UNIONE EUROPEA
Fondo Europeo di Sviluppo Regionale

Repubblica Italiana

Regione Calabria

UNIVERSITÀ DEGLI STUDI MEDITERRANEA DI REGGIO CALABRIA
MEDITERRANEA UNIVERSITY OF REGGIO CALABRIA
DIPARTIMENTO PATRIMONIO ARCHITETTURA URBANISTICA – PAU
HERITAGE, ARCHITECTURE AND URBAN PLANNING DEPARTMENT

DOTTORATO DI RICERCA IN
URBAN REGENERATION AND ECONOMIC DEVELOPMENT

INTERNATIONAL DOCTORATE PROGRAMME IN
URBAN REGENERATION AND ECONOMIC DEVELOPMENT

XXXI CICLO
XXXI CYCLE

TOWARDS A LANDSCAPE APPROACH TO RURAL DEVELOPMENT

LANDSCAPE REGENERATION AND INNOVATION ECONOMIES IN RURAL LANDSCAPES, CASES FROM MEIXIAN COUNTY (CHINA) AND THE LOCRIDE AREA (ITALY)

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REGGIO CALABRIA, JANUARY/GENNAIO 2019

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To my father and my mother.

Summary

Landscape has been increasingly considered to be relevant to development, as an aggregation of economic, sociocultural and environmental dynamics. However, has landscape development been sufficiently considered within the many approaches to rural development found in many disciplines (such as geography, sociology, economics, planning and more recently heritage)? Indeed, though it seems self-evidently relevant, this concept is rather elusive. As it is unclear how landscape can actually be turned into competitive advantages critical to the development process, related arguments in existing literature remain questionable. This is especially the case in rural areas, where landscape degradation and disadvantaged economic fabric are common problems. Besides, the consequential impact of development on landscape has also not been explored in relation to landscape's role in development.

With a focus on rural development, the author maintains that: First, interdisciplinary issues around rural development can, and should, be rooted in rural landscapes. This will allow the embedded socioeconomic and environmental assets of that landscape to be harnessed in a systemic way. Second, rural development needs to incorporate mechanisms for regeneration to maintain, update and improve the functionality of rural landscapes to meet new social and economic needs.

This dissertation seeks to relate landscape development to rural development via an interdisciplinary approach joining several different academic disciplines: rural studies, landscape studies, and regeneration, as well as local economic development and innovation. This work investigates how to *promote rural development by regenerating rural landscapes*, and *spurring innovation economies within rural landscapes*. This is achieved through two related objectives. First, it examines how the academic and political worlds have conceptualized the "rural" and rural landscapes, and how rural landscapes have been understood in relation to rural development. The author attempts to do so by finding connections among rural development and rural landscapes in the existing literature. Second, it proposes an experimental approach that conceptualizes, implements and manages rural development according to an improved landscape approach. What lies at the heart of the approach is the correlation between the development of innovation economies and landscape regeneration practices.

To achieve these two objectives, this dissertation is structured in four major parts. In the first part, the literature review looks into the understanding of the "rural", rural landscapes, and the structure, functions and changes of rural landscapes. It also reviews the contemporary discourses of rural development; the relationships among rural development and agriculture, sustainability, and multifunctionality; the role of "regeneration"; as well as the existing studies on the landscape approach. The second part is based on the literature review and

refers to the two case study areas. The dissertation first redefines rural development and rural landscapes. It then investigates the *status quo* of the rural landscapes and rural development of the two case study areas. Finally, it proceeds to build up the theoretical construct of the landscape approach to rural development that aims to coordinate landscape management and the development of rural economies. In doing so, this work also defines and offers principles and guidelines of rural landscape regeneration. In the third part, the dissertation explores landscape regeneration practices at three levels: natural landscape; built and agricultural landscape; and sociocultural landscape. The fourth part of the dissertation discusses innovation economies in the rural economic landscape. First, it analyzes the preconditions of developing innovation economies, namely, place, networking and innovation. Next, it proposes innovation as central to gaining competitive advantages for rural economies. In doing so, it highlights the role of land reform and rural-urban linkages in relation to innovation, as well as agricultural production. It also discusses the role of entrepreneurial innovations such as circular economy and network contracts of SMEs. Lastly, it investigates the development of innovation economies in the two case study areas in terms of cooperative economies, rural e-commerce and rural tourism.

The two case study areas for this dissertation are Meixian County of Shaanxi Province (China) and the Locride area of the Province of Reggio Calabria of Calabria Region (Italy). Cases from these two regions, showing different sociocultural and political economic contexts and states of development, are analyzed and, when appropriate, compared. The research, grounded in a robust literature review, adopts a mixed research methodology that is both qualitative and quantitative. Qualitative research consisted of semi-structured interviews of key stakeholders, including government workers and rural entrepreneurs, as well as on-site visits to case study areas to collect visual observations. The interviews were aimed to figure out the role of different stakeholders in local development, as well as their strategies and constraints. The main purpose of the site visits was to collect evidence to demonstrate the *status quo*, whether regenerated or not, of rural landscapes. Quantitatively, this research analyzed Chinese and Italian urban population change, and international trade of agricultural products, via statistical data retrieved from national statistical bureaus. This aims to illustrate the overall context of rural development today: urbanization and globalization. To assist the discussions on e-commerce, the research also compared data on ICT infrastructure and online business activities.

In addition, questionnaires were administered in both case study areas to survey the rural population's perception of their rural landscapes and the development of rural economies (mainly agricultural cooperatives, family farms and agricultural firms) in both case study areas. Members of agricultural cooperatives in Meixian County were also surveyed to determine their assessment of the effectiveness of those cooperatives. Overall, the questionnaires

had two functions. On the one hand, they were meant to uncover local people's perspective on existing problems associated with landscapes, to gain a better understanding of real needs. On the other hand, they helped look into the role and constraints of the innovation economies of the two case study areas, thus complementing the interviews.

The proposed landscape approach to rural development aims to balance the needs of landscape management and rural economic development. Essentially, it seeks to coordinate the development of innovation economies and landscape regeneration practices, so as to generate a concurrent positive effect on rural development and rural landscapes. Therefore, at the landscape level, the approach helps manage rural landscape changes, and bring about a vibrant, livable countryside. To this end, regeneration is an indispensable tool. At the economic level, it recognizes that healthy landscape evolution depends largely on healthy development of rural economies. It therefore tries to spur innovation economies to reinforce the competitive advantages of rural communities, and meanwhile curtail the pressure of economic growth on rural landscapes.

Based on examples from the two case areas, multiple findings have resulted. <u>At the landscape level</u>:

- Locally embedded traditional knowledge and values, properly revitalized and reinterpreted based on contemporary needs, have played a significant role in natural landscape regeneration;
- Both economic and ecological benefits have been created when abandoned agricultural landscapes have been reclaimed and regenerated;
- The revitalization of cultural heritage is critical to regenerate the built landscape while preserving local characteristics, as well as the linkage between tradition and modernity;
- The regeneration of public spaces (and in Meixian County's case, the initial creation thereof), has played an important role in meeting changing sociocultural and even economic needs;
- The regeneration of the sociocultural landscape, either through the revitalization of traditional culture and values, or through fostering the spirit of collaborative work, has helped build up social capital;
- In Meixian County, landscape regeneration has been "top-down", whereas it has been mainly "bottom-up" in the Locride area;
- Through landscape regeneration, not only has the functionality of rural landscapes been maintained, updated and improved, but new economic activities like rural tourism and cooperative economies have been made possible.

<u>At the economic level</u>:

- In the era of the knowledge economy, innovation economies play a crucial role in reinforcing the competitiveness of rural economies and driving rural development. Place, network and innovation, as well as land reform and rural-urban linkages, are fundamental prerequisites for innovation

economies;

- Innovations in agricultural economies prove to be a crux in regenerating rural landscapes and socioeconomic fabrics. Generally, innovations in the agricultural production process are largely limited to the application of modern technologies and knowledge;
- Regarding agricultural entrepreneurial innovations, a circular economy is an effective way to build up economies that save resources and are environmentally friendly, while generating social benefits. Another major entrepreneurial innovation is the network contract among small firms. This has helped them reduce the costs of production and operation, and also stimulate collaboration and information sharing;
- Agricultural cooperatives (ACs) and e-commerce are two major forms of innovation economies in rural areas. ACs have spurred innovation by capitalizing on local resources and highlighting knowledge, networking, standardization and multichannel marketing. They have also helped increase members' income via strengthened negotiation power with high quality products, increased supply capacity and diversified marketing tools;
- Rural e-commerce, developing at the territorial scale, has contributed to rural development in Meixian County. This is due to the roles e-commerce plays in increasing farmers' income; stimulating entrepreneurship and product innovation; modernizing production and ways of living in rural areas; and promoting territorial branding;
- Sustainable rural tourism requires a development approach integrated with "systems thinking" that highlights, and derives from, the characteristic territorial identity. As a booster of competitiveness, territorial branding is indispensable to adding value to the territorial identity. Cases from both study areas demonstrated that endogenous tourism development can be promoted by capitalizing on local assets with this kind of integrated approach.

It is hoped that through this research, the following will become widely accepted, both by academia and policy-makers:

- Rural landscapes and rural development are interdependent and mutually reinforcing;
- Rural landscapes should be regenerated to contemporize their functionality so as to meet rural populations' new demands and the need of local socioeconomic development;
- Innovation economies must be boosted to drive rural development;
- The proposed landscape approach to rural development can lead to diminishing the unavoidable tradeoff between environmental protection and rural development. This approach can also lead to a continuous improvement of the quality of life of all people. This not only means increased economic benefits and opportunities, but also an improved living environment and sociocultural life;
- The approach, more importantly, can foster the *process* of development of new local systems rather than merely generating the desired outcome (renovation), by supporting place-based, endogenous mechanisms;

- Valuable experience and practices from Meixian County and the Locride areas, both in terms of landscape regeneration and the development of innovation economies, can be learned from, shared, and critically "transplanted" locally.

Keywords*: rural landscapes, landscape approach, rural development, landscape regeneration, innovation economies*

Sommario

In quanto aggregazione di dinamiche economiche, socioculturali ed ambientali, il paesaggio è stato considerato sempre più rilevante per lo sviluppo. Tuttavia, lo sviluppo del paesaggio è stato sufficientemente preso in considerazione nei molti approcci allo sviluppo rurale trovati in molte discipline (come geografia, sociologia, economia, pianificazione e più recentemente patrimonio)? Infatti, anche se sembra evidentemente pertinente, il concetto è alquanto elusivo. Poiché non è chiaro come il paesaggio possa effettivamente convertirsi in vantaggi competitivi fondamentali per il processo di sviluppoe, gli argomenti correlati nella letteratura esistente rimangono discutibili. Ciò è particolarmente vero nelle zone rurali, dove il degrado del paesaggio ed il tessuto economico svantaggiato sono problemi comuni. Nel contempo, non è stato esplorato il conseguente impatto dello sviluppo sul paesaggio in relazione al ruolo che quest'ultimo ha nello sviluppo.

Incentrandosi sullo sviluppo rurale, la tesi sostiene in primo luogo che esso, come tema interdisciplinare, possa e dovrebbe essere radicato nei paesaggi rurali, in modo da poter sfruttare sistemicamente le loro risorse socioeconomiche ed ambientali. In secondo luogo, lo sviluppo rurale deve incorporare un adeguato meccanismo di rigenerazione per conservare, aggiornare e migliorare la funzionalità dei paesaggi rurali al fine di soddisfare nuove esigenze sociali ed economiche.

La tesi cerca di collegare lo sviluppo del paesaggio allo sviluppo rurale con un approccio interdisciplinare che congiunge studi rurali, studi paesaggistici, rigenerazione, sviluppo economico locale ed innovazione. La tesi indaga come *promuovere lo sviluppo rurale attraverso il rigenerare dei paesaggi rurali e lo stimolare delle economie di innovazione all'interno dei paesaggi rurali*. Questo è ottenuto attraverso due obiettivi correlati. In primo luogo, si esamina come i mondi accademico e politico abbiano concettualizzato il "rurale" e paesaggi rurali, e come i paesaggi rurali siano intesi in materia di sviluppo rurale. Si tenta di farlo trovando connessioni tra lo sviluppo rurale e i paesaggi rurali nella letteratura esistente. In secondo luogo, si propone un approccio sperimentale che concettualizza, attua e gestisce lo sviluppo rurale secondo un approccio paesaggistico migliorato. Ciò che è al centro di questo approccio è la correlazione tra lo sviluppo delle economie di innovazione e pratiche di rigenerazione del paesaggio.

Per raggiungere questi due obiettivi, la tesi è strutturata in quattro parti principali. Nella prima parte, la revisione della letteratura esamina la comprensione del "rurale", dei paesaggi rurali, e della struttura, delle funzioni e dei cambiamenti dei paesaggi rurali. Si esaminano inoltre i trattati contemporanei sullo sviluppo rurale, i rapporti tra sviluppo rurale ed agricoltura,

sostenibilità e multifunzionalità, il ruolo della "rigenerazione", nonché gli studi esistenti sull'approccio paesaggistico. Nella seconda parte, la tesi si basa sulla revisione della letteratura e si riferisce alle due aree di studio. Innanzitutto si ridefinisce lo sviluppo rurale e i paesaggi rurali. Si indaga poi sullo *status quo* dei paesaggi rurali e sullo sviluppo rurale delle due aree di studio. Infine, si procede a costruire il costrutto teorico dell'approccio paesaggistico allo sviluppo rurale che mira a coordinare la gestione del paesaggio e lo sviluppo delle economie rurali. In tal modo, la tesi definisce ed offre principi e linee guida per la rigenerazione del paesaggio rurale. Nella terza parte, la tesi esplora le pratiche di rigenerazione del paesaggio in tre aspetti, ossia il paesaggio naturale, il paesaggio costruito ed agricolo e il paesaggio socioculturale. La quarta parte della tesi discute le economie di innovazione nel paesaggio economico rurale. Dapprima analizza i presupposti delle economie di innovazione, specificamente luogo, rete ed innovazione. In seguito, propone l'innovazione come fulcro per ottenere vantaggi competitivi per le economie rurali. In tal modo, evidenzia il ruolo della riforma agraria e dei collegamenti rurali-urbani in relazione all'innovazione e alla produzione agricola. Discute inoltre sul ruolo delle innovazioni imprenditoriali come l'economia circolare ed i contratti di rete delle PMI. Infine, indaga sullo sviluppo delle economie di innovazione nelle due aree di studio in termini di economie cooperative, e-commerce rurale e turismo rurale.

Le aree di studio sono la contea di Meixian della provincia dello Shaanxi (Cina) e l'area di Locride della provincia di Reggio Calabria della regione Calabria (Italia). Vengono analizzati e, quando necessario, confrontati i casi studio di queste due regioni che mostrano contesti socioculturali e politici e stati di sviluppo differenti. La ricerca, basata su una solida revisione della letteratura, adotta una metodologia di analisi mista, sia qualitativa che quantitativa. Qualitativamente, si sono condotte interviste semi-strutturate a stakeholder chiave tra cui i lavoratori governativi e gli imprenditori rurali e si sono effettuati sopralluoghi per raccogliere osservazioni visive. Le interviste erano finalizzate a comprendere il ruolo dei diversi protagonisti nello sviluppo locale, le loro strategie e i vincoli. Lo scopo principale dei sopralluoghi era raccogliere prove per dimostrare lo *status quo* dei paesaggi rurali, rigenerati o non. Quantitativamente, la tesi ha analizzato i dati statistici della Cina e dell'Italia recuperati dagli uffici nazionali di statistica sulla demografia urbana e sul commercio internazionale di prodotti agricoli, così da illustrare il contesto generale dello sviluppo rurale odierno: urbanizzazione e globalizzazione. Ha inoltre confrontato i dati sull'infrastruttura TIC e le attività commerciali online per contribuire nei dibattiti sull'e-commerce.

Inoltre, entrambe le aree di studio sono state sottoposte a questionari sulla percezione che la popolazione rurale ha dei propri paesaggi rurali e sullo sviluppo delle economie rurali (principalmente cooperative agricole, aziende familiari e imprese agricole), oltre a raccogliere la valutazione dei membri sull'efficacia delle cooperative agricole nella contea di Meixian. Nel complesso, i

questionari hanno avuto due funzioni. Da un lato, avevano lo scopo di individuare le problematiche esistenti affrontate dai paesaggi dalla prospettiva delle popolazioni locali in modo tale da ottenere una migliore comprensione dei loro reali bisogni. Dall'altro lato, hanno aiutato a esaminare il ruolo ed i vincoli delle economie di innovazione delle due aree di studio, completando così le interviste.

L'approccio paesaggistico proposto per lo sviluppo rurale mira a bilanciare le esigenze di gestione del paesaggio e di sviluppo economico rurale. Essenzialmente, ha come obiettivo di coordinare lo sviluppo delle economie di innovazione e le pratiche di rigenerazione del paesaggio in modo da generare un concorrente effetto positivo sullo sviluppo rurale e sui paesaggi rurali. Pertanto, a livello paesaggistico, questo approccio mira a gestire i cambiamenti del paesaggio rurale ed a costruire una campagna vivace e vivibile, per le quali la rigenerazione è uno strumento indispensabile. A livello economico, l'approccio paesaggistico riconosce che un'evoluzione sana del paesaggio dipenda in gran parte da uno sviluppo sano delle economie rurali, e quindi cerca di stimolare le economie di innovazione per rafforzare i vantaggi competitivi delle comunità rurali, e di ridurre allo stesso tempo la pressione della crescita economica sui paesaggi rurali.

Basandosi sugli esempi delle due aree di studio, ne sono derivati diversi risultati. A livello paesaggistico:

- Le conoscenze ed i valori tradizionali locali, opportunamente rivitalizzati e reinterpretati in base alle esigenze contemporanee, hanno svolto un ruolo significativo nella rigenerazione naturale del paesaggio;
- Si è verificato che sono stati innescati benefici sia economici che ecologici quando i paesaggi agricoli abbandonati sono stati recuperati e rigenerati;
- La rivitalizzazione del patrimonio culturale è fondamentale per rigenerare il paesaggio costruito preservando le caratteristiche locali ed il legame tra la tradizione e la modernità;
- La rigenerazione degli spazi pubblici (e nel caso della Contea di Meixian, la loro creazione iniziale) ha svolto un ruolo importante nel soddisfare le mutevoli esigenze socioculturali e persino economiche;
- La rigenerazione del paesaggio socioculturale, attraverso la rivitalizzazione della cultura e dei valori tradizionali o la promozione dello spirito di collaborazione, ha contribuito a creare capitale sociale;
- Nella contea di Meixian la rigenerazione del paesaggio è stata "top-down", mentre nelle aree di Locride principalmente "bottom-up";
- Attraverso la rigenerazione del paesaggio, non solo è stata mantenuta, aggiornata e migliorata la funzionalità dei paesaggi rurali, ma sono state rese possibili nuove attività economiche, quali il turismo rurale e le economie cooperative.

A livello economico:

- Nell'era dell'economia della conoscenza, le economie di innovazione svolgono un ruolo cruciale nel rafforzare la competitività delle economie rurali e guidare lo sviluppo rurale, per il quale sono tre prerequisiti fondamentali il luogo, la rete e l'innovazione. Inoltre, la riforma agraria ed i collegamenti rurali-urbani sono due condizioni preliminari per promuovere le economie di innovazione;
- Le innovazioni nelle economie agricole si rivelano un punto cruciale nella rigenerazione di paesaggi rurali e di tessuti socioeconomici. In generale, le innovazioni nel processo di produzione agricola sono in gran parte limitate all'applicazione di tecnologie e di conoscenze moderne;
- Per quanto riguarda le innovazioni imprenditoriali nell'agricoltura, l'economia circolare è un modo efficace per creare economie che rispecchino le risorse e rispettino l'ambiente generando benefici sociali. Un'altra importante innovazione imprenditoriale è il contratto di rete delle piccole imprese che le ha aiutate a ridurre i costi di produzione e di funzionamento e a stimolare la collaborazione e la condivisione delle informazioni;
- Le cooperative agricole (CA) e l'e-commerce sono due principali forme di economia di innovazione nelle aree rurali. Le CA hanno stimolato l'innovazione capitalizzando le risorse locali e mettendo in luce le conoscenze, la rete, la standardizzazione ed il marketing multicanale, e hanno anche contribuito ad aumentare il reddito dei membri guadagnando un potere negoziale sul mercato rafforzato con prodotti di alta qualità, maggiore capacità di offerta e strumenti di marketing diversificati;
- L'e-commerce rurale, che si sviluppa su scala territoriale, ha contribuito allo sviluppo rurale nella contea di Meixian aumentando il reddito degli agricoltori, stimolando l'imprenditorialità e l'innovazione di prodotto, modernizzando la produzione ed il modo di vivere nelle aree rurali e promuovendo il marchio territoriale;
- Il turismo rurale sostenibile richiede un approccio di sviluppo integrato con un "pensiero sistemico" che tenga conto della caratteristica identità territoriale. Come stimolo alla competitività, il marchio territoriale è indispensabile per aggiungere valore all'identità territoriale. Entrambi i casi studio hanno dimostrato che lo sviluppo turistico endogeno possa essere promosso capitalizzando sull'integrazione del capitale locale.

È auspicabile che attraverso questa ricerca, quanto segue siano ampiamente accettato sia dal mondo accademico che dai responsabili politici:

- I paesaggi rurali e lo sviluppo rurale siano interdipendenti e si rafforzino a vicenda;
- I paesaggi rurali dovrebbero essere rigenerati per renderne contemporanea la funzionalità al fine di soddisfare le nuove esigenze della popolazione rurale e la necessità dello sviluppo socioeconomico locale;
- Le economie di innovazione devono essere potenziate per guidare lo

sviluppo rurale;

- L'approccio paesaggistico proposto per lo sviluppo rurale può portare ad un compromesso sempre minore tra protezione ambientale e sviluppo rurale. Può anche portare ad un continuo miglioramento della qualità della vita di tutti gli abitanti rurali, in termini non solo economici di benefici ed opportunità, ma anche ambiente di vita e vita socioculturale;
- L'approccio, ancora più importante, può favorire il *processo* di sviluppo di nuovi sistemi locali piuttosto che generare semplicemente il risultato di un rinnovamento, sostenendo meccanismi endogeni basati sul luogo;
- Le buone esperienze e le pratiche dalla contea di Meixian e dalle aree di Locride, sia in termini di rigenerazione del paesaggio che di sviluppo delle economie di innovazione, possono essere apprese, condivise e criticamente "trapiantate" localmente.

***Parole Chiave**: paesaggi rurali, approccio paesaggistico, sviluppo rurale, rigenerazione del paesaggio, economie di innovazione*

摘要

景观作为经济、社会文化和环境动力的整合，其与发展的相关性愈发得到认同。然而，涉及乡村发展各类方法的诸多学科（如地理学、社会学、经济学、规划和遗产学），是否充分考虑了景观本身的发展？的确，虽然这一相关性看似显而易见，但仍有待商榷。考虑到尤其是在乡村地区，景观退化和弱势经济结构是普遍存在的问题，现有文献尚未充分阐明，景观实际上是如何转化为对发展过程至关重要的竞争优势的。此外，在探讨景观对发展的作用时，也鲜有将后者对景观的影响联系起来。

本研究聚焦乡村发展，认为首先乡村发展作为一个跨学科问题，可以植根于乡村景观，从而系统地利用景观所具备的社会经济和环境资源。其次，乡村发展需要纳入适当的更新机制来维持、更新和提升乡村景观的功能，以满足新的社会和经济需求。

本研究采用跨学科的方法，综合乡村研究、景观研究、更新、地方经济发展和创新理论，旨在将景观发展与乡村发展联系起来，研究如何*通过更新乡村景观和促进创新经济体在乡村景观中的发展来促进乡村发展*。因此，本论文的研究目标有两方面：一方面研究学政两界如何界定“乡村”和乡村景观，以及如何理解乡村景观和乡村发展的关系。就此，笔者在现有文献中探究乡村发展与乡村景观之间的联系。另一方面提出促进乡村发展的实验性方法，即依据改进的景观方法来构想、实施和管理乡村发展。该方法的核心是发展创新经济与景观更新实践之间的相互关系。

为实现上述双重目标，论文分为四个主要部分。首先，文献综述着眼于对“乡村”，乡村景观以及乡村景观的结构、功能和变化的理解。文献综述亦回顾了乡村发展的当代话语、乡村发展与农业、可持续性和多功能性之间的关系、“更新”的作用，以及当前的景观方法研究。第二部分是基于文献综述，并参考了两个案例研究地区，首先重新定义了乡村发展和乡村景观。其次，研究了两个案例研究地区的乡村景观和乡村发展现状。最后，构建了旨在协调景观管理和乡村经济体发展的乡村发展的景观方法的理论体系，并就此提出乡村景观更新的原则和实施指南。第三部分从三个层面探讨了景观更新的实践，即自然景观、建筑和农业景观以及社会文化景观。第四部分探讨了乡村经济景观中的创新经济体。首先分析了发展创新经济体的前提条件，即地方、网络和创新。随后提出创新是农村经济体获得竞争优势的关键，强调土地改革的作用、城乡纽带同创新的关联以及农业生产和企业创新（如循环经济和中小企业网络）。最后从合作经济、农村电子商务和乡村旅游三方面，探析了两个案例研究地区的创新经济体的发展情况。

本研究选取中国陕西省眉县和意大利卡拉布里亚大区雷焦卡拉布里亚省的洛克里德（Locride）地区为案例研究地区，对这两个社会文化和政治经济背景和发展状况各异的地区的实例进行了分析，并在必要时作以比较。基于文献综述，该研究采用了定性和定量的混合研究方法。就定性研究而言，本研究对包括政府工作人员和农村企业家在内的主要利益相关者进行了半结构式访谈，并对案例研究地区进行了实地考察，采集了影像资料。访谈旨在理清不同利益相关者在地方发展中扮演的角色，采取的策略和制约因素。实地考察的主要目的是收集图像信息，以佐证乡村景观的现状。就定量研究而言，论文分析研究了从中国和意大利国家

统计局获取的城市人口变化和农产品国际贸易的统计数据，以说明当今乡村发展的宏观背景：城市化和全球化。在探讨电子商务时，亦比较了信息和通信技术（ICT）基础设施和线上商业活动的有关数据。此外，本研究对两个案例研究地区农村人口对乡村景观的感知以及农村经济体（主要是农业合作社、家庭农场和农业企业）的发展情况进行了问卷调查，并对眉县农业合作社的有效性进行了问卷评估。问卷调查旨在从当地人的视角揭示景观当前面临的问题，以便更好地了解他们的实际需求，同时在访谈的基础上，研究创新经济体在眉县和洛克里德地区当地经济发展过程中的作用和制约因素。

本论文提出的乡村发展的景观方法旨在平衡景观管理和乡村经济发展的需要，以便同时对乡村发展和乡村景观产生积极影响。因此，在景观层面，该方法旨在管理乡村景观变化，构建一个生机勃勃且宜居的农村，更新将在其中扮演不可或缺的角色。在经济层面，该方法认识到健康的景观演进在很大程度上取决于农村经济的健康发展，因此主张促进创新经济体的发展以增强农村地区的竞争优势，同时减轻经济增长对乡村景观的压力。

通过对中意两个案例地区实例的分析研究，本论文得出了多项调查结果。<u>在景观层面</u>：

- 根据当代需求，恰当地复兴、重新诠释当地固有的传统知识和价值体系，在自然景观更新中发挥了重要作用；
- 通过复垦和更新废弃的农业景观，可以创造经济和生态效益；
- 复兴文化遗产对于重建建筑景观同时保留地方特色以及传统与现代之间的联系至关重要；
- 更新（或创造，如眉县的情况）公共空间，在满足不断变化的社会文化乃至经济需求方面发挥了重要作用；
- 通过振兴传统文化和价值体系或培育协作精神，更新社会文化景观，有助于积累、扩充社会资本；
- 在眉县，景观更新的举措是“自上而下”实施的，而在洛克里德地区主要是“自下而上”；
- 通过景观更新，不仅乡村景观的功能得到保持、更新和改善，而且为发展乡村旅游和合作经济等新的经济活动奠定了基础。

<u>在经济层面</u>：

- 在知识经济时代，创新经济体在增强农村经济竞争力和推动乡村发展方面发挥着至关重要的作用，而地方、网络和创新是其发展的先决条件。此外，土地改革和城乡纽带也是培育创新经济体的先决条件；
- 农业经济的创新是更新乡村景观和社会经济结构的关键。通常，农业生产过程中的创新主要限于现代技术和知识的应用；
- 就农业企业创新而言，发展循环经济是建立资源节约型和环境友好型经济体，同时产生社会效益的有效途径。另一项重要的企业创新是建立小微企业网络，借此降低生产和运营成本，促进协作和信息共享；
- 农业合作社（AC）和电子商务是农村地区创新经济体的两种主要形式。 农业合作社通过利用当地资源，强调依托知识、关系网络、标准化和多渠道营销来刺激创新，并通过提高产品品质、强化供应能力和利用多样化的营销工具，提高市场谈判能力，从而帮助成员增收；

- 农村电子商务在地区范围内的发展，通过增加农民收入、刺激创业和产品创新、促进农村生产和生活方式的现代化以及促进地域品牌化，为眉县的乡村发展做出了贡献；
- 可持续乡村旅游需要一种综合全面的发展方式，以及依托地域特色的“系统思考”。作为竞争力的助推器，地域品牌建设对于将地域特色转化为经济效益并增值是不可或缺的。两个研究地区的实例表明，通过整合利用当地固有资本，可以促进内生式旅游业的发展。

希望通过本研究，学术界和政策制定者能普遍认同以下事实，即：

- 乡村景观和乡村发展是相互依存和相互促进的；
- 应更新乡村景观，以实现其功能性的当代化，从而满足农村人口的新需求和当地社会经济发展的需要；
- 必须激发、培育创新经济体，以推动乡村发展；
- 所提出的乡村发展的景观方法，可以协调、平衡环境保护与乡村发展的需求，并且不仅就经济利益和机会而言，而且在人居环境和社会文化生活层面，能够不断提高所有人的生活品质；
- 更为重要的是，通过支持基于地方的内生机制，该方法有助于培育新的地方体系的发展*过程*，而不是单纯带来更新的结果；
- 眉县和洛克里德地区在景观更新和创新经济发展方面的良好经验和实践，能够为更多的地区学习、共享和批判性的本地化“移植”。

***关键词**: 乡村景观，景观方法，乡村发展，景观更新，创新经济体*

Sommaire

En tant qu'ensemble de dynamiques économiques, socioculturelles et environnementales, le paysage est de plus en plus considéré comme un élément pertinent pour le développement d'un territoire donné. Cependant, cette pertinence ne fait pas florès parmi la littérature existante. En effet, n'ont pas été étudiés dans de nombreuses disciplines (tels que géographie, sociologie, économie, planification et plus récemment patrimoine) : la manière dont les paysages, qui sont souvent dégradés et dont le tissu économique n'est pas toujours diversifié et équilibré – ce qui est particulièrement le cas des zones rurales – peuvent se transformer en avantage concurrentiel essentiel au processus de développement ; ni le rôle et l'impact du développement sur le paysage.

L'accent étant mis sur le développement rural, notamment en tant que question interdisciplinaire, nous affirmons tout d'abord que le développement rural peut s'appuyer sur les paysages ruraux en exploitant de manière systémique leurs atouts socioéconomiques et environnementaux intrinsèques. Deuxièmement, le développement rural doit intégrer un mécanisme de régénération approprié pour maintenir et mettre à jour la fonctionnalité des paysages ruraux afin de répondre aux nouveaux besoins sociaux et économiques, ce qui est une condition préalable pour que les économies rurales obtiennent des avantages concurrentiels.

La thèse cherche à relier le développement du paysage au développement rural avec une approche interdisciplinaire, associant études rurales, études de paysage, régénération, développement économique local et innovation. Elle examine comment *promouvoir le développement rural en régénérant les paysages ruraux et en stimulant les économies d'innovation dans les paysages ruraux*. L'objectif est donc double : le premier but est d'examiner comment les mondes académique et politique ont conceptualisé le « rural » et les paysages ruraux, et comment ces derniers ont été compris en relation avec le développement rural. Pour ce faire, nous avons trouvé dans la littérature existante des liens entre développement rural et paysages ruraux. Le deuxième but est de proposer une approche expérimentale et conceptuelle qui conçoit, met en œuvre et gère le développement rural selon une approche paysagère. Sera ainsi au cœur de la démarche, la corrélation entre développement des économies d'innovation et pratiques de régénération du paysage.

Pour atteindre le double objectif, la thèse est structurée en quatre parties principales. Pour commencer, la revue de littérature se penche sur la compréhension du « rural », des paysages ruraux, de la structure, des fonctions et des changements des paysages ruraux. Elle examine aussi les discours contemporains sur le développement rural, les relations entre développement rural et agriculture, la durabilité et la multifonctionnalité, le rôle de la «

régénération », ainsi que les études existantes sur l'approche paysagère. La deuxième partie est basée sur la revue de la littérature et fait référence aux deux zones d'étude de cas. Elle offre d'abord une redéfinition du développement rural, des paysages ruraux. Ensuite, elle analyse le *statu quo* des paysages ruraux et du développement rural dans les deux zones d'étude de cas. Enfin, la thèse construit la structure théorique de l'approche paysagère du développement rural. Cette approche vise à coordonner la gestion du paysage et le développement des économies rurales. Ce faisant, ce travail aussi définit et propose des principes et des lignes directrices pour la régénération du paysage rural. Les pratiques de régénération du paysage sont par la suite explorées dans la troisième partie sur trois niveaux : le paysage naturel, les paysages bâtis et agricoles et le paysage socioculturel. La quatrième partie de la thèse aborde les économies d'innovation dans le paysage économique rural. Elle analyse tout d'abord les conditions préalables aux économies d'innovation, i.e. le lieu, les réseaux et l'innovation. Elle propose ensuite l'innovation comme élément central dans la création d'avantages concurrentiels pour les économies rurales, en soulignant le rôle de la réforme agraire et des liens entre zones rurales et urbaines en ce qui concerne l'innovation, notamment celle qui concerne les productions agricoles et entrepreneuriales telles que l'économie circulaire et les contrats de réseau des petites et des moyennes entreprises (PME). Enfin, elle examine les économies d'innovation dans les deux zones d'étude en termes d'économies coopératives, de commerce électronique et de tourisme rural.

Pour répondre aux interrogations de cette thèse, deux zones d'études de cas sont analysées : le comté de Meixian de la province du Shaanxi (Chine) et la zone de Locride de la province de Reggio Calabria de la région de Calabre (Italie). Les contextes socioculturels, politiques et les états de développement de ces deux zones présentent de grandes divergences qui sont analysées et, le cas échéant, comparées. La thèse, fondée sur une solide revue de littérature, adopte une méthodologie de recherche mixte à la fois qualitative et quantitative. Sur le plan qualitatif, nous avons effectué des visites de terrain dans les zones d'étude de cas afin de recueillir des observations visuelles. Elles avaient pour objectif principal de rassembler des éléments de preuve démontrant le statu quo, qu'ils soient régénérés ou non, des paysages ruraux. En parallèle, nous avons mené des entretiens semi-structurés avec des parties prenantes clés, notamment des fonctionnaires et des entrepreneurs ruraux. Ces entretiens visaient à déterminer le rôle des différentes parties prenantes dans le développement local, leurs stratégies et leurs contraintes. Quantitativement, nous avons analysé les données statistiques de la Chine et de l'Italie, extraites des bureaux nationaux de statistique, sur l'évolution démographique urbaine et sur le commerce international des produits agricoles, afin d'illustrer le contexte général du développement rural actuel : urbanisation et mondialisation. Pour soutenir les discussions sur le commerce électronique, nous avons également comparé des données sur l'infrastructure des technologies de l'information et de la communication (TIC) et sur les activités commerciales en ligne.

En outre, nous avons également mené des enquêtes par questionnaire sur la perception par les populations rurales de leurs paysages ruraux et sur le développement des économies rurales (principalement avec des coopératives agricoles, des fermes familiales et des entreprises agricoles) dans les deux zones étudiées, ainsi que sur l'évaluation de l'efficacité des coopératives agricoles dans le Comté de Meixian par les membres. Les questionnaires remplissaient deux fonctions. D'une part, ils visaient à mettre en lumière les problèmes existants auxquels les paysages sont confrontés du point de vue des populations locales, afin de mieux comprendre leurs besoins réels. D'autre part, ils ont permis d'examiner le rôle et les contraintes des économies d'innovation dans les deux zones étudiées, complétant ainsi les entretiens.

L'approche paysagère proposée pour le développement rural vise à équilibrer les besoins en matière de gestion du paysage et ceux du développement économique rural. Elle essaie essentiellement de coordonner le développement d'économies d'innovation et les pratiques de régénération du paysage, de manière à générer un effet positif simultané sur le développement rural et sur les paysages ruraux. Par conséquent, au niveau du paysage, l'approche vise à gérer les changements du paysage rural et à construire une campagne vivante et vivable. À cette fin, la régénération est un outil indispensable. Sur le plan économique, l'approche reconnaît qu'une évolution saine du paysage dépend en grande partie du développement sain des économies rurales. Elle s'efforce donc d'inciter les économies d'innovation à renforcer les avantages concurrentiels des communautés rurales, et en même temps à réduire la pression de la croissance économique sur les paysages ruraux.

Sur la base d'exemples tirés des deux zones étudiées, nous avons abouti aux résultats multiples. Au niveau du paysage :

- Les connaissances et valeurs traditionnelles incorporées localement, correctement revitalisées et réinterprétées en fonction des besoins contemporains, ont joué un rôle important dans la régénération des paysages naturels ;
- Des avantages économiques et écologiques ont été créés lorsque les paysages agricoles abandonnés ont été récupérés et régénérés ;
- Il s'avère que pour régénérer le paysage construit la revitalisation de son patrimoine culturel est essentielle ainsi que la préservation des caractéristiques locales et le renforcement du lien entre tradition et modernité ;
- La régénération (et la création initiale dans le cas du comté de Meixian) des espaces publics ont joué un rôle important dans la satisfaction des besoins en évolution socioculturels voire économiques ;
- La régénération du paysage socioculturel, soit par la revitalisation de la culture et des valeurs traditionnelles, soit par la promotion de l'esprit de travail collaboratif, a contribué au renforcement du capital social ;
- Dans le comté de Meixian, la régénération du paysage a été « descendante » (dite *top-down*), alors que principalement « ascendante » (dite *bottom-up*)

dans la zone de Locride ;

- Grâce à la régénération du paysage, non seulement la fonctionnalité des paysages ruraux a été maintenue, mise à jour et améliorée, mais de nouvelles activités économiques telles que le tourisme rural et les économies coopératives ont été rendues possibles.

Au niveau économique :

- À l'ère de l'économie de la connaissance, les économies d'innovation jouent un rôle crucial dans le renforcement de la compétitivité des économies rurales et du développement rural. La place, le réseau et l'innovation sont donc trois conditions préalables fondamentales. En outre, la réforme agraire et les liens entre zones urbaines et rurales sont deux conditions prérequises à la création d'économies d'innovation ;
- Les innovations dans les économies agricoles se révèlent être au cœur de la régénération des paysages ruraux et des tissus socioéconomiques. En règle générale, les innovations dans le processus de production agricole se limitent largement à l'application des technologies et des connaissances modernes ;
- En ce qui concerne les innovations entrepreneuriales dans le secteur agricole, l'économie circulaire est un moyen efficace de créer des économies économes en ressources et respectueuses de l'environnement, tout en générant des avantages sociaux. Une autre innovation entrepreneuriale majeure est le contrat de réseau de petites entreprises qui les a aidées à réduire leurs coûts de production et d'exploitation et à stimuler la collaboration et le partage d'informations ;
- Les coopératives agricoles (CA) et le commerce électronique sont deux formes majeures d'économies d'innovation dans les zones rurales. Les CA ont stimulé l'innovation en capitalisant sur les ressources locales et en mettant en valeur les connaissances, la mise en réseau, la normalisation et le marketing multicanal. Elles ont également contribué à accroître les revenus des membres en renforçant le pouvoir de négociation sur le marché avec des produits de haute qualité, une capacité d'approvisionnement accrue et des outils de marketing diversifiés ;
- Le commerce électronique rural, se développant à l'échelle territoriale, a contribué au développement rural du comté de Meixian en augmentant les revenus des agriculteurs, en stimulant l'entreprenariat et l'innovation en matière de produits, en modernisant la production et les modes de vie dans les zones rurales et en promouvant la marque territoriale ;
- Le tourisme rural durable nécessite une approche intégrée du développement avec une « pensée systémique » qui compte sur l'identité territoriale caractéristique. Pour renforcer la compétitivité, la marque territoriale est indispensable pour ajouter de la valeur à l'identité territoriale. Les cas des deux zones d'étude ont démontré que le développement du tourisme endogène peut être promu en capitalisant sur l'intégration du capital local.

Il est souhaitable que, par le biais de cette recherche, ce qui suit sera largement

accepté, tant par le monde académique que par les responsables politiques :

- Le paysage rural et le développement rural sont interdépendants et se renforcent mutuellement ;
- Il convient de régénérer les paysages ruraux pour en adapter les fonctionnalités afin de répondre aux nouvelles demandes de la population rurale et aux besoins de développement socioéconomique locaux ;
- Il est important de stimuler les économies d'innovation pour stimuler le développement rural ;
- L'approche paysagère proposée en matière de développement rural pourra réduire le compromis inévitable entre protection de l'environnement et développement rural. Elle peut également conduire à une amélioration continue de la qualité de vie de tous, en termes non seulement d'avantages et d'opportunités économiques, mais aussi de milieu de vie et de vie socioculturelle ;
- L'approche surtout pourra favoriser le *processus* de développement de nouveaux systèmes locaux plutôt que de générer simplement le résultat de la rénovation, grâce au soutien à des mécanismes endogènes ;
- De bonnes expériences et pratiques du comté de Meixian et de la zone de Locride, tant en termes de régénération du paysage que de développement d'économies d'innovation, pourront être apprises, partagées et adaptées localement de manière critique.

Mots-clés *: paysages ruraux, approche paysagère, développement rural, régénération paysagère, économies d'innovation*

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Acronyms

AC: Agricultural Cooperative
CAP: Common Agricultural Policy
CBD: Convention on Biological Diversity
CMO: Common Market Organisation
Coldiretti: Confederazione Nazionale Coltivatori Diretti (Coldiretti, National Confederation of Direct Cultivators)
CPC: Communist Party of China
CRI: Contratto di Rete di Imprese (Network Contract of Enterprises)
DOC: Denominazione di Origine Controllata (Controlled Designation of Origin)
DOP: Denominazione di Origine Protetta (Protected Designation of Origin)
DRC: Development Research Center
EAFRD: European Agricultural Fund for Rural Development
EC: European Commission
EIA: Environmental Impact Assessment
ELC: European Landscape Convention
ESIF: European Structural and Investment Funds
FAO: Food and Agriculture Organization of the United Nations
FPC: Farmers' Professional Cooperative
GD: Grande Distribuzione (Large Distribution)
GDO: Grande Distribuzione organizzata (Large Organized Distribution)
GEOCI: Greening, Embellishing, Optimizing, Cleaning and Illuminating
GIS: Geographic Information System
HUL: Historic Urban Landscape
ICA: International Co-operative Alliance
ICOMOS: International Council on Monuments and Sites
ICT: Information and Communications Technology
IFLA: International Federation of Landscape Architects
IGP: Indicazione Geografica Protetta (Protected Geographical Indication)
IOU: I Owe You
Istat: Istituto Nazionale di Statistica
IUCN: International Union for Conservation of Nature
LAPs: Local Action Plans
LAPs: Local Action Plans
LEADER: (Liaison entre actions de développement de l'économie rurale)
MHT: Minor Historic Town
NBS: National Bureau of of Statistics of China
NCCPC: National Congress of the Communist Party of China
NNUP: National New Urbanization Planning
O2O: Online to Offline
OECD: Organisation for Economic Co-operation and Development
PCCG: Parco Culturale della Calabria Greca (Cultural Park of the Greek Calabria)

PIAR: Progetti Integrati per le Aree Rurali (Integrated Projects for the Rural Areas)
PIF: Progetti Integrati di Filiera (Integrated Supply Chain Projects)
PO: Producers Organization (Organizzazione di Produttori)
PSL: Piani di Sviluppo Locale (Local Development Plans)
PSR Calarbia: Programma di Sviluppo Rurale della Regione Calabria (Rural Development Programme of Calabria Region)
PTS: Progetti Tematici Strategici *(*Strategic Thematic Projects)
QR Code: Quick Response Code
RC: River Contract (Contratto di Fiume)
RCT: Randomized Controlled Trial
RDP: Rural Development Programme
RRS: Rural Revitalization Strategy
SME: Small And Medium-sized Enterprise
UNESCO: United Nations Educational, Scientific and Cultural Organization
WTO: World Trade Organization

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乾道变化，各正性命，保合太和，乃利贞[1]。

《易经・乾卦・彖辞》

Tempora mutantur sicut nos et nostrae imagines terrarum.[2]

[1] See *Yi Jing: Qiangua: Tuanci*: "The Way of Heaven 乾道 (All in the Universe) is constantly evolving, all kinds of things in the world should have their position of co-existence and *taihe* 太和 (the state Perfect of Harmony), so everything can develop in harmony." (translation of the author)

[2] The times are changing, so are ourselves and our landscapes in them.

Part 1 Introduction: Preamble to Linking Rural Landscapes and Rural Development

Chapter 1 Research Structure

1.1. Research Background

Perceptibly or imperceptibly, rural areas worldwide are transforming fast in our time. Very often, rural transformations at social and economic levels are understood alternatively as results of four phenomena, namely, counterurbanization, the urban-rural shift, the restructuring hypothesis, and class recombination (Pratt 1996). As for the transformations at the landscape level, the scope of studies, mainly focused either on natural or sociocultural aspects of landscape changes, remains to be broadened to relate landscape changes to rural development as a whole. However, given the predominant urban discourse both at the academic and institutional levels, landscape and rural development issues are not well coordinated and integrated into regional agendas. These issues are drawing growing public concerns reflecting diverse social interests. This, on the one hand, is due to the loss of qualities related with rural landscapes, such as open space, ecological services, scenic beauty, etc. On the other hand, the rural problematic has been pushed to the foreground by the crisis in farming, a sector said to be producing surpluses while causing environmental degradation particularly in developed countries (Frouws 1998).

Such a view sounds like "blaming the victim" and does not apply to all nation states. Rural areas are generally in a disadvantaged situation despite increasing concerns on food security, rural development, and the alleviation of rural poverty in developing countries (McGee 2008). They generally suffer from a range of problems associated with limited employment opportunities and restricted access to public and social services (Hodge 1986). This is especially the case in countries where development concepts and patterns are guided by neoliberal economic policies that heavily depend on the market rather than government intervention and rigidly comply with the prevailing capitalist values (Cocklin *et al*. 2003). Given its disadvantaged material socioeconomic conditions, the rural appears more vulnerable than the urban when facing the shocks from globalization (*ibid*). According to the World Bank[3] (2017), in rural areas, where 78% of the world's poor live, environmental neglect contributes to degraded land, water scarcity, falling crop yields and economic migration. Ignoring the rural can lead to a backlash to the urban, causing increasing rural-urban disparities. As a potential source of social and political instability and an important indicator of economic inefficiency (Yang and Fang 2000), growing rural-urban disparities tend to become the breeding ground for socioeconomic problems. A typical manifestation is the increasing urban slums following continuous rural migration. Ideologically, there is a conventional binarism in regional studies, i.e. a rural-urban divide due to the dichotomic thinking which often proves to be

[3] World Bank (2017), "An Integrated Approach to Managing and Restoring Landscapes", http://www.worldbank.org/en/topic/environment/brief/landscapes, accessed on September 26, 2017.

"the outcome of an urban-centric, industrialized-economy-geared development model" (Lee 2015, 9). With such a development model, the economic, social and environmental costs of radical efforts made by various nation states towards modernization, in the past or at present, have often been systematically transferred to rural communities. This is believed to be the fundamental causes of rural poverty, social instability and environmental problems (Pan *et al.* 2017).

Generally speaking, in contrast to the urban primacy, there are diverging attitudes of nation states and regions on the rural regardless of their states of development. The European Union (EU) regional policies such as the Common Agricultural Policy (CAP) and local initiatives have created incentives that seek to re-establish sustainable rural economies, successful communities and unique rural space (Winchell and Koster 2010). There have been three major paradigmatic changes in the contemporary EU rural development, namely, post-productivism, economic diversification, and governance (from top-down to bottom-up) (Macken-Walsh 2009). In terms of rural governance, integrated rural development, multifunctionality and bottom-up approaches have become guiding concepts (McAreavey 2009). These largely endogenous approaches have paved the way for innovative, diversified forms of economic activities and reshaped rural livelihood and rural landscapes (CERAMAC 2003).

All in all, what has been happening in rural Europe is a paradigmatic shift from agricultural modernization to rural development (O'Connor *et al*. 2006; van der Ploeg and Roep 2003) that is "post-productivist" (Evans *et al.* 2002; Fitzpatrick 2004; Holmes 2002; Marsden 2003; Mather *et al.* 2006; Wilson and Rigg 2003; Wilson 2007). However, this shift has not always been trouble-free as the negative outcomes resulting from some previous and current EU policies and strategies have demonstrated. To begin with, the shift, seemingly "forced", has not followed a natural course. For instance, in southern Europe, agriculture is being politically discouraged and consequently "a productive, functional, social and identity crisis spread in rural areas" (Matos Fernandes 2013). The development of these landscapes of consumption shows an evolutionary path that can be termed as "creative destruction" (Halpern and Mitchell 2011). Then, the CAP has often shown a negative influence on landscape, also in the case of Agri-Environmental Schemes (AES) originally intended to promote landscape (Rovai *et al.* 2016). In addition, at present, the marginal status of rural development has not been fundamentally reversed. Europe 2020, though a strategy aimed at smart, sustainable and inclusive growth, fails to take into account the specific diversity of a territory and continues a bias towards industrial and technological development, while rural development is seen as a mere by-product of investing in high skill service economies (Guarino *et al.* 2017).

Compared to many European countries, China, as the largest developing country with most rapid urbanization, emphasizes the critical need of coordinated urban-rural development to help curtail increasing regional disparities while

improving rural population's livelihood (Li 2017; Liu 2011; Wang *et al.* 2016; Yang *et al.* 2011). In fact, over the past decade, China has attached increasing importance to integrated urban-rural development and coordinated regional development as a vital means to narrow the gap in urban-rural and regional development. The desirable sustainability makes it imperative to balance urban and rural development to achieve the vital harmony between environment and human society (Shi *et al.* 2016). Such a development philosophy finally led to the national Rural Revitalization Strategy (RRS) elaborated in the "China's No. 1 Central Document of 2018". In the US (similar countries Australia and Canada), a "suburban nation" (Batchis 2010; Beauregard 2001; Taylor and Hurley 2016), by contrast, sustainable urban, not rural, development initiatives are guiding national priorities for change. Rural America, as an "economic colony" of the urban, its concerns and problems seldom seem to matter to urban Democrats (Ikerd 2016). Consequently, the rural in the US remains "dominated by corporate agriculture, increasing farm size and decreasing work force, and rural decline" (O'Connor *et al.* 2006). This causes various socioeconomic and environmental problems in rural America, just to name a few, poverty, food insecurity, environmental pollution, substandard housing and high unemployment (Cason *et al.* 2001; Fitchen 1991). As a result, worsening rural economic landscape together with political indifference have paved way for widening rural-urban economic and political divides in the US. This becomes more often than not an underlying threat to integrated regional development.

Spatial linkages are becoming a key feature in modern spatial planning and geography (Baycan *et al.* 2017). The author therefore maintains that, on the one hand, rural development shall be recognized as a reciprocal counterpart of urban development. This means that an integrated regional development is barely achievable if there is no coordinated rural and urban development, since "growing inequality within a region can hinder regional economic performance (Dreier 2004, 43)". With deepening economic restructuring of urban and rural areas, urban-rural interdependence has become increasingly evident (Irwin *et al.* 2009). Woods (2005) identifies four major reasons for states to take an interest in rural development, i.e. welfarist rationale, economic rationale, "stewardship" rationale, and rationale of the spatial control of the population. The last reason, according to Woods, is able to reduce the "push-factors" for out-migration, therefore "conflates rural development and regional development" (p. 145). On the other hand, globally speaking, current rural and urban development of different nation states across the world is synchronic whereas their current state and stage of development are seemingly "diachronic". This means that the regional rural and urban development of a certain country is part of a national and global sequential continuum. Within this sequential continuum, landscapes evolve according to their situation in hierarchically polarized geographical space (Antrop 2000), which explains the diversity of landscape morphology across the global sequential continuum. This is true for both regions of the same country and of different countries. Experience sharing among regions is thus necessary.

As the literature review available shows, countries of disparate political and socioeconomic contexts adopt various rural development strategies. In Western countries, for example, most popular strategies include, just to name a few, partnerships (McArdle 2012; Ward 2002), community-based innovative agriculture (Pretty 1998), off-farm employment creation (van Leeuwen 2010), tourism (Carneiro *et al*. 2015; Lo *et al*. 2014; Moldovana *et al.* 2015; Sonnino 2004), etc. Nowadays, technological change, globalization and changing demographics have altogether intensified the competition and rapid, revolutionary changes in economic development strategies, especially with regard to rural economic development (Johnson 2007). Therefore, how to guarantee the coherence of fast changing development strategies becomes increasingly topical. Given that there is an ongoing shift in rural development strategies from a sectoral to a territorial approach that is more integrated (Kizos *et al*. 2010; Rega 2014), further research work needs to be done to build up a coherent conceptual framework where cases can be integrated and fully studied. Besides, current academic discussions have drawn heavily on individual case studies from specific countries. Therefore, it is also necessary to relate different strategies to broader political and socioeconomic trends occurring both at home and abroad so as to keep the state of the art of strategies.

As an aggregation of socioeconomic, cultural and environmental dynamics, landscape has been increasingly considered as relevant to development (Agnoletti 2013, 2014; Hart 2015; Kizos *et al*. 2010; Sobala and Myga-Piątek 2016). Not only the academic, but also institutions of different levels have showed a growing interest in landscapes in relation to sustainable development over the last decade. Globally, international institutions such as UNESCO, FAO and IUCN have elaborated on different kinds and aspects of landscapes for various purposes ranging from food production, cultural and natural preservation to socioeconomic development. Landscapes have also gone through a legislation process in mainly western countries like Italy (as in *The Italian Constitution*, Article 9). Besides, they have become central to numerous national, international and regional instruments in the form of directives, policies, charters and conventions, such as the European Landscape Convention (ELC, 2000), the Convention on Biological Diversity (CBD, 1992), the European Common Agricultural Policies (CAP) 2014–2020, the IFLA Asia-Pacific Region Landscape Charter (2015), etc.

Landscape generally reflects the dynamism related to socioeconomic changes (Guarino *et al*. 2017) which usually result from development. However, has landscape development been sufficiently considered within the many approaches to rural development found in many disciplines? Indeed, though it seems self-evidently relevant, the concept that landscape is relevant to development seems rather elusive. First, as it is unclear how landscape can actually be turned into competitive advantages critical to the development process, related arguments in existing literature remain questionable. This is

especially the case in rural areas, where landscape degradation and disadvantaged economic fabric are common problems. Second, it ignores the dynamic nature of landscape, which is in constant transformation following the dynamic interaction between natural and cultural (Antrop 2004a) as well as socioeconomic forces (Guarino *et al*. 2017). Since modern times until today, the dynamics driving landscape transformation, both in speed and scale, and the perceptions, values and behavior of landscape users have changed considerably (Antrop 2000, 2005; Palang 2006). Third, despite a strong interlink between rural development and landscape preservation/improvement is recognized, these two domains have developed, both as research fields and policy sectors, largely independently (Rega 2014). Fourth, the concept fails or omits to address a crucial issue, namely, the trade-off between preservation and development. Truly, rural areas increasingly find themselves in an ambivalent urban context. In most cases, it is urban forces that dominate the building and preserving of rural landscapes (Overbeek 2009). Actually, Overbeek's observation arouses still another question: why does that very urban context matter to rural landscapes and then to rural development?

Given the limitations of existing literature, the author maintains that first "landscape" can serve as a promising conceptual framework to elaborate on rural development. It is the most suitable concept to not only fully describe and analyze current spatial issues in all settings, but study and analyze the process of rural transitions and their social and ecological contexts (Kizos *et al.* 2010) in the long run. Its geographic diversity also makes it more practical to integrate a broader political and socioeconomic context into discussions. Second, interdisciplinary issues around rural development can, and should, be rooted in rural landscapes. This will allow harnessing in a systemic way the embedded socioeconomic and environmental assets of landscapes. Third, rural development needs to incorporate mechanisms for regeneration to maintain, update and improve the functionality of rural landscapes to meet new social and economic needs. Meanwhile innovation economies shall be bolstered to gain essential competitive advantages, preconditions of rural development.

1.2. Objectives and Significance

This dissertation tries to not merely draw experience from real-world practices, but more importantly push forward the state-of-the-art of the current concepts concerning landscape management and rural development. Therefore, it seeks to relate landscape development to rural development via an interdisciplinary approach joining several different academic disciplines: rural studies, landscape studies, and regeneration, as well as local economic development and innovation. It investigates how to *promote rural development by regenerating rural landscapes*, and *spurring innovation economies within rural landscapes*.

This is achieved through two related objectives. First, it examines how the academic and political worlds have conceptualized the "rural" and rural landscapes, and how rural landscapes have been understood in relation to rural development. The author attempts to do so by finding connections among rural development and rural landscapes in the existing literature. Second, it proposes an experimental approach that conceptualizes, implements and manages rural development according to an improved landscape approach. What lies at the heart of the approach is the correlation between the development of innovation economies and landscape regeneration practices. Indeed, an improved landscape approach is needed to integrate individual development initiatives into a coherent systemic landscape context to maximize their positive impacts on development while minimizing negative ones on landscape.

To achieve the above-mentioned aims, the dissertation poses three major questions:

- 1) What is the relationship between rural landscapes and rural development?
- 2) How to address the trade-off issue between the need of rural development and rural landscape preservation?
- 3) How rural development and rural landscapes can be supportive for each other?

To answer these questions, seven core objectives have arisen:

- 1) define rural landscapes and rural development under the context of urbanization and globalization that are driving constant rural transformations at varied pace and scale;
- 2) elaborate on the relevance of rural landscapes (means) to rural development (action/end);
- 3) construct an improved landscape approach to rural development;
- 4) find ways to coordinate the economic, social and environmental dynamics of rural development within the framework of rural landscapes;
- 5) examine "regeneration" with a holistic view under the rural context and explore ways to ease the tension between landscape changes and socioeconomic transitions;
- 6) seek innovative ways to add value to (regenerated) rural landscapes and spur innovation economies;
- 7) and compare cases from two regions of different states of development (degrees of urbanization) to highlight different trajectories towards a landscape approach to rural development.

The research is significant in that, first, it highlights the issue of landscape

change in relating rural landscapes to rural development. This fills the gap in the existing literature. Second, it tries to both carry out critical analyses of empirical cases and push forward the state-of-the-art of the existing concepts concerning landscape management and rural development. Consequently, it is able to further the current rural landscape and development studies by integrating aspects of regeneration and intercultural regions into discussions. This makes the relevance of rural landscape to rural development a more concrete concept. Third, the proposed landscape approach and the associated principles and guidelines can facilitate both integrated development strategy making and intervention evaluation and thus contribute to integrated rural development. Both the landscape approach and principles and guidelines are applicable under various scenarios, both local and territorial/regional, and both individual project planning and territorial/regional strategic planning. Last but not the least, by comparing cases from two regions of different states of development, it can predict tendency of landscape and socioeconomic transformations. Thereby, it can suggest contextualized landscape management and rural development strategies for the region of lower level of development, while promoting the sharing of experience and knowledge.

1.3. Methodology

To explore this issue under a possibly broad geographical context, this dissertation seeks to carry out empirical analyses of rural landscapes issues and rural development practices. For this purpose, Meixian County of Shaanxi Province (China) and the Locride area of the Province of Reggio Calabria of Calabria Region (Italy) are chosen as case study areas. Cases from these two regions showing different sociocultural and political economic contexts and states of development are analyzed and, when necessary, compared.

The research, grounded in a robust literature review on rural studies, landscape studies, rural development, regeneration and landscape approach, adopts a mixed research methodology that is both qualitative and quantitative. Qualitatively, it administered semi-structured interviews of key stakeholders including government workers (only in Meixian County) and rural entrepreneurs and carried out on-site visits to the case study areas to collect visual observations. In Meixian County, the presidents of the following agricultural cooperatives/companies were interviewed: Qinwang Guoyou Kiwifruit Professional Cooperative, Jindi Cherry Professional Cooperative, Jinse Qinchuan Kiwifruit Professional Cooperative, Huaixiang Strawberry Professional Cooperative, Houwaqiao Kiwifruit Professional Cooperative, Fuzi Jingtian Rice Professional Cooperative, Xifu Yinxiang Rose Professional Cooperative, Hengshengxin Poultry Farming Professional Cooperative, Jinqiao Kiwifruits, Co. Ltd. and Qinwang Kiwifruits Co. Ltd. Semi-structured interviews

were also conducted with responsibles from the Water Resources Bureau, Industry and Commerce Bureau, and Cultural Heritage and Tourism Bureau of Meixian County. In Reggio Calabria, the presidents or responsibles of the following agricultural cooperatives/family-run farms were interviewed: Fattoria della Piana, OP Monte, Valle di Marro Social Cooperative, Agricultural Cooperative Aspromonte, Azienda Agricola Tenuta Morano, Azienda Agricola Barone Macrì, Azienda Vitivinicola e Agrituristica "Casale Li Monaci", Tenuta Dioscuri, Tenuta Baccellieri, Agriturismo Ritorto, Vitivinicola Naimo Società Agricola, Azienda Agricola Brancatisano and Panificio Paolo Malara. All interviewees were required to approve and sign the informed consent form before the interview (Appendices 6-7).

The interviews were aimed to figure out the role of different stakeholders in local development, their strategies and constraints. The main purpose of the site visits was to collect evidence to demonstrate the *status quo*, whether regenerated or not, of rural landscapes. Quantitatively, it analyzed statistical data of China and Italy retrieved from UN agency and national statistical bureaus on urban population change and international trade of agricultural products, so as to illustrate the overall context of rural development today: urbanization and globalization. It also compared data on ICT infrastructure and online business activities to assist the discussions on e-commerce. Besides, it carried out questionnaire surveys on the rural population's perception of the landscapes and their sociocultural and economic life (Appendices 1-2), and the innovation and development of rural economies (mainly agricultural cooperatives, family farms and SMEs) (Appendices 4-5) in both case study areas, as well as the assessment of agricultural cooperatives' effectiveness in Meixian County by members (Appendix 3). The questionnaire surveys were undertaken from February to June 2018 in Meixian County, and from July to October 2018 in the Locride area. Questionnaires were answered either on the spot during the on-site investigations or online through WeChat or an online survey portal (lediaocha.com/survey). The questionnaire surveys were meant to uncover the existing problems confronted by landscapes from local people's perspective, gain a better understanding of their real needs, and look into, on the basis of the interviews, the role and constraints of the innovation economies in the case study areas. 237 residents of 19 villages (Dongshilin, Xishilin, Hongaitou and Huaixi in Huaiya Township, Quxing, Nanzhai, Guanting and Dangjiazhai in Qizhen Township, Heping, Dawan, Yanxia and Xinhe in Yingtou Township, Hulukou and Xiguan in Shoushan Subdistrict (township level), Yangjia in Changxing Township, Yanjiabu and Quliubu in Tangyu Township, Hedi and Ningqu in Jinqu Township, and Doujiabu in Hengqu Township) of Meixian County (Figg. 1-2), and 118 from the rural areas of 12 comunes of the Locride area (Portigliola, Locri, Sant'Ilario dello Ionio, Gerace, Caulonia, Roccella Jonica, Samo, Bianco, Sant'Agata del Bianco, Canolo, Bovalino and Antonimina) (Figg. 3-4) responded to the questionnaires. Site visits were carried out mainly in these villages and the rural areas of these comunes.

Figure 1: Location of Meixian County.
Source: Hasani's elaboration based on Google Maps.

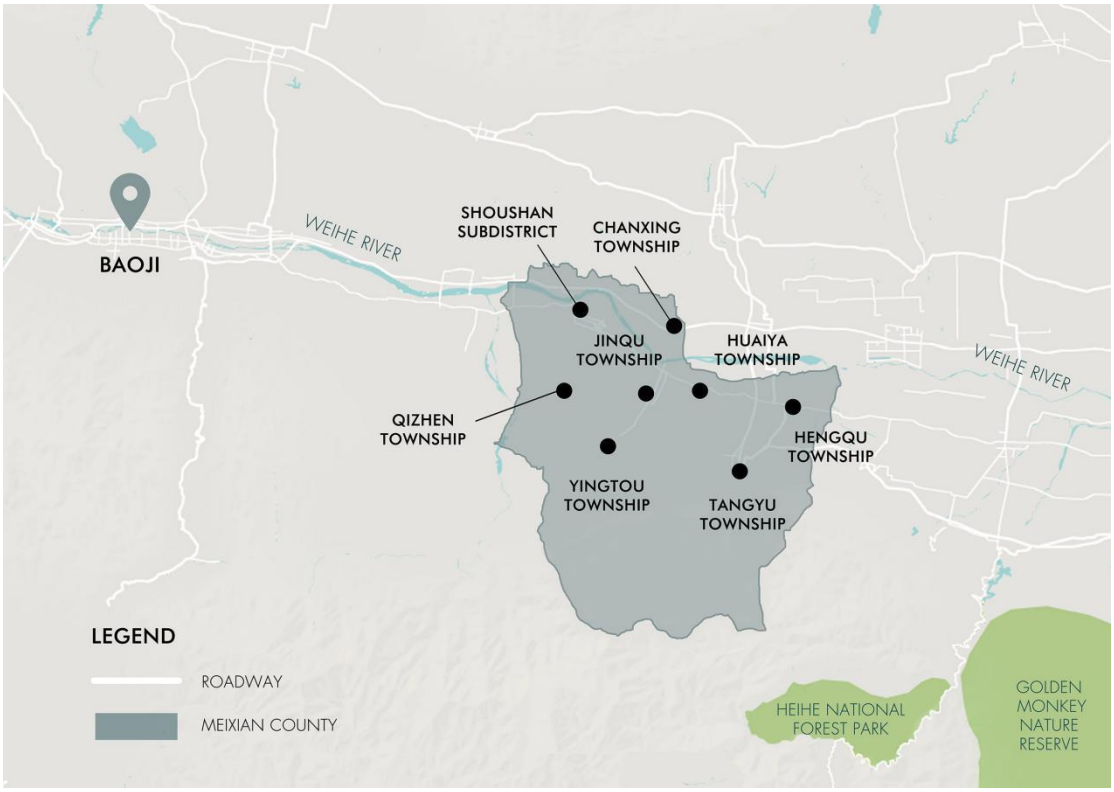

Figure 2: Location of the townships where site visits were conducted in Meixian County.
Source: Hasani's elaboration based on Google Maps.

1.4. Rural-Urban System of Case Study Areas

Under the scope of this research, Meixian County and the Locride area are the chosen case study areas, although the Grecanic and Tyrrhenian areas were also referred to in case no appropriate examples have been observed in the Locride area. The rationale for choosing these two case study areas is, first, in both areas, the agricultural sector plays an important role in local economy. Second, culturally speaking, both societies are organized according to familism, although one is *collectivistic familism* and the other *individualistic familism* (to be discussed in detail in Section 3.3.5). Third, although the two areas cannot be more different in terms of demographic and geographical conditions, stage of development and institutional system (Tables 1-2), they can serve as interesting, meaningful scenarios to promote the exchange and sharing of the experience related to rural development. While Meixian County at present has a quite dynamic rural economy, the hinterland of the Locride area is seemingly in difficulty. Fourth, the trajectory of rural restructuring of the Locride area, judged against a "development stage spectrum", can serve diachronically as a precious reference for Meixian County to envision its own rural transformation in the near future facing fast urbanization.

Figure 3: Location of the Locride area.
Source: Hasani's elaboration based on Google Maps.

The two case study areas have quite different administrative divisions (Table 1). The *Constitution of China* defines three levels: the provincial (province,

autonomous region, municipality and special administrative region), county and township. However, two more levels have been inserted in actual implementation: the prefecture under provinces, and the village under townships[4]. As in Italy, its previous administrative division system characterized by decentralization (*decentramento*) used to be quite similar to the Chinese one. Then in 2000, *circoscrizione* was abolished and the current three-level administrative divisions composed of region, province and comune was formed[5]. The Locride area can be roughly considered as equivalent to the administrative division of county in China.

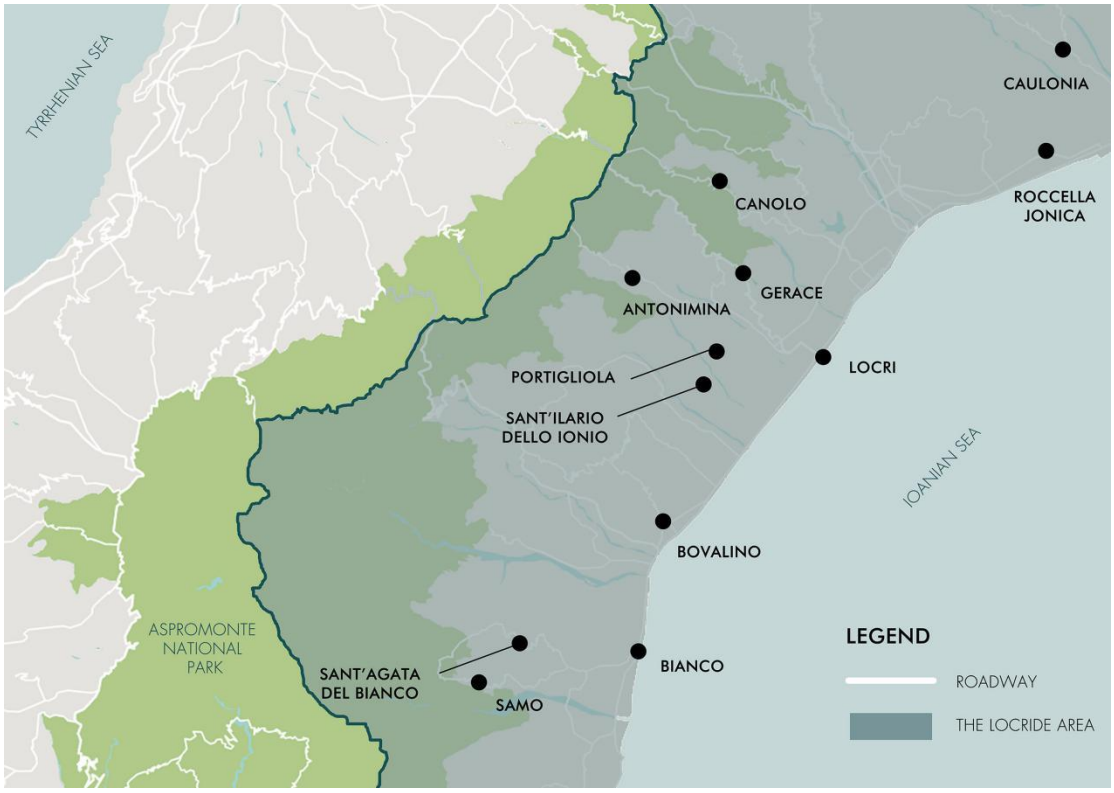

Figure 4: Location of the comunes where site visits were conducted in the Locride area.
Source: Hasani's elaboration based on Google Maps.

Meixian County is located in the Guanzhong Plain[6]. The plain boasts fertile soil, rich water resources and favorable climate, which makes agriculture a primary

[4] In recent years, the need of a reform of the administrative divisions has aroused heated discussions, which is expected to help reduce corruption and government budget. It has been therefore proposed such reform aspects as redemarcation of the provinces, division of mega-provinces and enlargement of counties and townships, and reduction of the current administration divisions from five to three as stipulated in the Constitution.

[5] With the passing of the legislative decree No. 267 of 2000, *circoscrizione*, as articulated in detail in Article 17, can be maintained if the comune has a population of over 250,000 residents, and otherwise it is suggested to be abolished. For a comune with a population between 100,000-250,000 residents, it is optional to maintain or abolish the *circoscrizione*. In case the comune chooses to keep the *circoscrizione*, the latter must have at least 30,000 residents. This inevitably involves the aggregation of *frazione*. Such a reform was reaffirmed in the Law No. 244 of 2007.

[6] The "Shaanxi Agricultural Regions Division" classifies the province from north to south into three major regions, namely the Loess Plateau in northern Shaanxi, the Guanzhong Plain and the Qinling-Daba Mountains in southern Shaanxi.

economic sector in the Guangzhou region throughout the history. As one of the birthplaces of the Western Zhou (c. 1046-771 BC) culture, Meixian County boasts outstanding historical, archaeological, cultural and landscape-environmental heritage. Under the jurisdiction of Meixian County, there are eight townships, 123 administrative villages and 882 villagers' groups. Geographically, three townships are located in mountainous areas, covering an area between 120-202 km². Over the last decade, sparse and small villages in mountains and natural disaster-prone areas have been merged and/or relocated. The average territorial area of the seven townships is about 98.58 km²: five with an area below average. The townships are between 20 and 45 minutes away by car from the nearest urban center, i.e. Shoushan Subdistrict (the seat of the Meixian County government) (Fig. 5).

Table 1. Administrative divisions in China and Italy

Divisions	Italy[1]	Italy	China
Level 1	Region	Region	Province
Level 2	Province	Province	Prefecture (City)
Level 3	Comune	Comune	County
Level 4	Circoscrizione	-	Township
Level 5	Frazione	-	Village

[1] Until 2000.

Source: The Author.

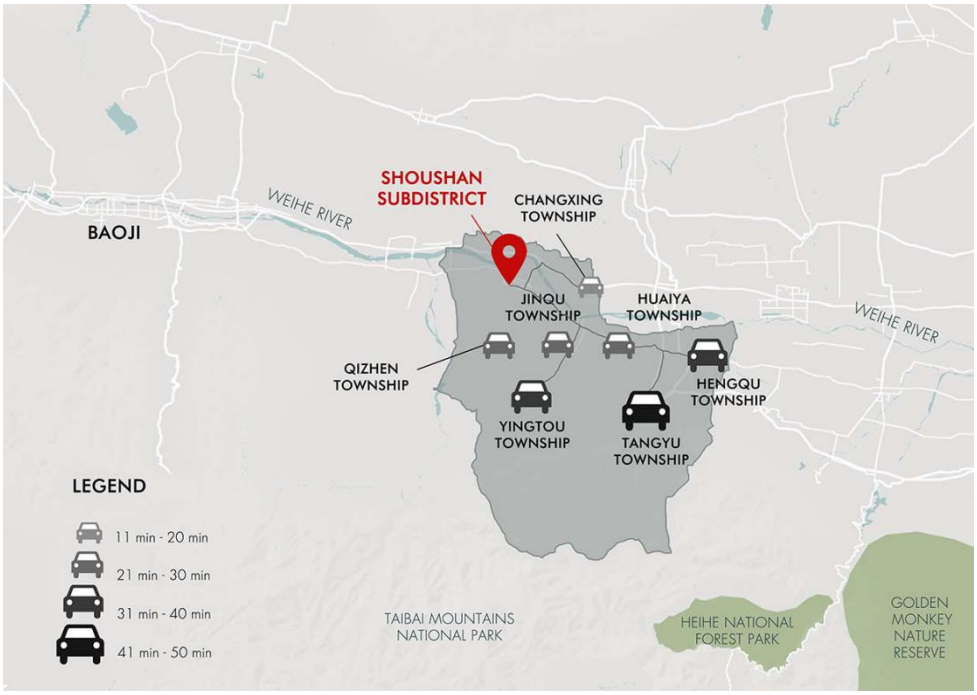

Figure 5: Travel time by car to the nearest urban pole Shoushan Subdistrict in Meixian County.
Source: Hasani's elaboration based on Google Maps.

The county has a resident population of 328,327 inhabitants as of 2017, which is

concentrated in piedmont alluvial plains and Weihe alluvial plains (Fig. 6). All townships have over 20,000 residents, and the average population of the area is about 41,041 inhabitants per township, 1,602 per administrative village, and 223 per villagers' group. According to the data of the Sixth National Census (2010), the ratio of the population aged over 65 years nationwide is about 6.9%. The unemployment rate is about 2.24%. The labor market highlights the importance of the primary and tertiary sectors, which employ respectively 34% and 46% of the workforce. No official data on education attainment in Meixian County has been found. However, according to the author's questionnaire survey (Appendix 1), 6.6% of the 237 respondents have primary school certificate, 44.7% have a secondary school or professional start-up certificate. 32.9% of residents have a high school certificate while 15.8% hold a university degree.

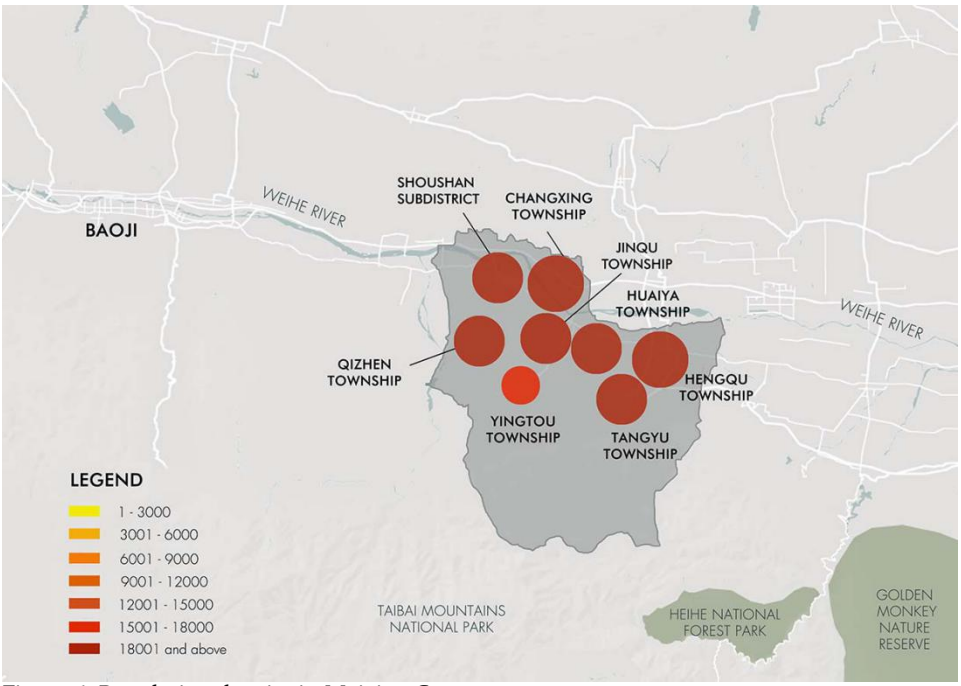

Figure 6: Population density in Meixian County.
Source: Hasani's elaboration based on Google Maps.

Over the past decade, Meixian County has experienced continuous economic restructuring, with a declining primary sector while rising secondary and tertiary sectors. According to the "Statistical Bulletin of 2017 on Economic and Social Development of Meixian County", in 2017, the proportion of the three sectors in its economy is respectively 16.4% (primary), 53.8% (secondary), and 29.8% (tertiary). The agricultural sector still occupies a significant position in its economy, accounting for over 30% of its GDP (2017). Meixian County boasts remarkable agricultural produces such as kiwifruit, cherry, strawberry, etc. It is also known for advantageous natural and tourism resources. Its mountainous areas, home to the Taibai Mountains National Park and Red River Valley Forest Park, are of great natural beauty and rich in geothermal resources. Its wetland parks scattered in the riparian areas along the Weihe River are also emerging

tourist attractions. In terms of degree of urbanization, currently about 40%, six towns are predominantly rural areas, with over 50% of the population living in villages. Economically speaking, the per capita disposable income is about 17,063 yuan in 2011[7].

Meixian County enjoys advantageous location thanks to its proximity to three economic hubs, namely, neighboring the State Agricultural High-tech Demonstration Zone in Yangling City, 120 km east of Xi'an (capital city of Shaanxi Province) and 65 km west of Baoji (second largest city of Shaanxi Province). It also enjoys advantageous transportation system. Its infrastructure is well developed, including one state road, several provincial roads (including two tourism lines), highway (3 exits), railways and one intercity high-speed rail under construction, making it an important transport hub connecting the southwest and northwest of China.

Table 2. Key facts of Meixian County and the Locride area in comparison to their higher administrative division

	Meixian County[1]	Baoji City[2]	Locride[3]	Reggio Calabria[4]
Area (km²)	863	18,172	1,164	3,210.37
Population	328,327	3,781,000	120,859	559,759
Density (person/km²)	380	208	104	174
Per capita disposable income	¥ 11,321 (rural) ¥ 35,221 (urban)	¥ 11,209 (rural) ¥ 34,351 (urban)	€ 6,227.94	€ 12,386
Travel time to nearest hub	20-45 minutes	-	11-50 minutes	-
Education attainment	44.7% (SS) 32.9%(HS) 15.8% (Uni)	-	31% (SS) 26% (HS) 9% (Uni)	-
People over 65	6.9%	-	20.4%	-
Climate	warm temperate semi-arid and semi-humid continental monsoon climate	warm temperate semi-arid/ semi-humid continental monsoon	typical Mediterranean climate	typical Mediterranean climate
Average precipitation	609.5 mm	656.3 mm	-	546.8 mm

Notes: 1. Data of 2017. Source: "Statistical Bulletin of 2017 on Economic and Social Development of Meixian County", retrieved at <http://www.sxmx.gov.cn/html/gov/1/tjxx/sjtj/29688/29688.html>;
2. Data of 2017. Source: "Statistical Bulletin of 2017 on Economic and Social Development of Baoji City", retrieved at <http://www.baoji.gov.cn/site/11/html/276/300/290616.htm>;
3. Retrieved from "GAL Terre Locridee - Piano di Azione Locale 'GE.L.SO.M.IN.I.'" (2013);
4. Data of 2014. Source: "Rapporto Urbes 2015 - Reggio Calabria", retrieved at <https://www.istat.it/storage/urbes2015/reggiocalabria.pdf>.

[7] The data in this paragraph, unless with specification, are retrieved from the National Bureau of Statics <http://www.stats.gov.cn/tjsj/pcsj/> and the "Statistical Bulletin of 2017 on Economic and Social Development of Meixian County" <http://tjj.baoji.gov.cn/html/xianqugongbao/20180409/1729.html>.

The Locride area, renowned for its rich Magna Graecia, Roman and Byzantine cultures, is located on the Ionian side of Reggio Calabria and enclosed between the National Park of Aspromonte, the Ionian Sea and the Natural Regional Park of the Serre. Extending along the Costa dei Gelsomini, the area, together with the Grecanic area and the Tyrrhenian area, constitutes the Province of Reggio Calabria. The area includes 36 municipalities, covering an area of 1,164 km² which accounts for 36.3% of the total area of the province. 46.4% of the total area of the Locride is totally agricultural, of which 73% is cultivated Demographically, the area has a resident population of 120,859 inhabitants as of January First, 2015, equal to 21.7% of the provincial resident population. The population are concentrated in coastal areas, while the inner areas are sparsely inhabited (Fig. 7). The entire area faces continuous depopulation and territorial abandonment, especially in mountainous areas subject to soil erosion and hydrogeological risks. The ratio of the population aged over 65 years is about 20.4% in 2015. The average population of the area is about 3,357 inhabitants per municipality, but 11 municipalities have fewer than 1,000 inhabitants. Of the 97% of the literate residents, 87% possess an education qualification, among whom 31% have a secondary school or professional start-up certificate, 26% of residents have a high school certificate while 9% hold a university degree.

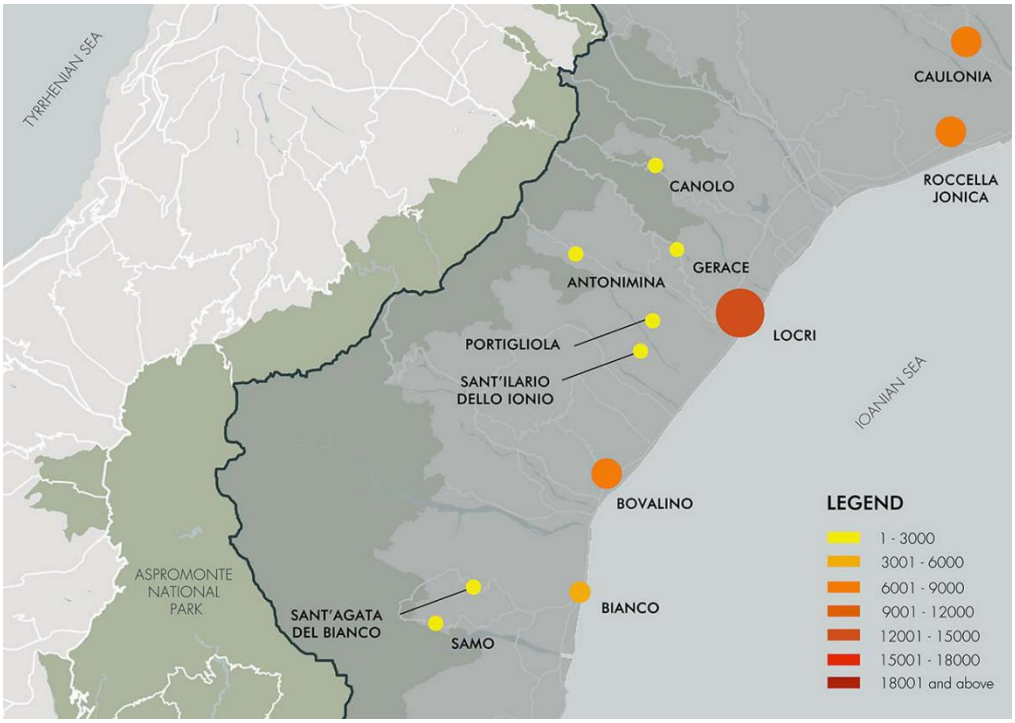

Figure 7: Population density in the Locride area.
Source: Hasani's elaboration based on Google Maps.

Geographically, 14 municipalities are totally mountainous, 11 partially mountainous and only 11 not mountainous. The average territorial area of the 36 municipalities is about 32.34 km²: 25 have an area below average, and 30 have an area of less than 50 km². These municipalities are between 11 and 50 minutes

away by car from the closest Urban Pole, i.e. Siderno which, with a resident population of 18,231 (2017), is the most populated comune within the Locride area (Fig. 8). In terms of degree of urbanization, 31 municipalities are classified as "rural areas", which means that at least 50% of the population live in rural grid cells. The rest five municipalities are all intermediate density areas. The coastal areas are subject to the pressure from human activities related with tourism and urbanization. These activities are not always qualified and respectful of the landscape and environmental values. The inland areas are mainly composed of minor historical towns (MHTs), often located on the slopes of the valleys that flank seasonal rivers (*fiumara*).

Economically speaking, the average taxable income (ATI) per capita of the Locride area is about 6,227.94 euros. According to the data from the Ministry of Economy and Finance, all these municipalities are classified in the "PSR Calarbia 2014-2020"[8] as rural areas with development problems. This fact is manifested by the large gap between the ATI per capita of the area and that of the Province of Reggio Calabria, which is about 12,386 euros in 2014. According to the ISTAT data (2011), the unemployment rate of young people is almost 40%. The labor market highlights the importance of the primary and tertiary sectors, which employ respectively 29.7% and 29.4% of the workforce[9].

Figure 8: Travel time by car to the nearest urban pole Siderno in the Locride area.
Source: Hasani's elaboration based on Google Maps.

[8] See Programmi di sviluppo rurale regionali approvati 2014-2020, retrieved at <https://www.reterurale.it/PSR2014_2020>.

[9] Data retrieved from "Gal Terre Locridee ¨C Piano di Azione Locale 'GE.L.SO.M.IN.I.'" , retrieved at <http://www.galterrelocridee.net/wp-content/uploads/2018/02/0-PAL_GAL-Terre-Locridee_DEFINITIVO.pdf>. All data are of 2011, unless with specification.

The territory possess significant productive values, with a well-established tradition of cultivating olives, vines and citrus fruits. This makes it home to both remarkable agricultural produces and various quality food products such as salami, olive oil and cheese, as well as artisanal products. Closely related with its productive values, the Locride area is well-known for its strong territorial identity deriving from the integration of landscape features, rural economy and the widespread historical-cultural resources. From the naturalistic and ecological point of view, the Locride area is home to a variety of rare ecosystems and characteristic landscapes. This is demonstrated by numerous areas of naturalistic values, such as the Aspromonte Park and the Serre Park. Tourism, therefore, has a no less important role to play in its economy considering its outstanding historical, archaeological, artistic, cultural and landscape-environmental heritage. However, all these unique resources still need to be properly mobilized in tourism development, which proves to be difficult partially due to the insufficient infrastructure.

1.5. Outline

As the conceptual map shows (Fig. 9), based on literature review, the dissertation first builds up the theoretical construct of a landscape approach to rural development. Then, the research investigates rural landscape regeneration with regard to natural landscape, built landscape and sociocultural landscape. Finally, the dissertation discusses innovation economies in the rural economic landscape, focusing on land reform, rural-urban linkages recovery, and place, networking and knowledge as preconditions of innovation. On this basis, it looks into innovative rural economic activities such as rural e-commerce, rural tourism, and emerging cooperative economies.

The dissertation consists of five parts. In Part 1, it offers in Chapter 1 an overview of the research background, research objectives and significance, research methodology, case study areas and the overall structure. Chapter 2 then reviews the existing literature to find connections among rural development and rural landscapes, and uncover its limitation. Therefore, it looks into the understanding of the “rural”, rural landscapes, and the structure, functions and changes of rural landscapes. It also reviews the contemporary discourses of rural development; the relationships among rural development and agriculture, sustainability, and multifunctionality; the role of “regeneration”; as well as the existing studies on the landscape approach. Part 2 is aimed to construct the conceptual framework of the proposed landscape approach to rural development. For the purpose of this dissertation, Chapter 3 first redefines the rural, rural landscapes and rural development under the discourse of urbanization and globalization, and expounds on the relationship between rural landscape and rural development. Then, it investigates the *status quo* of the

rural landscapes at three levels (natural, built and agricultural, and sociocultural landscapes) and rural development of the two case study areas. It analyzes local people's perceptions and governance patterns, examines current policies and strategies, and reveals existing problems. Chapter 4, based on the discussions in the literature review and Chapter 3, constructs an improved landscape approach to rural development. To this end, it first explains the overall construct of the approach, and then discusses on rural landscape regeneration in relation to rural development. It provides a definition of rural landscape regeneration, examines regeneration under the rural landscape context and proposes principles for rural landscape regeneration. Part 3 and Part 4 are dedicated to the application of the improved landscape approach to rural development, drawing on empirical examples from Meixian County and the Locride area.

Part 3 consists of chapters 5, 6 and 7, which systematically elaborate on rural landscape regeneration at three levels, namely, natural landscape, built and agricultural landscape, and sociocultural landscape. The three chapters try to demonstrate how empirically rural landscape regeneration can serve as a fundamental means to contemporize and optimize the functionality of rural landscapes. Part 4, as the improved landscape approach requires, casts light on innovation economies from an "ecosystem" perspective. It investigates the mechanism of innovation within the rural economic fabric. The mechanism is meant to form a synergizing relationship with landscape regeneration and meanwhile provide a *socioeconomic* support to keep the landscape regeneration process dynamic and sustainable. Chapters 8 starts with discussions on place, innovation and network, which are considered as the preconditions of innovation economies in rural areas. Then it looks into the disadvantages and innovations of rural economies, focusing on land reform and rural-urban linkages as two facilitators to foster innovation economies. On this basis, it explores agricultural innovations and entrepreneurial innovations with real-world examples from the two case study areas. Finally, the chapter investigates how emerging farmers' professional cooperatives and e-commerce are promoting place-based innovation and economic development, casting light on their *status quo*, development strategies, and significance and limitation. In Chapter 9, rural tourism is examined against the innovation discourse, with special focus on territorial identity as assets and territorial branding as the value-adding tool. Part 5 draws a conclusion of the research, discusses findings, and offers suggestions for future research.

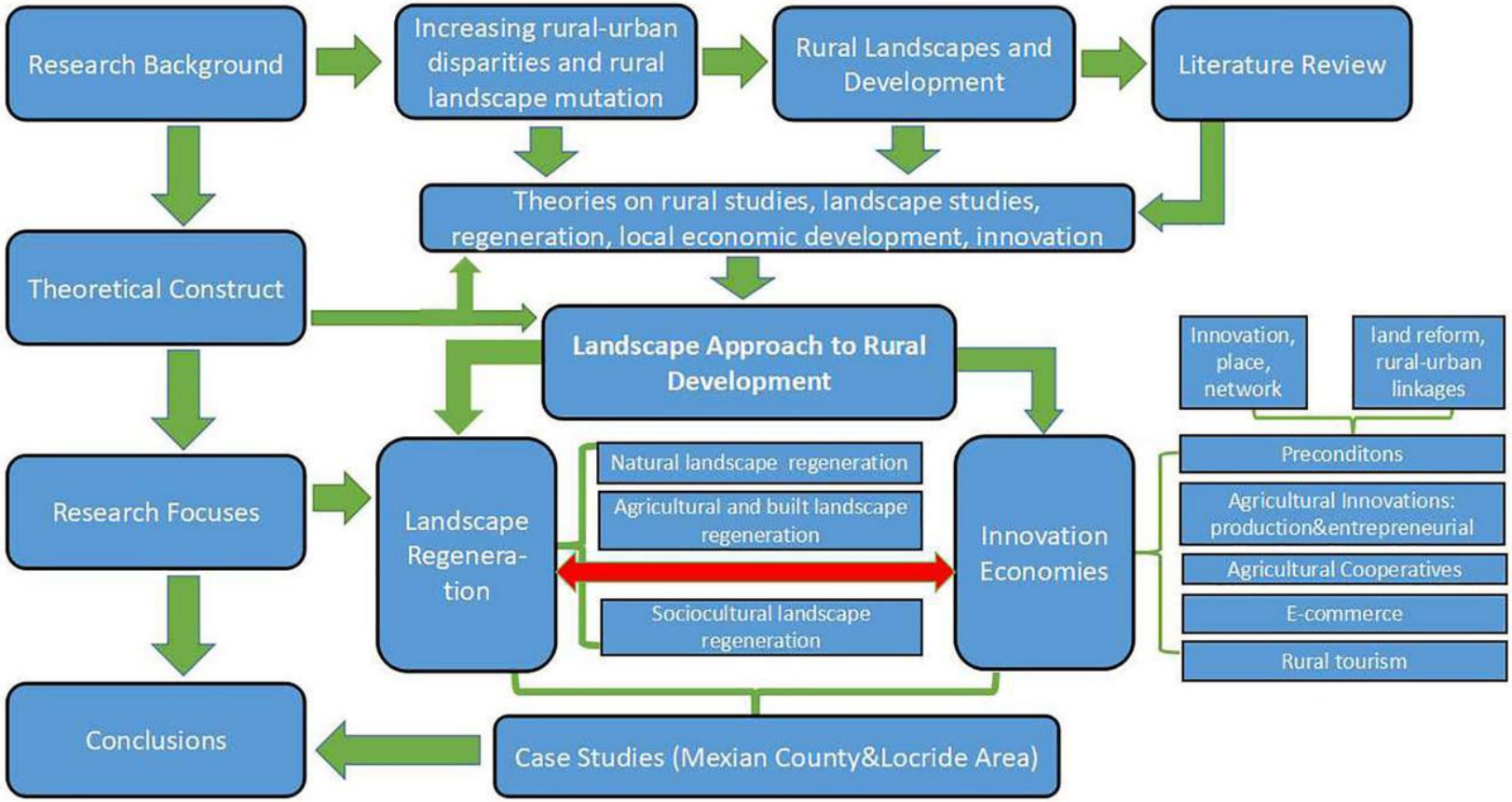

Figure 9. Conceptual map of the research structure.
Source: The Author's elaboration.

Chapter 2 Literature Review: Rural Landscapes and Rural Development

As an aggregation of economic, sociocultural and environmental dynamics, rural landscape has been increasingly considered as relevant to rural development. However, such an argument appears questionable for several reasons. First, it seems to have ignored the fact that rural development is also fundamental to rural landscapes' own "development". Second, there lacks a comprehensive understanding of rural development, and the academia generally relates it to economic growth. Third, this view seems to ignore the dynamic nature of rural landscapes. As a matter of fact, rural landscapes often change in the course of urbanization and facing global trends like globalization. It is not explicit whether a certain rural landscape change brings about positive or negative externalities which may affect the outcomes of development initiatives. This again puts the concept of "rural development" under question. The fourth issue concerns sustainability. Rural landscapes are taken for granted as a resource supportive of rural development. A hidden question is how this resource can be utilized in a sustainable way and how sustainable benefits can be generated in the long run. Sustainability here thus has two dimensions: the sustainability of landscape itself and the sustainability of development. Fifth, this allegation, based on specific case studies, holds true only under a specific socioeconomic context. This context determines the state of rural landscapes and their perception (and associated positioning) which vary greatly in countries of different states of development. Consequently, the functionality and prioritized functions of rural landscapes vary considerably, so does their impact on rural development. Sixth, at present, academic discussions on the relationship between rural landscapes and rural development are mainly focused on the role of heritage rural cultural landscapes in the development of rural tourism. However, the relationship between ordinary rural landscapes and rural development is rarely investigated, nor are other aspects related to rural society and economies, like entrepreneurship or innovation economies. In order to fully understand the relationship between rural landscapes and rural development, it is therefore necessary to investigate these six aspects. In the following sections, a literature review is carried out on the existing studies on landscape and development, focusing on rural studies, landscape studies, rural development, regeneration and landscape approach.

2.1. The Rural and Rural Landscape

2.1.1. Existing Definitions

According to Kizos and others (2010), rural landscapes ought to enjoy a central

role in current rural research because, first, it is an interface of various spatial dynamics and its form and functions can be used to address a great variety of rural issues; second, it encourages interdisciplinarity (Tress *et al.* 2005 cit. in Kizos *et al.* 2010); third, it increasingly takes into account processes of localization and globalization; and fourth, it evolves into a broader and policy-relevant concept rather than merely perceptive conceptualizations (Olwig 1996 cit. in Kizos *et al.* 2010). Balestrieri (2015) also highlights the topicality of rural landscapes considering first, the rooting of cultural identity in rural areas; second, the widespread need to regenerate degraded land and environment; and third, their contribution to local development. However, while existing studies on landscape are numerous, what is still lacking is an effort to coordinate and organize all this knowledge in a way that could make it useful in terms of policy application (Rovai *et al.* 2016). Unarguably, a sound understanding of rural landscapes is fundamental for their valuation, preservation, planning and management (Balestrieri 2015). With this regard, it is necessary, first and foremost, to have a systematic examination of the existing conceptualization of rural landscapes. This is critical to laying the very foundation for linking landscape studies and practices, which within the framework of this dissertation concerns development-related practices.

One of the fundamental questions of this dissertation is, what is the rural and what is rural landscape? It is almost impossible to reach a consensus on a universal definition of the rural that could be accepted by all the countries and applied under any circumstances. Both Eurostat and the National Bureau of Statistics of China refer to "rural areas" as areas outside of urban clusters[10] and with defining demographic characteristic. In China, rural areas are localities with a resident population of less than 3,000. In the EU, Local Administrative Units level 2 (LAU2 or communes) are classified into three categories based on the degree of urbanization[11, 12], namely,

1) cities (alternate name: densely populated areas), at least 50% of the population live in urban centers;
2) towns and suburbs (alternate name: intermediate density areas), at least 50% of the population lives in urban clusters and less than 50% in urban centers;
3) and rural areas (alternate name: thinly populated areas), at least 50% of the population live in rural grid cells.

Clearly, EU's and China's definition does not consider agriculture or sociocultural attributes as defining characteristics of rural areas. Bealer and

[10] "Urban clusters" are clusters of contiguous grid cells of 1 km² with a density of at least 300 inhabitants per km² and a minimum population of 5,000 (Eurostat).
[11] See European Commission - Eurostat - Degree of urbanisation - Background: <http://ec.europa.eu/eurostat/web/degree-of-urbanisation/background>, accessed on July 10, 2018.
[12] The degree of urbanization is measured in two ways: the first, by the percentage of the total population living in urban areas (Antrop 2004b), as defined by the country; and the second, by the rate of urbanization, which describes the projected average rate of change of the size of the urban population over the given period of time [It is calculated as ln(PUt/PU0)/n where n is the length of the period and PU is the percentage urban. It is expressed as a per cent.].

others (1965) first identified the ecological, cultural and occupational aspects and more recently Frey and Zimmer (2001) identified the ecological, economic and social aspects as three characteristics that distinguish the rural from the urban. Rural sociologists have commonly defined the rural following either the descriptive approach that studies rural localities' sociospatial characteristics (such as employment, population, migration, housing conditions, land use and remoteness) or the sociocultural approach that investigates people's sociocultural characteristics (such as values, behaviour, attitudes and way of life) (Halfacree 1993). While spatial indifference (space as reflection of society) is inherent in the descriptive approach, the sociocultural approach draws on spatial determinism (space as producer of society) (*ibid*.). Both have been criticized by Halfacree for their "erroneous conceptualization of the relationship between space and society" (1993, 26), who claims that,

> … whilst space has no inherent causal powers (i.e. it is not absolute), whereby a spatial formation can give rise to social practices, neither can it be reduced to the sum of relationships (distances) between objects (i.e. it is not relative). Instead, space and spatial relations are both expressions of underlying structures – space is produced (Smith, 1984) – and a means of creating further spaces – space is a resource (Smith, 1981). (p. 26)

Indeed, perceiving the rural either as a spatially constructed sociality (rural as a geographical locality associated with certain social relations) or a socially constructed spatiality (rural as a social/psychological construct of a type of locality) (Gray 2000) cannot offer adequate understandings of the rural especially in today's world. A major manifestation is that new spatial configurations and tightening intra-regional connectivity make the rural and the urban less polarities or dichotomous than stations along a continuum (Friedland 2002). As a result, the conventional urban-rural dichotomy is no longer a viable approach to differentiating the rural according to sociodemographic, attitudinal, cultural variables, etc. This is particularly true in North America and Europe, where places that are "rural" based on their location and landscape form are nonetheless partially "urban" in their higher-order economic functioning and composition (Irwin *et al.* 2009). This means that there is no causal link between rural space and social life (Gilbert 1982). Consequently, urban and rural are no longer distinct geographic entities, but rather end points of an economic and geographic continuum along which a range of places are arrayed that vary in their mix of urban and rural elements (Irwin *et al.* 2009).

Alternatively, Halfacree (1993) argues for a locality-based definition in parallel to seeing the rural as social representation. In the former, the rural is treated as a specific type of space that has a physical geographic location where its characteristic are concretized in the physical and social attributes of that

location. Its attributes can be observed and analyzed in terms of topographic attributes, social composition of the people living and/or working there, forms of activity, nature of social relations, and relations with other spaces of a similar or different type in other geographic locations (Gray 2000). At this point, it seems that Halfacree is describing the "locality" based on its sociospatial characteristics, thus returning to the descriptive approach. Halfacree (1993) himself admits that none of the three definitions has adequately defined what makes localities rural. As for the latter, instead of seeing the rural as a space as the locality-based definition does, the rural is "a de-spatialized cultural concept" and representing space. With regard to rural landscape and development, this space provides a framework for understanding the co-existence of divergent beliefs, attitudes and opinions within different segments of the population (Fraser 1994). The rural is not only a physical reality, but also a mental, subjective and perceptive reality as it is primarily a social construct (Balestrieri 2015). Therefore, the rural space itself can be seen as a social construct that is not independent of but integral to a particular type of society (Gilbert 1982; Richard *et al.* 2011). Also in the Marxist theory, space is viewed as a reflection of society (Claval 1993), and the resulting rural is seen as a spatial product of the dominant mode of production, which under the present system is urban and industrial centered (Gilbert 1982). On this basis, Gilbert (1982) suggests two constituents of the rural: "capitalist space" in the form of uneven regional development, and the "mode of primary production" (including the occupational category), which is distinguished by its direct interaction with the natural environment.

Halfacree (1993) values defining the rural as a social representation because it has the everyday significance as its basis of definition. According to Johansen and Nielsen (2012), a definition able to "make sense of our everyday world" is most desirable, in that only in this way will it be easy for planners, rural policy makers, and local rural actors to use empirically. They therefore argue for an "everyday approach" to defining the rural by taking into account the community level and the regional level and combining a rural locality's culture and natural amenities as criteria. Size of territory and population density are major criteria in the OECD definition of rural areas, which, in their opinion are too broad for practical application and thus should be replaced with the size of territory and land cover. The "everyday approach" uses the open land between the rural units' centers as a criterion for rurality, and the number of such centers that a person has to traverse to reach an urban area as a proxy for distance and degree of rurality. On the one hand, the size of territory should be the smallest possible territorial unit yet sufficient to capture local identity and culture; on the other hand, rural units should be able to capture local differences and gradients in landscape structure and monitor local land cover and distance.

Perceiving the rural as a social representation has affected the understanding of "landscapes". Landscapes are primarily "social" as a "direct emanation of the evolutionary process of a society" (Morabito *et al.* 2008, 523) and a "human

enterprise" composed of "man-made or man-modified spaces to serve as infrastructure or background for our collective existence…" (Jackson 1984, p. 8). Greider's and Garkovich's (1994) remarks on landscapes based on a social constructionist perspective reveal the three key ingredients in the formation of landscapes, i.e. human perception, human-nature interaction, and value and identity construction:

> "Landscapes" are the symbolic environments created by human acts of conferring meaning to nature and the environment, of giving the environment definition and form from a particular angle of vision and through a special filter of values and beliefs. Every landscape is a symbolic environment. These landscapes reflect our self-definitions that are grounded in culture. (p. 1)

Therefore, they conclude that landscapes are socially constructed, and both western and non-western peoples create landscapes as a reflection of their self-definitions under a specific cultural context. This means that under the conceptualization of the rural as a social representation, rural landscapes can also be perceived as social representations: any physical place can embody multiple landscapes, each representing the cultural definitions of those who perceive it (Greider and Garkovich 1994). As social representations, rural landscapes are inevitably and continuously reconstructed in response to cultural groups' changing self-definitions in the course of rural transformations. In a self-redefinition process, they have incorporated the impacted aspect of the physical environment. It is therefore important that any efforts to build up a framework of landscapes cast light on the meaning of the environmental change for cultural groups. This is because "biophysical changes in the environment are meaningful, or socioculturally significant, only insofar as cultural groups come to acknowledge them through a redefinition of themselves" (*ibid*., 21).

Over the years, "landscape" has gained a growing popularity in rural studies within such disciplines as rural geography, rural sociology, landscape ecology, etc. Popular topics include rural landscapes and agritourism/rural tourism (Ammirato and Felicetti 2013; Carneiro *et al*. 2015; Lo *et al*. 2014; Moldovana *et al.* 2015; Sonnino 2004; Torquati *et al.* 2017), rural landscapes and rural development (Guarino *et al.* 2017; Hart 2015; Kizos *et al.* 2010; Park and Selman 2011; Pinto-Correia *et al.* 2010; Richard *et al.* 2011; Sobala and Myga-Piątek 2016), rural landscapes and biodiversity and cultural conservation (Agnoletti 2014; Fischer *et al.* 2012; Halpern and Mitchell 2011; van Der Valk 2014; Wang and Wang 2016; Yu *et al.* 2016), rural landscapes and system resiliency (Biggs *et al.* 2015; Schippers *et al.* 2015), rural landscapes and territorial planning and governance (Anderson *et al.* 2017; Gullino *et al.* 2018; Primdahl *et al.* 2013; Rovai *et al.* 2016; Selman 1993; Vizzari and Sigura 2015; Yang *et al.* 2011), rural landscapes and innovation (Wiggering *et al.* 2010), etc. However, most of the studies have used the term "landscape" as given without offering any clear definition. Existing definitions generally refer to "landscape" as the cultural and

natural interactions between people and environment (Balestrieri 2015; Kizos *et al.* 2010; Lin 2016; Park and Selman 2011) and as spatial social-ecological systems that deliver a wide range of functions (Gulickx *et al.* 2013). Antrop (2000) refers to "landscape" as a common cultural commodity and perceivable environment that is holistic, relativistic and dynamic. Not only the academia, national and international institutions have also showed a growing strong interest in "landscape" which is often defined with varied perspectives (Table 3).

Table 3. Definitions and scopes of "landscape" in national and international instruments on landscapes

Instrument	Definition	Scope
Latin American Landscape Initiative[1] (2012)	a space/time outcome of natural and human factors, tangible and intangible, that being perceived and modeled by people, reflect the diversity of culture	N/A
Aotearoa-New Zealand Landscape Charter[2] (2010)	the cumulative expression of natural and cultural elements, patterns and processes in a geographical area	- all aspects of the landscape, including natural, cultural, rural, urban and peri-urban areas; - including land, water systems and marine areas; - including landscapes which are outstanding, spiritually, culturally or naturally significant or protected, and everyday, productive or degraded landscapes
European Landscape Convention[4] (2000)	an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (art. 1)	- covering natural, rural, urban and peri-urban areas; - including land, inland water and marine areas; - concerning landscapes that might be considered outstanding as well as everyday or degraded landscapes (art. 2).
IFLA Asia-Pacific Region Landscape Charter[3] (2015)	an area, as perceived by people, whose character is the cumulative result of the action and interaction of natural and/or cultural factors	Same as in the Aotearoa-New Zealand Landscape Charter (2010)

Source: The Author's own work based on documents retrieved from: Canadian Society of Landscape Architects <http://www.csla-aapc.ca/career-resources/international-landscape-convention> for texts 1-3 and Council of Europe <https://www.coe.int/en/web/landscape/> for text 4. Accessed on May 30, 2018.

The table above shows two commonalities. First, the institutional definitions all put an emphasis on three key aspects of "landscape", i.e. landscape as a spatial physicality (an area), as a human-nature interaction and as a result of human perception and action. Indeed, the perception of landscapes cannot be made

only from a single space-time thinking. Rather, it should start from the broad relationship between people and the environment (Lin and Cai 2012). The IFLA Asia-Pacific Region Landscape Charter and the Aotearoa-New Zealand Landscape Charter also stress the cumulative process embedded in landscapes, implying their dynamic, evolving nature. Second, the landscape scope defined in the ELC and some of the above-mentioned instruments shows a considerable broadening, whereby both "elite" and ordinary even degraded landscapes are central to the focus. Indeed, this broadening reflects the continuous evolution of the understanding of heritage at both institutional and academic levels over the last decades. By contrast, the UNESCO World Heritage Convention has only defined "cultural landscapes" of outstanding universal value[13].

Considering that "All rural areas have cultural meanings attributed to them by people and communities", ICOMOS-IFLA (2017) has related the concept of "rural landscape" closely to the rural space as a whole, suggesting a totality and human-nature view of both rural areas and rural landscapes. Such a view leads to the conclusion that, "all rural areas are landscapes" (ICOMOS-IFLA 2017) and a relatively comprehensive definition of "rural landscape", highlighting five major aspects, i.e. spatial physicality (an area), formation mechanism, systemic nature, typologic diversity and multifunctionality (Table 4).

Table 4. "Rural landscape" as defined by ICOMOS-IFLA (2017)

Aspects	Attributes
Spatial Physicality	● terrestrial and aquatic areas ● land surfaces, subsurface soils and resources, the airspace above, and water bodies
Formation Mechanism	● co-produced by human-nature interaction used for the production of food and other renewable natural resources ● produced and managed through traditional methods, techniques, accumulated knowledge, and cultural practices, as well as those places where traditional approaches to production have been changed
Systemic Nature	● dynamic, living systems ● rural landscape systems encompass rural elements and functional, productive, spatial, visual, symbolic, environmental relationships among them and with a wider context
Typologic Diversity	● both well-managed and degraded or abandoned areas that can be reused or reclaimed ● huge rural spaces, peri-urban areas as well as small spaces within built-up areas
Multi-functionality	● Rural landscapes are multifunctional resources

Source: The Author's own work based on the "ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage (2017)".

[13] UNESCO, however, has touched upon the issue of linking heritage and development in the article 5(a) of its World Heritage Convention, "…to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes."

It is worth noting that the definitions found in the above institutional instruments are of limited applicability within the scope of this dissertation. This is because, first, as the defining institutions are mostly cultural and political, like UNESCO, ICOMOS and its national committees and EU, they have perceived rural landscapes primarily as heritage and defined them accordingly within the field of heritage. Undeniably, these institutions have promoted a major shift away from a static concept that was Eurocentric, materiality-centric and monument-centric to the current one that has taken into account the geographical and morphological diversity of heritage and ongoing socioeconomic, political and environmental processes. This has led to the recognition of landscapes as a type of heritage (to be discussed further in Section 4.2). Furthermore, what has been acknowledged is not only landscapes' intrinsic significance, but also their role and function they can have. This is even more so with the official recognition of the role and culture as a cross-disciplinary element and driver of sustainable development, now embedded in the UN 2030 Agenda (Target 4 under Goal 11)[14]. Nevertheless, the numerous instruments put forward by these institutions, as institutional and political texts, have articulated on synthetic rather than analytical concepts regarding the relevance of rural landscapes to development. This makes them have a limited capability in addressing factual socioeconomic and political issues in rural society.

Second, all these instruments, most of the existing academic texts alike, have offered an oversimplified interpretation of landscape formation and evolution mechanism. Rural landscapes are simply seen as a result of a somehow abstract man-nature interaction. "Man" cannot exist, let alone imposing any impact on nature once outside of a certain social system. Such a definition seems to depict a landscape void of social institutions. It is actually the interaction among all forms of social institutions, especially land ownership, land use, social roles, value system and rules that account for the formation and evolution of rural landscapes.

2.1.2. Structure and Functions

According to Piaget (1968), a certain structure is characterized by: 1) *totalité*, a structure is a wholeness composed according to a certain order and rules, where all components have organic linkages with each other within the structure and the wholeness is more than the sum of all components; 2) *transformations*, a structure undergoes constant transformations as its components are in dynamic movement and replacing each other based on certain rules without changing its overall stability; and 3) *autoréglage*, a structure is able to regulate and adjust itself with only its own elements and rules, bringing about its conservation and a certain degree of "closure". Monat (2018) holds that feedback loops, self-organization and hierarchies are important elements of natural system structure. Landscape structure also shows these characteristics. Including both

[14] UN recognized the need to "strengthen efforts to protect and safeguard the world's cultural and natural heritage" to foster sustainable cities and communities.

composition and configuration (Griffith *et al.* 2000), landscape structure tells how a certain landscape is constituted physiognomically and organized spatially. Landscape composition refers to features related to the presence or amount of land cover types without being spatially explicit (McGarigal and Marks 1995 cit in Griffith *et al.* 2000). It includes landscape elements that are both tangible and intangible, such as geological, morphological and ecological features as well as historical, perceptual and social values (Küster 2010), and that are both typological and chronological. Landscape configuration refers to the spatial distribution of cover types within the landscape (McGarigal and Marks 1995 cit in Griffith *et al.* 2000), and therefore is scale-dependent and refers to the spatial heterogeneity of the landscape (Turner 1989).

Landscape structure often reflects the variation in the natural environment and the specific interactions of human activities with the natural environment (Verburg *et al.* 2013), or solely natural disturbances in the form of natural disasters (Kamada and Nakagoshi 1996). Due to those interactions, the landscape structure is a unitary one characterized by the combination of mind and object (Chen 2013). As the impact of human activities on the natural environment differs in terms of distribution and intensity, a gradient of landscape modifications that translates into different landscape structures is thus produced (Vizzari and Sigura 2015). Landscape structure is maintained or changed under a balance of the effectiveness between natural and anthropogenic disturbances (Kamada and Nakagoshi 1996). Like landscape themselves, landscape structure is holistic, in that first, the whole is more than the sum of the composing elements; second, each element receives its significance only because of its position and relationship with the surrounding elements; and third, changing one element therefore always changes the whole in some way (Antrop 2000).

The functions of rural landscapes, referred to by some as "landscape services" (Gulickx *et al.* 2013), are closely related to their structure. Landscape structure together with landscape heterogeneity has a strong influence on the regulating services (water retention and purification, pollination, soil protection, etc.) and cultural services (landscape aesthetics, tourism, sense of place, etc.) delivered by landscapes (Verburg *et al.* 2013). Besides landscape services, landscape structure is also relevant with the shaping of development pathways. According to Fujihara and others (2005), a clear understanding of the structural changes in landscapes like changes in land use, population distribution and farming infrastructure and their impacts on the landscape is vital for sustainable regional planning and development.

Rural landscapes contain a number of resources which in various ways can be mobilized by the rural actors to drive rural development (Kizos *et al.* 2010). Wang and Lu (2015) maintain that for the value cognition of rural landscapes, a system that encompasses ecological value, economic value and sociocultural value is needed. Sandker and others (2010) consider rural landscapes as mosaics

of land cover types providing ecosystem services and developing opportunities for the multiple needs of diverse stakeholders. Lin and Cai (2012) highlight the rural landscapes' three structural functions stemming from traditional agriculture, i.e. productive economy, ecosystem services and sociocultural attributes. Socioculturally speaking, rural landscapes, with their innate natural, cultural and aesthetic values (Antrop 2000; Jin and Tang 2012; Wu 2015), give a clear character and identity to a certain place and region (Antrop 2004a). Regarding their production function, there exists a divergent perspective between developing economies and developed ones. The rural landscapes of developed economies are commonly viewed as post-productivist ones for consumption and recreation *in situ* (Cloke 2006; Halpern and Mitchell 2011; Lowenthal 1997; Marsden 2003; Matos Fernandes 2013; Pinto-Correia *et al.* 2010; Székely 2013; Willis and Campbell 2004), while their productive function has been marginalized. Consequently, instead of its traditional productive function like agriculture, other values of rural landscapes are increasingly stressed in today's world characterized by deep socioeconomic transformations.

National and international instruments on landscapes have also articulated on landscape functions. What are highlighted are commonly landscapes' relevance to public interest, socioeconomic and ecological services, cultural identity, well-being and quality of life, economic development, etc. As defined in the preamble to the ELC, landscape 1) has an important public interest role in the cultural, ecological, environmental and social fields, and constitutes a resource favourable to economic activity; 2) contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity; and 3) is an important part of the quality of life for people everywhere. The Canadian Landscape Charter (2015) recognizes that landscapes are 1) of public interest; 2) favorable to viable economic activities; 3) integral to the Canadian identity and to its diverse cultures; and 4) a major contributor to the quality of life for all people living in urban or rural areas. The Latin American Landscape Initiative (2012) highlights such landscape functions as 1) an exceptional, fragile and transitory resource; 2) the crucible of the intangible of Latin American communities; 3) a cultural, social and environmental asset; 4) a reference value and control of transformation; and 5) a right to all.

Apart from the above-mentioned socioeconomic and ecological functions, the existing literature also casts light on the communicative, regulative and regenerative functions of rural landscapes. First, as Widgren (2004) points out, besides their aesthetic values, landscapes are important also as a means of communication. On the one hand, landscapes contain customary law, social justice and order, land rights, and everyday practices (Bourdieu 1977). On the other hand, their eidetic quality, namely powerful visual imagery, and their landscape narratives (or landscape biographies) including maps, can be highly communicative in spatial strategy-making, and therefore are an effective way to

engage people with the possibilities of future action (Corner 1999 cit in Primdahl *et al.* 2013). Landscape imagery and identity are also of increasing significance in territorial branding (de San Eugenio Vela *et al.* 2017; Mettepenningen *et al.* 2012), in the marketing of food, and in the emerging moral economy (based on goodness, fairness and justice) of food production and consumption (Morgan *et al.* 2007). Second, in many countries and regions, mainly developed ones, landscapes are employed as a regulative tool to manage changes in land use and associated development so as to control transformation as stated in the Latin American Landscape Initiative. Rural landscapes as a regulative tool means that as a spatial representation of society and economy, they emerge as a new tool for observing rural transformations (Bao and Zhou 2014). Using rural landscapes as an observation tool, the deep-rooted social and economic reasons for landscape changes can be revealed. In so doing, policy advice and technical support for managing rural landscape changes can be provided (*ibid*.). In Europe, as is evidenced by the ELC and many other national legislation, landscape has become part of the national and regional patrimony and the subject of intensive planning and regulation (Friedland 2002). In the United States, by contrast, the regulative function of landscapes has not been applied in practice yet, as landscapes are still popularly conceived as wilderness and as national parks and monuments (*ibid*.). Third, landscapes, with their tangible and intangible resources that are locally embedded, are sources of regeneration in response to territorial transformations. Through a holistic understanding of landscape functions, social, economic, and environmental goals can be coordinated and complement each other, and the correlation between these goals under the context of rural transformations can be evaluated (Lin and Cai 2012). Facing exogenous pressures due to urbanization and globalization, rural areas are forced to regenerate themselves with endogenous approaches so as to "glocalize" themselves, a process where globalization and localization are complementary to each other (Saija 2009). Rural landscapes have a significant role to play in this regeneration process characterized by glocalization (Kizos *et al.* 2010).

It can be concluded from the above discussions that on the one hand, rural landscapes are multifunctional; and on the other hand, landscape functions are not always compatible, and conflicts between functions are not uncommon (Heilig 2003). A typical conflict is the trade-offs between ecological function and economic function. Indeed, under a given socioeconomic system, one or some functions tend to be prioritized over other functions depending on the prioritized societal needs. This explains why in industrializing societies, economic function is often prioritized over ecological function to satisfy most basic societal needs (at the bottom of Maslow's hierarchy of needs).

2.1.3. Landscape Changes

Since 1992, UNESCO has designated rural landscapes as "evolving cultural landscapes". This suggests that rural landscapes are changing by nature. A sound knowledge of landscape changes is significant because the recognition of the

dynamic of socioeconomic continuity and change is key to understanding development (Árnason *et al*. 2009). By studying the phenomena of rural landscape changes and the underlying causes, it can help reveal the factors affecting rural development and understand the problems in the development process. This will serve as a basis for a more scientific development of integrated development strategies. According to Antrop (2000), understanding "landscape" itself is the precondition of understanding landscape changes. To help understand current landscape changes, he therefore proposes an integrated approach to landscape analysis based on holism, perception and evolution, which respectively look into the holistic, perceivable and dynamic nature of landscapes (Antrop 2000).

> Holism allows the link between landscape ecology and perception. It explains the interaction between structure and functioning and the importance of the scale. Perception is linked to structure, pattern recognition and learning and, thus, also to behaviour and the practical results of planning processes. Landscape evolution is based on the dynamic interaction between structure and functioning and also on history, which makes each landscape unique. (p. 17)

Generally speaking, landscape changes are studied in two major ways: while one is descriptive focused on landscape's external morphological changes caused by changing productive patterns, the other is prescriptive looking into landscape's internal functional and structural changes.

The descriptive approach sees landscapes as *realities* resulting from layered stages of development (Olwig 1996), and each particular stage is characterized by a certain landscape form. Antrop (2004) has studied landscape changes in a diachronic order. Referring to the European context, he maintains that, landscape changes have gone through three periods, namely, pre-18th-century traditional landscapes, landscapes of the industrial revolution age from the 19th century to the World War II, and the on-going post-modern landscapes characterized by increasing globalization and urbanization. Such an categorization contains two underlying messages: first, the impact of productive patterns on landscape change, and second, the rate and scale of landscape change. On the one hand, although all the three periods are results of spatial reconfiguration according to the relationship between environment and socioeconomic forms and needs, each of them marks distinct productive patterns. Smallholder farmer economy and urban commodity economy are two basic productive patterns of traditional landscapes. The second period has seen industrialization and modernization of various degrees in both urban and rural areas, and the resulting productive pattern is largely industry-based. As for the third period, whereas traditional industrial economy of developed economies has declining importance, new economic forms that are service and knowledge-based are emerging under deepening globalization and urbanization.

On the other hand, the rate and scale of landscape change, as is shown by the short interval between the second and third periods, is closely related with industrialization, globalization and urbanization. These simultaneous national and global trends have brought about changes that are unprecedented in terms of scale, intensity and speed. Consequently, the changes from traditional landscapes to modern ones of the two successive periods, showing "a visible break in the continuity with the past", have been mutative rather than evolutionary, in that "new landscapes have been superimposed rather than being integrated" (Antrop 2004a, 5) into the existing landscapes. This suggests that there have hardly been longer periods of rest or stabilization critical to the harmonization of the existing landscape and the new landscape elements (Antrop 2000). Therefore, the innate instability is common to newly created modern landscapes, especially those of the second period, which very often have soon disappeared (Antrop 2004a). Due to this reason, current landscape changes, without a "harmonic integration" and characterized by uniformity, rationality, and the loss of diversity, coherence and identity of the existing landscapes (Antrop 1997, 2000, 2004), are more often than not seen as a threat. Such a pessimist perception of landscape changes suggests four fundamental conflicts between rural landscapes and modernity, namely, conflict with urban use, conflict with conservation and/or recreation, conflict with forestry and conflict over tenure (land owners and land cultivators are very often different bodies) (Cloke 2013).

The prescriptive approach, instead, pays attention to the *processes* shaping landscapes, namely, the dynamic interaction between environmental and socioeconomic forces embedded in landscapes. Today, rural landscapes world-wide are facing significant economic, sociocultural, environmental[15] and demographic changes (ICOMOS-IFLA 2017; Lokocz *et al.* 2011; Kizos *et al.* 2010; Whittaker and Hutchcroft 2002). In this regard, three points are especially worth noting:

First, these changing factors are closely interrelated, which means that, for example, demographic change affects economic change which in its turn affects sociocultural and environmental changes. Consequently, they have a joint impact on rural landscapes. In essence, this approach finds its theoretical root in landscape ecology, which looks into the relationship and interaction between human activities and landscape structure, functioning and dynamic changes (Forman and Godron 1986; Griffith *et al.* 2000; Liu *et al.* 2006; Selman 1993). Under the interaction, landscapes have been going through continuous land reorganization in order to better adapt their use and spatial structure to the changing socioeconomic demands (Antrop 1998, 2004a; Gullino *et al.* 2018). The consecutive reorganization implies simultaneous functional and structural changes of rural landscapes on both macro (land use and land cover) and micro

[15] Such as climate change, pollution and environmental degradation including non-sustainable resource mining, impacts on soil, vegetation, and air quality, and loss of biodiversity and agro-biodiversity.

levels (all landscape components) (Gorączko and Gorączko 2015), and on both material and immaterial levels. This means that landscape functioning and structure are intimately related (Antrop 2000), and the interaction between the two accounts for the fundamental reason of landscape changes.

Second, among all these changing factors, what has more profound influence is the economic factor which is going through drastic restructuring in the course of urbanization and globalization. Economic changes are structural and often manifested in economic growth or decline, trade, intensification of agriculture, change of land use, etc. Change of land use and related practices has the most direct impact on rural landscapes. On the one hand, it brings about landscape diversity. On the other hand, it results in direct changes not only in their structure and form, but their functioning and ecosystem services (van der Zanden *et al.* 2016). For example, landscape changes are closely related to changes of farms' productive arrangements, which are in turn affected by specific economic strategies that are conditioned by internal factors such as resources and by external factors such as agricultural policies and commodity market trends (Rovai *et al.* 2016). Change of land use is always accompanied by conflicting social interests over a certain use of rural landscapes. This is because that different social groups often attribute different meanings to the landscapes and hold incompatible expectations for the activities considered appropriate within those landscapes. They therefore see some land uses as impeding a particular meaning or expectation (Woods 2003).

Third, all landscape components have their own dynamics of change (Antrop 1998). Studying changing rural landscapes involves therefore studying the nature of each landscape component and its specific frequency, pace and magnitude of change (*ibid*.), ranging from changing symbolic values (cultural heritage, values and identities), productive structures and functions to ecological/environmental aspects (Kizos *et al.* 2010).

Besides the two approaches, landscape perception is also recognized as an effective way of understanding landscape changes. This is simply because that landscape changes are always accompanied by changing perceptions of landscapes or changing values attributed to them (Cloquell-Ballester *et al.* 2012; Gobattoni *et al.* 2015). This approach actually suggests the "mental" agency of the perceiver/user of the landscape to trigger landscape changes: physical change starts from cognitive change. Miles-Watson and others (2015), for example, argue that it is reasonable to see landscapes as an object of human perception and practice, and as a medium that interactively expresses changing cultural, social and political attitudes. In fact, as social groups and landscapes are mutually constitutive (*ibid*.) and shaping (Richard *et al.* 2011), landscapes affect and are affected by life pattern and mentality towards the environment. Often, landscape perception is impacted by one's knowledge and past experience, therefore, it is "primarily subjective and can be understood only relative to the characteristics of the observer" (Antrop 2000a, 19). The subjectivity of

perception is a fundamental factor in the organization of environment and, thus, for the shaping of environment (*ibid*.). For examples, changes in landscape perception have far-reaching effects on emerging real estate markets, local planning, and people's very livelihoods in the communities affected (Taylor and Hurley 2016). European policies and the ELC have recognized the key role of people's perceptions and attitudes as the drivers of landscape change and preservation of sustainable landscapes (García-Llorente *et al.* 2012; Rega 2014). For this reason, there is the need to assess public preferences for landscapes (García-Llorente *et al.* 2012) and their "openness" to landscape change (Park and Selman 2011) so as to anticipate and manage land use conflict and promote culturally sustainable landscapes (Anderson *et al.* 2017).

2.2. Rural Development

As far as rural development is concerned, rural sociology and rural geography are two main research areas. The former focuses on changes in rural society, while the latter on analyzing rural issues from the perspective of geographical distribution and space (Zhang 1999 cit in Chen 2008). In China, the research on rural development has long been focused on studying "development models". The concept of "model", first advocated by Fei Xiaotong 费孝通 (1985), refers to a characteristic development path of a specific locality/region formed under certain historical conditions. This concept has led to mainly qualitative research concentrated on the types and models of rural transformation such as rural clusters, tourism, e-commerce, etc. and rural development from multiple perspectives (Yao and Liu 2014; Yuan *et al.* 2017). Major perspectives include dynamic factors (exogenous and endogenous), spatial system (rural clusters), historical perspectives (rural development stages in China), and regional characteristics (rural development models in Asia and the West) (Yao and Liu 2014).

Just as it is challenging to define "rural", it is no less so to define "rural development" once a diversity of global contexts and perspectives representing diverse social interests are taken into account. For example, in developed economies, rural development is popularly associated with quality of life and environment preservation (Rega 2014). In developing ones, by contrast, it is mainly related to agricultural development, rural industrialization and urbanization, poverty alleviation, nutrition, improvement of health conditions, illiteracy eradication, access to natural resources and community services, etc. (Adisa 2012 cit in Rega 2014; Yao and Liu 2014). Therefore, the dissertation tries to review how "rural development" is conceptualized in the existing literature.

First of all, it is necessary to define what is "development". According to Bertrand (1972), development shall be conceptualized in accordance to five rules:

- development carries no implicit or explicit connotation of

underdevelopment[16];

- development programs are not exclusively external (or international) in nature;
- development concept transcend [sic] any exclusive area or residence designation;
- the change which development implies cannot be measured exclusively in terms of specific economic, technological or political objectives;
- development must be comprehended as more than a trend such as industrialization, or a process such as change, although it obviously encompasses such phenomena.

Point 4 emphasizes that development is not only about economic growth, but about improvements in quality of life and well-being of people.

The literature available on rural development is numerous. Generally speaking, however, there are three gaps need to be filled. First, the majority of studies are strategy-oriented and case study-based. What is needed is thus a coherent conceptual framework into which different development strategies can be analyzed. Second, studies popularly take "rural development" as a given concept without taking into account possible conflicts of interest regarding a specific development initiative. It is therefore necessary to clearly define what "rural development" signifies under a certain context and for a certain social interest. Third, few studies are comparative and indeed seldom relate themselves to larger ongoing socioeconomic and political trends at home and abroad.

2.2.1. Role of Agriculture

Agriculture is an interface between society and environment (Fischer *et al.* 2012; Hermans *et al.* 2009; Zografos 2007), and a link between ecosystems and "techno" systems (Guarino *et al.* 2017). The social, economic and spatial dynamics of European rural regions are dominantly influenced by the dynamics of the agricultural sector (EC 2006). For most developing countries like China, agricultural growth should simultaneously contribute to four principal goals: growth, poverty reduction, food security, and sustainable natural resources management (Hazell 1998), and must be achieved in a way that is environmentally sustainable and socially equitable (Hazell and Lutz 1998). Indeed, agriculture has long been synonymous with rural development and now sustainable agricultural development (Hermans *et al.* 2009), or at least central to related discussions. Just like van der Ploeg and others remark, "Rural development theory is not about the world as it is – it is about the way agriculture and the countryside might be reconfigured (2000, 396)." For the agriculture-based rural development, Marsden (2003), with a reference to the European context, points out three rural development models (see Table 5) for

[16] There are no societies or areas within societies which can completely escape a designation of needing improvement and all can be judged superior on certain criteria--there are always ways to improve conditions of life, despite a comparative advantage over others.

realizing the possibility of rural sustainability, i.e. agro-industrial model, post-productivist model and rural development model. The first two according to Marsden are unsustainable: the agro-industrial model have aroused problems due to product quality, deregulation, and consumption pattern which have altogether formed systems prone to periodic crises and failures. In the post-productivist model, the agricultural sector of developed economies is marginalized due to agriculture's decreasing economic significance and environmental degradation caused by intensive industrial agricultural production. Meanwhile, as rural landscapes are attributed with different meanings, values and functional expectations mainly by urbanites, the rural space as a result becomes one of consumption for the urban population. As for the rural development model, agriculture is repositioned under a broader rural context. Grounded in agro-ecology, this model aims to manage the rural as an ecosystem. This is done by 1) addressing simultaneously the needs of society (development) and environment (preservation); and 2) emphasizing principles of environmental and territorial justice and the significance of community building and empowerment, and of corporate responsibility and accountability. The final goal is to achieve the so-called "ecological modernization" (Dryzek 1997), which marks a full local progress with well-balanced achievements in environmental protection and socioeconomic development.

Before Marsden, "post-productivism" already became commonly used as a concept in the 1990s by rural geographers. Initially, it represented an attempt to explain and theorize changes and trends in contemporary agriculture, where the focus on agricultural production gradually shifted towards demand for amenities, ecosystem services and preservation of cultural landscapes (McCarthy 2005; Wilson and Rigg 2003; Woods 2011), and the functional positioning of the rural as multifunctional space (Halpern and Mitchell 2011; Hart 2015; Jack 2007). Stemming from a western European context, it does not apply in other contexts (Holmes 2002). Wilson and Rigg testified that "post-productivism" is applicable to developing countries to understand their contemporary agricultural change, on condition that the concept be adapted "to address specific conditions in the rural South, possibly by combining theoretical approaches surrounding the notion of 'post-productivism' developed largely from a Northern perspective, and 'deagrarianization' from a Southern perspective" (2003, 681).

Table 5. Three models of rural development with a focus on agriculture

	Ideology	Action Level	Agency	Approaches	Objectives
Agro-industrial	Productivism	Macro	Corporate enterprises	Partial deregulation of markets; dependence on free competition	Maximization of production

Post-productivist	Preservationism paternalism[2]; subsidization[3]; contestation	Micro	Ex-urban residents; large rural landowners	Pro-consumption while marginalizing agriculture	Commodification of rural space and nature for urban residents
Rural development	Agro-ecology; multi-functionalism; social constructivism	Macro and micro	Enterprise; farms; consumers	Sustainable production agriculture; integrated food networks; community building	Enhancement of natural environment and social equity

Source: The Author's reworking based on Marsden (2003)
Notes: 1. Similar to environmentalism led by new ex-urban residents;
2. By large rural landowners;
3. The state may subsidize agriculture in marginal areas.

The implication of Marsden's rural development model is that it is considered as a new developmental model for the agricultural sector (van der Ploeg and Roep 2003). A healthy rural development needs agriculture that is neither marginalized nor based on large-scale monocultures. It should be agriculture with a broad diversity, based on "economies of scope" instead of economies of scale (Marsden 2003). It is worth noting that rural development models spatially show diversity and temporally goes through a dynamic evolution under different historical conditions (Hong 2007), and are ultimately embodied in the territoriality (Yao and Liu 2014). This territorial nature of rural development models means that a specific rural development pattern is formed under joint forces of specific natural and economic conditions, different industrial structure, technical composition, production intensity and the configuration of factors. In this sense, Marsden's categorization is largely descriptive rather than prescriptive.

2.2.2. Discourses and Sustainability

Despite that Marsden does not explicitly elaborate on other aspects of rural development besides agriculture, he makes it explicit the very need to achieve an agriculture-based rural development "in between". This has paved the way for a new paradigm that addresses the rural as a whole: not only agriculture and economy, but environment and rural life. Consequently, rural development has been redefined in a broader framework, in terms of the mechanism, objective and means of development. Rural development concepts go beyond the boundaries of the economic sphere, and see a growing emphasis on the capitalization on landscapes, as well as a rediscovery of tangible and intangible resources (Ammirato and Felicetti 2013). Rural development concerns itself with the wider regional scale and a broader range of actors (Murdoch *et al.* 2003). Van der Ploeg and Roep (2003) also argue that rural development is a three-dimensional process that is multilevel, multiplayer and multifaceted. In terms of the objective of rural development, human well-being has been

increasingly emphasized. Jansma and others (1981) refer rural development to an overall improvement in the economic and social well-being of rural residents and the institutional and physical environment in which they live. Mindful that such a definition ignores the implication of the rural to non-rural residents, Hodge refines Jansma's definition: "an overall improvement in welfare of rural residents and in the contribution which the rural resource base makes more generally to the welfare of the population as a whole" (1986, 272).

Clearly, the above discussions have taken into account diverse social interests. This on the one hand leads to multiple discourses concerning the functions of the countryside; and on the other hand, invites discussions on the relationship between (rural) multifunctionality and rural development. Indeed, the rural today sees an ongoing further diversification of interest and coalitions. This ongoing diversification process has led to the formation of a "discourse coalition" (Hermans *et al.* 2009), under which rural development is expected to go through a negotiation process. Such a process involves coalitions of "diverse social interests" (Frouws 1998) consisting of both urban and rural population, both the public and the private, social entities, and the academia. This means that the rural is no longer the monopoly of farmers (van der Ploeg and Roep 2003). Rural discourses are important in the processes and structures through which access to and use of rural resources are constructed (Marsden *et al.* 1993 cit in Frouws 1998). Based on the analyses of various notions, concepts, statements and views in numerous publications by the public, the private and the academia, Frouws (1998) identifies three major sociopolitical discourses related to European perspectives on rural development and the future of the countryside (see Table 6): the traditional agriruralism, neo-liberal utilitarianism and hedonism. Clearly, the utilitarianist discourse and the hedonist discourse are respectively compatible with Marsden's agro-industrial model and post-productivist model of rural development. In essence, the three discourses respectively correspond to the social, economic (international competitiveness in global markets) and cultural function (contribution to the quality of life for its beauty and attractiveness) of the rural.

Table 6. Overview of discourses on the countryside

	Ontology	Agency	Motivation	Natural relationships
	What entities focused on?	Who has principal capacity to act?	Primary reasons for action?	Primary relationship between entities
Agri-ruralist	Farmers (and their family)	Agricultural sector and the state	Traditional values	Farmer as custodian of nature and landscape

Utilitarianist	Consumers and producers	Market actors, enterprises and local governments	Material self-interest	Market relations; nature and landscape only as production values
Hedonist	Tourists, city dwellers, animals	People in networks	Pleasure seeking, self-fulfilment	Nature and biodiversity have intrinsic value; mutual agreement

Source: Adapted from Frouws (1998) by Hermans *et al.* (2009).

Frouws' discourse analysis of the rural not only casts light on the diversification of social interests concerning the rural and the associated rural development trajectories, but implies unequal power relations prone to triggering conflicts between different groups with vested interests. Under unequal power relations, it is not unusual that "certain actors impose 'their' rurality on others" (Murdoch and Pratt 1993, 411). Facing the urban-dominant power relation, rural development expectations are established by urban interests and representational frames (Ferrão 2000 cit in Matos Fernandes 2013), and accordingly rural schemes tend to be designed according to their potential for satisfying urban needs (Antrop 2004a, 2004b; Heilig 2003). According to Pratt, certain sociopolitical discourses of the rural enable and support "the reproduction of particular uneven social relations, economic distributions and social stratifications" (1996, 70).

Frows' discourse classification shows four flaws. First, the three functions represented by the three discourses bring about misconceptions of sustainability, not to mention that the environmental function of the rural is practically marginalized. Sustainable development, or sustainability, first articulated in *Our Common Future* (1987, also referred to as *Brundtland Report*) by the World Commission on Environment and Development (WCED), are commonly understood within an integrated three-dimensional framework, i.e. environment, economy and society. Such a tradition has been continued in the UN's setting of its 17 Sustainable Development Goals (SDGs) in the "2030 Agenda for Sustainable Development" (2015). Although the three discourses have all incorporated the concept of sustainability, they have all done so with a specific configuration of economic, ecological and social interests that sometimes exclude each other (Hermans *et al.* 2009, 58). Consequently, sustainability is defined by one interest against another, for example, the economic sustainability is achieved at the cost of losing ecological sustainability. Second, the three discourses fail to offer a full picture of rural development. In either the production-oriented utilitarianist discourse or the consumption-oriented hedonist discourse, rural communities are ignored. Third, the relationship between the three discourses are not clearly stated: are they transitional and one replaces another or simply parallel alternatives? Fourth, despite that Frouws concluded that the three discourses are "operative in social

interaction, the development of strategies, defending interests and making political choices" (1998, 64), on the practical level, they seem to be unable to serve as credible references for effective policy-making due to mismatches between political discourses and popular social discourses. For instance, whereas public discourses in the Netherlands appear to express the dominance of hedonist discourse, current trends in rural areas generally correspond more with the utilitarian discourse (Frouws, 1998, 65).

Shaker (2015) argues that "sustainability" should be viewed as humanity's target goal of human-ecosystem equilibrium (homeostasis), while "sustainable development" refers to the holistic approach and long-lasting processes that finally lead to sustainability. Although it is difficult to give a universal definition of "sustainability", which must be contextualized according to each specific place and situation, some of its commonality can be synthesized. According to Hazell and Lutz (1998), sustainability shows three characteristics: 1) it requires that the value of the capital stock composed of all natural resource, human and man-made capital assets not be depleted over time; 2) it requires that sufficient income must be set aside or otherwise given up to replenish any capital depreciation or losses incurred in the development process; and 3) it can be weak or strong, depending on whether the definition allows substitution between different types of capital assets. Weak sustainability, allowing substitution of different forms of capital while keeping the total value of the capital stock constant or increase, permits tradeoffs between growth and environmental objectives. As for strong sustainability, such a substitution is not allowed and the value of each component of the capital stock is maintained at the same level. While the "strong" definition of sustainability appears preservativist and anti-developmental, the "weak" definition is more in line with the concept of rural development in that it does not require to preserve all natural resources. Rather, natural resources can be exploited or degraded in the development process, on condition that compensatory investments/interventions be made in other forms of capital to keep the total value of the capital stock constant or increase.

In the rural setting, the sustainability of rural development has holistic and comprehensive connotations at social, economic and environmental levels (Liu 2010). Firstly, economically, rural industries must be developed in a way to revive the rural economy in the long run. Secondly, environmentally, rural natural landscapes and ecological environment must be maintained so that rural areas can remain attractive and provide sustainable natural amenities and ecological services. Thirdly, socially, on the one hand, rural public services must be strengthened to improve living conditions of rural population. On the other hand, the social and cultural aspects of rural localities should be enriched and regenerated where necessary so as to keep and carry on with the unique characteristics of rural localities.

2.2.3. Multifunctionality

The diversification of social interests is equally manifested in the emerging discourse of multifunctionality. Over the years, rural development has been increasingly conceived as a multidimensional and integrated concept, premised upon multifunctionality and diversification, with a strong emphasis on the environmental dimension and the socioeconomic development of rural communities (Rega 2014). Popularly, the academia refers multifunctionality to either agricultural multifunctionality or rural multifunctionality (Rodríguez Rodríguez *et al.* 2004 cit in van Leeuwen 2010). On the agricultural level, according to the OECD (2001), "multifunctionality" is characterized by 1) the existence of multiple commodity and non-commodity outputs that are jointly produced by agriculture; and 2) the fact that some of the non-commodity outputs exhibit the characteristics of externalities or public goods like rural landscapes that are non-tradable. With varying importance in different countries of different levels of development, non-commodity outputs actually represent extra market-values that encompass a wide range of environmental, socioeconomic and cultural benefits (Hediger and Knickel 2009). A typical example is agricultural landscapes, which besides food supply are popularly recognized as providing multiple values and services to diverse interest groups (van Ittersum 2008), like on-farm tourism (also called agritourism). According to van der Ploeg and Roep (2003), the emerging discourse of "multifunctionality" actually marks a paradigmatic shift of agricultural development from the modernization model to the rural development model. While modernization strives for specialization in agricultural production and therefore excludes other rural activities, the new rural development paradigm is aimed at mutual benefits and win-win situations between different activities (*ibid*.). They also maintain that in the rural development model, agriculture differs itself from the conventional agriculture by gaining multifunctionality through three simultaneous and interrelated processes, namely, deepening, broadening and regrounding (see Fig. 10). The three processes practically reorganize agriculture into a three-level structure capable of delivering a broader range of products and services. Deepening means that agricultural activities are transformed, expanded and/or relinked to other players and agencies. This process is aimed to deliver products that entail more value added per unit precisely as they meet better the higher demands of society. Multifunctionality on this level actually concerns the agri-food supply chain which is deepened through provision of high quality products (e.g. organic farming), networking, localized supply and consumption. Broadening means that the rural income flows are extended by new trajectories of development activities. Multifunctionality on this level results from the reconfiguration of the rural space as a whole, whereby new trajectories of development activities are created, ranging from agritourism, new on-farm activities, diversification (e.g. energy production) to nature and landscape management. Regrounding means that agriculture capitalizes on a new or different set of resources and/or adopts new patterns of resource use.

Multifunctionality on this level is derived from developing and/or revitalizing cost-efficient locally embedded resources and techniques.

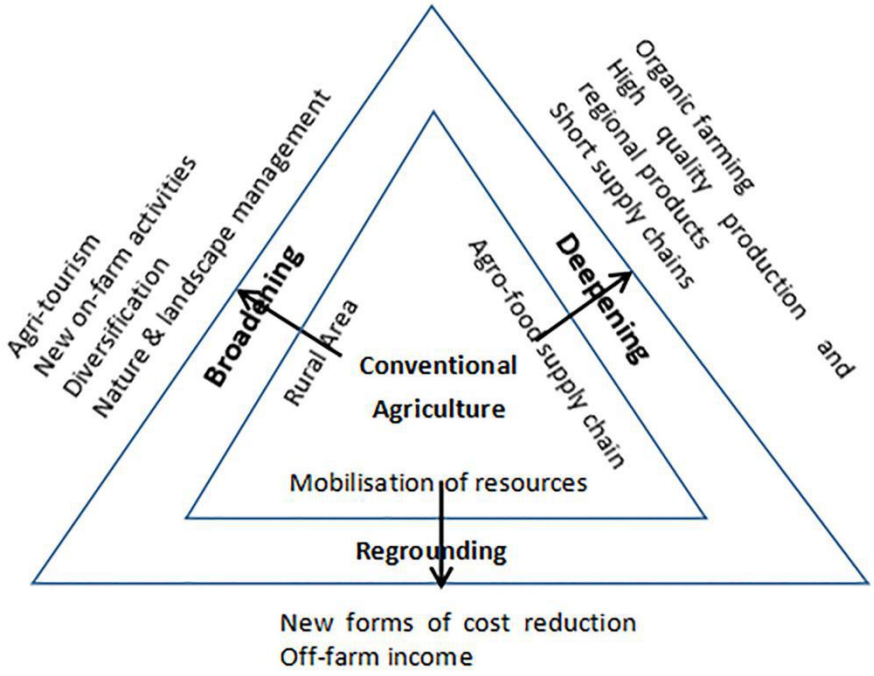

Figure 10. The rural development model of agriculture structured according to multifunctionality.
Source: Reproduced by the Author from van der Ploeg and Roep (2003).

The fact that multifunctionality on the broadening level entails not only the agricultural sector, but the rural as a whole seems to suggest that agricultural multifunctionality is simply an integral part of rural multifunctionality. Rural landscapes are central to the discussions on rural multifunctionality. It is recognized that rural landscapes are multifunctional by nature, in that they support at the same time scenery, biodiversity, productivity, regulatory, socioeconomic, and sociocultural functions (Wiggering *et al.* 2010). According to Pinto-Correia and others (2010), the concept of "rural multifunctionality" arises in response to the pessimistic view that rural areas were reduced to "places of only consumption". As a distinct attribute of rural areas, rural multifunctionality, similar to agricultural multifunctionality, means the jointness between functions. Functional jointness tells how several functions relate to each other, positively or negatively, and raises fundamental issues for the future management of rural landscapes (de Groot 2006).

The management of rural landscapes is important for the multifunctionality discourse. This is because rural multifunctionality largely depends on rural landscapes that are subject to change in the course of rural development. Therefore, a set of "land ethics" that mainly incorporates community, cooperation and responsibility needs to be in place so as to help manage the

reshaping of rural landscapes (Lin and Cai 2012). This is necessary especially given that rural multifunctionality demands and encourages non-agricultural activities that are becoming increasingly important for the rural economy, and also more relevant for the management of rural landscapes.

2.3. Regeneration

Regeneration is an instrument that has already been popularly discussed in the urban development domain and practiced in various forms of land redevelopment programs. According to Roberts (2000), urban regeneration is referred to as "a comprehensive, integrated vision and action to address urban issues with the use of long-term enhancements within an area in respect to the economy, physicality and environmental circumstances" (p. 17). What is omitted in this definition is the social and cultural dynamics which are no less important than the economic and environmental ones. These dynamics entail different urban issues that a certain urban regeneration program is aimed to address (see Table 7).

As cities are increasingly challenged by rapid urbanization and socioeconomic transformations, classical development paradigms have been questioned and attacked for being oriented towards "digital growth" that brings about urban sprawl, environmental degradation, social polarization, etc. Urban regeneration thus is gaining popularity worldwide in urban development policy for its effectiveness in facilitating adaptation to the existing built environment (Jones and Evans 2013). This is achieved mainly by reusing and repurposing existing buildings and lands through structural upgrading and functional adaptation and diversification (Ou and Bevilacqua 2017), contemporizing the functionality of urban spaces, and integrating socioeconomic and environmental interventions.

Contextual differences at cultural, socioeconomic and political levels among cities suggest varied approaches to urban regeneration, such as "mixed use approach" (Bengs and Schmidt-Thomé, 2005; Hirt 2007; Bevilacqua 2013), "urban reconstruction" (Jones and Evans 2008), "heritage-preserving renovation" (Jessen 2006), and "green-economy led approach" (Fitzgerald 2010) in the USA and Europe. There is also debate between place-based and community-led strategies (Sutton 2008). Community-led strategies rely on the bottom-up approach and encourage participatory local decision-making. Besides the need to allow the community to act rather than acting on its behalf, community-led strategies also need to pay long-term attention to how community needs and aspirations can link effectively with regeneration programs (Maliphant 2014).

What is common to these approaches is the objective of "a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change" (Roberts and Sykes 2000). However, urban regeneration initiatives have long depended heavily on "prestige mega-projects

of iconic architecture" (Tarazona Vento 2017) and economic and market instruments (Booth and Boyle 1993; Leary and McCarthy 2013) with the paramount aim of boosting economic growth. Consequently, the link between economic progress and social improvement tends to be weak. This link is further weakened with a transfer of wealth from the public to the private sector through the regenerated built environment (Tarazona Vento 2017). Consequently, facing an ever changing macro environment (economic, social and political) and due to market failure, these initiatives tend to result in an increase in social inequality, the creation of precarious jobs, and an underinvestment in social services (Barber and Hall 2008; McGregor and McConnachie 1995; Tarazona Vento 2017). This makes the economic fruit generated by urban regeneration far from sustainable and equitable.

Table 7. Dynamics and popularly targeted issues of urban regeneration programs

Dynamic	Targeted Issues
Economic	- Job creation (OECD 2005; Spaaij *et al.* 2013) - Transport (Swanson *et al.* 2007; Joshi 2017) - Retailing (Dixon 2005; Jeong *et al.* 2013)
Sociocultural	- Health and Quality of life (Curtis *et al.* 2002; Rogers *et al.* 2008) - Community (Maliphant 2014) - Culture and creativity (Jarvis *et al.* 2009; Sepe 2013; Stojanovic *et al.* 2012) - Social/community enterprise (Bailey 2012; Ragozino 2016) - Housing (Cameron 1992) - Governance (Havers 2013) - Social inequality (Arbaci and Tapada-Berteli 2012)
Environmental	- Infrastructure (Gospodini 2005) - Built and natural environment (Battisti and Tucci 2015; du Plessis 2012)

Source: The Author's own work (2018).

It is therefore necessary to overcome "the limits imposed by the overriding emphasis on economic feasibility and short-term maximization" and recognize "the need for a more integrated socio-economic strategy" (Grodach and Loukaitou-Sideris 2007). To this end, a more integrated approach to urban regeneration needs to be developed. In this way, it is possible to link "the stimulation of economic activities and environmental improvements to wider social and cultural elements" (Colantonio and Dixon 2011) on the one hand; and on the other hand, create a balance between promoting economic competitiveness and social improvement (cohesion, environmental issues, quality of life, etc.) (Roberts and Sykes 2000; UNESCO 2008).

The need to integrate the sociocultural dimensions into urban regeneration schemes suggests that urban regeneration is desirably accompanied by social regeneration (Ginsburg 1999). The rationale for this integration is, urban

development problems are essentially systemic problems involving multiple dynamics, just as cities are urban ecosystems whose development is pushed forward under the joint force of interrelated social, economic and environmental dynamics. This is evidenced in the above table which demonstrates that urban regeneration is able to serve as a holistic framework where interrelated urban issues can be addressed in a coordinated way. Actually, not only urban issues, but also urban inhabitants and the urban environment are interrelated. Recognizing the significance of functional connectivity between all dynamics of a given urban ecosystem, Girardet (2014) argues for the "regenerative city" characterized by relationships and linkages among inhabitants, between inhabitants and ecosystems, and between socioeconomic and ecological systems (Fusco Girard 2014). A successful urban regeneration scheme therefore must be developed under the broad context of urban ecosystem and adopt a "systems thinking" so as to find holistic solutions that can coordinate these dynamics.

"Systems thinking" is said to play a crucial role in helping achieve sustainable development (Reynolds *et al.* 2018), and suits well for the study of complex systems like agriculture, landscapes, development, etc. This is because that such a thinking pays attention to the connectivity, process and diachronicity embedded in a system, and addresses challenges by using integrated approaches (Banson *et al.* 2018). In so doing, it allows for a full understanding of a system in terms of its parts and the interactions between them (Buchanan 2003), and with a developmental perspective. As non-linear systems (feedback-rich systems), "systems thinking" often "leads to multiple, often surprising consequences and to outcomes that are not necessarily proportional to the input" by combining imprecise starting conditions plus feedback (Ellen MacArthur Foundation 2013, 23). With "systems thinking", a certain development strategy like tourism can be holistically conceptualized as one integral component of the broader socio-ecological system (Shakya 2015). In a development process, "systems thinking" can build up connectivity among different social relations, and therefore is supportive of collaboration among stakeholders and collaborative innovation, which can lead to robust outputs for multistakeholders (Banson *et al.* 2018; Bramwell and Lane 2000). In fact, interrelations are a principal consideration of "system thinking", as it involves considering relationships across time, space and function (McCool 2015b). The way how system components are linked together and relate to each other, as well as to their environment determines the system structure (Monat 2018). Focusing on interrelationships among system components (as opposed to the components themselves), "systems thinking" 1) is holistic instead of analytic; 2) recognizes that systems are dynamic and usually include multiple feedback loops; and 3) acknowledges that systems often exhibit emergent and self-organizing behaviors (*ibid*.).

2.4. Landscape Approach

The landscape approach first arose in the field of protected areas conservation

which incorporated an ecosystem thinking and landscape-scale thinking (Sayer *et al.* 2013). However, concerns about "people" and "society" and their impacts on landscapes were excluded from related discussions (Lawrence 2010). Then with increasing social concerns about the trade-offs between environment and development, the concept is generally referred to as any spatially explicit attempt to simultaneously address conservation and development objectives (Sayer *et al.* 2013). In essence, the landscape approach is an integrated approach aimed at sustainably managing natural resources for multiple purposes and functions, the basis for inclusive and resilient growth (World Bank 2017). The management of tropical landscapes that involves both climate mitigation and food production objectives is a typical application of the landscape approach (DeFries and Rosenzweig 2010). This broadened landscape approach is, however, still largely associated with the management of places rich in natural resources.

Beyond the natural conservation field, it is the urban areas that have undergone increasing experimentation of the landscape approach. The experimentation was first started by urban planners and geographers who argued for a landscape-based approach to urban development. As an aggregation of economic, social and cultural dynamics, urban landscapes have been increasingly considered as a contributing factor to, primarily, urban *economic* development. It is argued that economic development process needs to integrate urban landscape since "cityscape and the total natural environment are essential attributes of the quality of life" (Blakely and Green Leigh 2010, 236). The Council of Europe, in its ELC (2000), acknowledges landscapes' role in forming the European identity and local cultures, contributing to quality of life and individual and social well-being as well as fostering a harmonious relationship between social needs, economic activity and the environment[17].

Such a correlation between urban landscape and urban economic development stems from increasing concerns about degrading urban environment due to excessive human activities on the one hand; and on the other hand, it reflects continuous urban restructuring and diversification of development strategies. Then, over the last decade, the landscape approach has gained popularity again in the urban sphere, especially as an integrated approach to urban historic preservation. Although still synonymous with spatial planning in many European countries (van Ittersum 2008), it has been experimented mainly in developed countries as an alternative approach to coordinate historic urban landscape preservation and urban development. It generally puts an emphasis on the interplay between the socioeconomic and environmental dynamics embedded in landscapes and its impact on urban development. This

[17] See the *European Landscape Convention*, The Council of Europe, 2000, retrieved from https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680080621, accessed on July 1, 2017. The Convention, the first international treaty to be exclusively devoted to all aspects and all classes of European landscape (natural, rural, urban and peri-urban), is aimed at the protection, management and planning of all landscapes and raising awareness of the value of a living landscape.

paradigmatic shift is badly needed for urban historic preservation, which has long seldom seen cities as spaces with values and belief systems that are reflected in their overall setting: their urban landscapes (Taylor 2016).

In fact, the landscape approach marks the abandonment of the static, material-centric view of historic cities and their preservation, and recognizes their dynamic nature and specific needs as living landscapes. Such a shift has been led by international institutions and is best manifested in the historic urban landscape (HUL) approach to the management of historic cities. Recommended by UNESCO in 2011, the HUL approach takes into account the broader territorial and landscape context and puts a stress on "the impact of contemporary development on the overall urban landscape of heritage significance, whereby the notion of historic urban landscape goes beyond traditional terms of 'historic centres', 'ensembles' or 'surroundings'..."[18] (UNESCO 2005). Besides the emphasis on the overall landscape setting, the central place of "values" in the HUL approach is highlighted: "the inalienable role of human values" (Taylor 2016, 472) as are embedded in the HUL. To reconcile the tension between conservation and development, the approach first calls for "the integration of historic urban area conservation, management and planning strategies into local development processes and urban planning, ...for which the application of a landscape approach would help maintain urban identity" (UNESCO 2011)[19]. Second, it recognizes the role of urban landscapes in urban development, considering the key elements of urban landscapes, both tangible and intangible, as "social, cultural and economic asset" (*ibid*), and "sources of social cohesion, factors of diversity and drivers of creativity, innovation and urban regeneration" (UNESCO 2013, 5). These are all significant factors in "enhancing the livability of urban areas and fostering economic development" (Taylor 2016, 474).

The HUL approach in essence is a holistic approach to address complex urban issues, in that it creatively incorporates different approaches, namely heritage, economic, environmental, social and cultural, where all component approaches are complementary to each other. Therefore, a synergy needs to be formed so that the HUL approach can tackle at the same time related issues and thus help improve the functionality and livability of historic cities through a process of spatial and functional regeneration. In this process, diversity and innovation are two major values that are innate in the HUL approach (Ou and Fumo 2017). All in all, the HUL approach demands that current urban development processes take into full account a broader context, in terms of both landscapes and values to be preserved and *developed*. In this sense, such an approach sees the urban landscapes as an evolving continuity and a dynamic system where there is a

[18] See the Vienna Memorandum on "World Heritage and Contemporary Architecture - Managing the Historic Urban Landscape", retrieved from http://whc.unesco.org/archive/2005/whc05-15ga-inf7e.pdf, accessed on June 26, 2017.

[19] See the UNESCO Recommendation on the Historic Urban Landscape (2011), retrieved from http://unesdoc.unesco.org/images/0021/002150/215084e.pdf#page=52, accessed on July 2, 2017.

"stratification of previous and current urban dynamics" (UNESCO 2008)[20]. It equally recognizes urban landscapes as cultural landscapes where there are 1) continuous interactions between human activities and urban environment; and 2) sociocultural and economic assets of important values related to diversity and identity which can fuel sustainable urban development[21]. Not only UNESCO, but other international institutions have also rejoined the HUL approach. ICOMOS, for example, in response to the urban landscape issue during urban development, proposes the principles of "innovation in continuity", "innovation by preserving" and "continuity and coherence with the existing spatial layout"[22] (ICOMOS-CIVVIH 2010).

From the above discussions, it is not difficult to see that currently the landscape approach is conceived mainly in either a narrow or broad sense. In a narrow sense, the landscape approach, focusing on the natural ecological landscape, explores the role of landscapes in development and ways to balance the needs of socioeconomic development and environmental protection. In a broad sense, the landscape approach instead focuses on a holistic landscape consisting of natural ecological, sociocultural and economic landscapes. Therefore, it not only recognizes the role of landscapes in development, but seeks to address the development-conservation trade-off issue. Emphasizing that landscapes are constantly changing, it tries to coordinate and balance the development of landscapes and socioeconomic development.

Within the academia, there is an emerging innovative approach that combines regeneration and landscape approach for urban development. Wolch[23] (2013), for example, calls for urban landscape regeneration, recognizing that the need to retrofit, reuse and restore obsolete or degraded urban landscapes is fundamental to urban sustainability. Chen (2013) argues that construction and regeneration are two dimensions within the process of urban landscape evolution. Construction is a relatively static dimension, emphasizing results, whereas regeneration is a relatively dynamic one, emphasizing processes.

The author argues that regeneration approach and landscape approach are readily adaptable to the rural context and applicable for rural development. This is because both regeneration and landscape suggest a system characterized by totality, interrelations and multidimensional dynamic processes, which is an

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[20] UNESCO, "Proposal by the Director-general for the Preparation of a Revised Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas (179th Session of the Executive Board)", (2008), retrieved from http://unesdoc.unesco.org/images/0015/001583/158388e.pdf, accessed on July 26, 2017.

[21] According to the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, "Cultural diversity is a rich asset for individuals and societies. The protection, promotion and maintenance of cultural diversity are an essential requirement for sustainable development for the benefit of present and future generations.", retrieved from http://unesdoc.unesco.org/images/0014/001429/142919e.pdf, accessed on June 23, 2017.

[22] To this end, it is thus necessary, as ICOMOS (2012) advocates, to "preserve the fundamental spatial, environmental, social, cultural and economic balance".

[23] Wolch, J. (2013), "Celebrating 100 Years of Landscape at Berkeley", https://frameworks.ced.berkeley.edu/2013/100-years/, accessed on September 26, 2017.

essential commonality of the urban and the rural. Similar to urban landscapes, rural landscapes are complex systems subject to dynamic forces in the economic, sociocultural and environmental spheres that have shaped and still keep shaping them (Winchell and Koster 2010; Tapiador 2007). As a system that embodies territoriality and a space-time continuum, rural landscapes are the context where rural development issues can be properly understood and then tackled systematically. Within the *system* of rural landscapes, it needs to be recognized that any social setting is nested in environmental, political and economic contexts, which affect the final success of any development strategy (Gobattoni *et al.* 2015).

Part 2 Building a Conceptual Framework: Landscape Approach to Rural Development

Chapter 3 Rural Landscapes and Rural Development amidst Urbanization and Globalization

3.1. Redefinition of Rural Landscapes and Rural Development

Generally speaking, as the literature review above demonstrates, there is no consensus on definitions of the rural and the associated rural landscapes and rural development, whereas institutions start to reach a consensus on the definition of rural landscapes. The author maintains that this is mainly due to three facts, first, related theories and concepts are changing with socioeconomic progress; second, the rural, rural landscapes and rural development are by nature a multistakeholder issue and thus leads to a diversification of discourses represented by different social groups; and third, globally the rural and rural landscapes are in non-synchronic phases of evolution while rural development shows various states along the "development spectrum".

3.1.1. Principles of Redefinition

For the purpose of this dissertation, the rural, rural landscapes and rural development are redefined based on six principles as follows:

Principle 1: Taking into account the urbanization and globalization as the broad context in which the rural is being defined and shaped, rural landscapes evolve constantly and rural development takes place

According to the UN "2018 Revision of World Urbanization Prospects", global urbanization is expected to continue, so that by 2050, the world will be less than one-third rural (32%) and over two-thirds urban (68%), roughly the reverse of the global rural-urban population distribution of the mid-20th century. This global rural-urban demographic shift suggests a continuous decline in rural population in the long run. For many high-income countries like Italy, a majority (54.8%) of their population already lived in urban areas in 1950. Their level of urbanization is expected to continue to increase to 86.6% in 2050. By contrast, in the upper-middle-income countries like China, only 22.1% of the population lived in urban areas in 1950. However, with their ongoing rapid urbanization and rapid growth of gross national income (GNI), they are expected to be 82.6% urban by 2050 (UN 2018), close to the level of high-income countries. As Figure 11 demonstrates, both China and Italy are seeing an increasing level of urbanization from 1950 to 2050, with China by 2050, 80.0% urban, nearly reaching the same degree as Italy, 81.1% urban. From 2000, China is seeing a decreasing average annual rate of change of the urban population, which is however higher than that of Italy (Fig. 12). This suggests that China is urbanizing much faster than Italy to reach nearly the same degree of urbanization as Italy. Southern Italy has long been a region of rural emigration with a rapid decrease

of births.

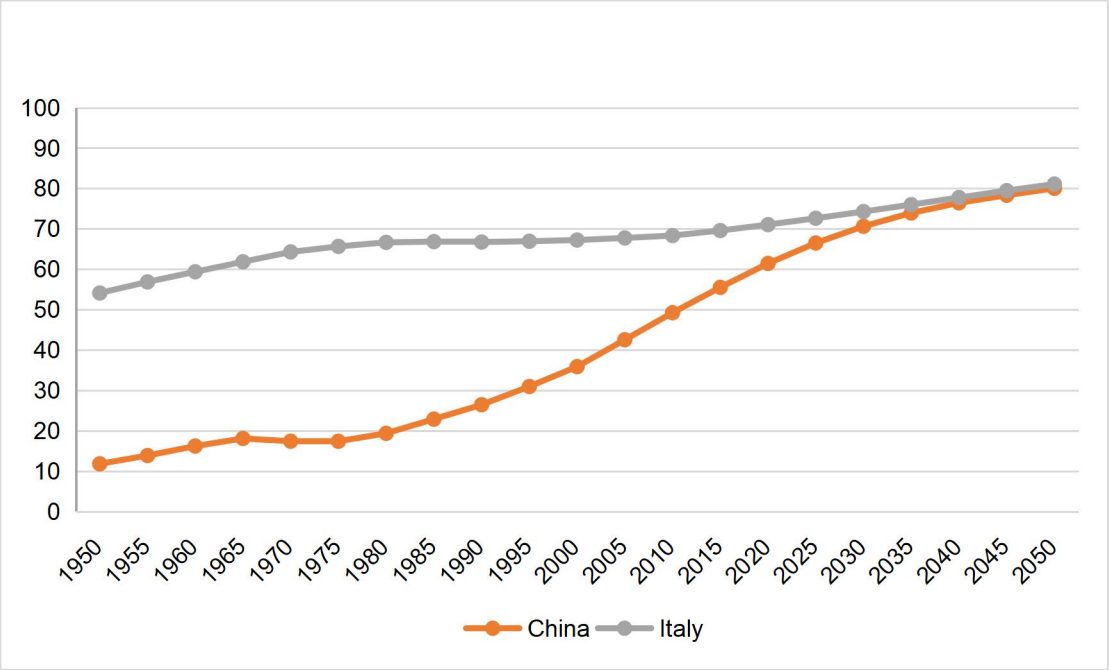

Figure 11. Percentage of population at mid-year residing in urban areas in China and Italy, 1950-2050.
Source: The Author's own work based on United Nations (2018), Department of Economic and Social Affairs, Population Division (2018). World Urbanization Prospects: The 2018 Revision, Online Edition. Retrieved from <https://esa.un.org/unpd/wup/Download/>, accessed on June 11, 2018.

Taking into account both external and internal factors, Antrop (2004a, 2004b) lists four major driving forces of landscape changes, i.e. accessibility, urbanization, globalization as well as calamity which is increasingly evident facing climate change[24]. Among the four forces, urbanization and globalization are especially noticeable for their far-reaching and profound impacts on rural landscapes. Urbanization, for example, brings about five major pressures to rural landscapes, namely, housing and settlement, productive activities[25], networks of infrastructure, recreation and fragmentation (Antrop 2000). Globalization, instead, while promoting a greater integration of economic and social activities around the world (Dahlman 2007), undermines diversity in various aspects. Besides their impacts on rural landscapes, as two overwhelming, deepening processes, urbanization and globalization are giving new characteristics to

[24] Climate change is very demanding on new assistance policies on agriculture to make up for the losses caused by increasingly irregular and extreme climate. In 2018, the persistent high temperatures cause varying degrees of damage to agricultural production due to serious drought in some European countries. This means a higher budget pressure. For example, German farmers have already asked the government to provide one billion euros of financial subsidies to make up for their losses. In response, the European Commission adopts, in addition to support under the existing CAP legislation, a number of instruments to support affected farmers, including higher advance payments, derogations from greening requirements and state aid.

[25] In the future, the finality of agriculture will become less focussed on economical productivity, but more on maintenance of an ecologically equilibrated environment in the Open Space and its multifunctional use (Antrop 2000, 26).

development processes. These processes are fundamentally controlled by the interplay between local and external forces (Lowe *et al.* 1995 cit in Sonnino 2004), and by an increasingly global embeddedness that creates new linkages, opens up new options, and often generates uneven outcomes (Schweizer 1997 cit in Sonnino 2004). Both engender the reconfiguration of economic, social and spatial structures in urban and rural areas alike (Chen 2008).

To rural localities, urbanization and globalization represent two powerful exogenous forces not only shaping their structural and functional constructs, but affecting their trajectory of development. These forces, largely related with globalization, heavily affect global flows of capital, goods and people as well as supply chains and the agricultural sector in particular (Kizos *et al.* 2010). Under globalization, although most of the changes in agricultural and food markets are taking place in developed countries, they have far-reaching implications for agricultural development efforts in developing countries (Kirsten and Sartorius 2002). The agricultural sector is seemingly becoming import-oriented in the pursuit of cheaper price. As figures 13 and 14 illustrate, both China and Italy have much higher import than export in the agricultural field, with the latter relatively steady. This is even more evident with some specific agricultural goods. For example, China is heavily importing soya, with generally declining production and almost negligible export compared to import (Fig. 15).

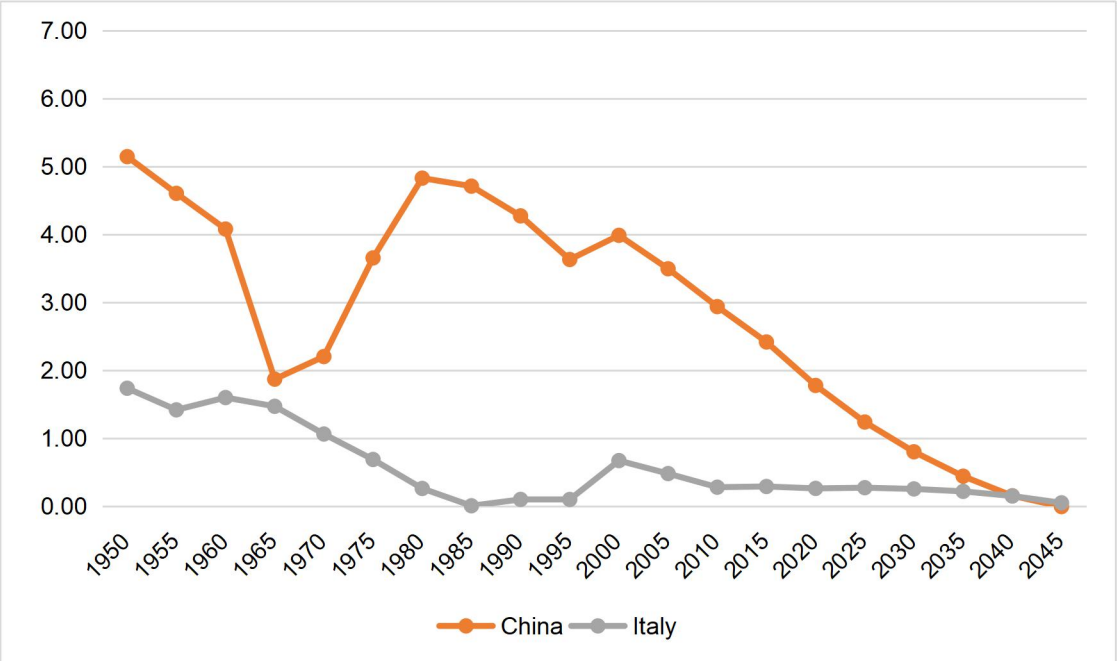

Figure 12: Average annual rate of change of the urban population in China and Italy, 1950-2050 (percent). Source: The Author's own work based on United Nations (2018), Department of Economic and Social Affairs, Population Division (2018). World Urbanization Prospects: The 2018 Revision, Online Edition. Retrieved from <https://esa.un.org/unpd/wup/Download/>, accessed on June 11, 2018.

Urbanization and globalization bring about rural modernization that often

improves rural living conditions. They meanwhile engender what Pretty (1998) calls the social costs of rural modernization, which in his opinion might ultimately lead to the disappearance of rural communities. These costs are due to: 1) scale-enlargement, intensification, specialization and industrialization of agriculture (van der Ploeg and Roep 2003; 2) decline of social capital which mainly comprises social (informal) relationships; 3) land abandonment; 4) population decline; 5) rural poverty; and 6) loss of social cohesion (Pretty 1998). Shi and others (2016) argue that too rapid urbanization in China has brought about both urban and rural problems. First, extensive construction leads to land acquisition at a speed and scale far beyond the threshold of a balanced urban growth of circular economy. Second, urbanization makes local production and consumption depend heavily on transportation. Third, rural areas have seen a shrinking labor force due to the outmigration into cities. Fourth, urbanization is fueled by the excessive consumption of rural resources at the cost of damages to the ecological environment.

Principle 2: Taking into account the holistic and systemic nature of the rural, rural landscapes and rural development

The rural, rural landscapes and rural development are holistic systems that go through dynamic evolution. In these holistic systems, sociocultural, economic and environmental dynamics are closely interlinked and interacting with each other. Consequently, related studies and interventions need to be guided by a "systems thinking". Regarding rural development, failing to address socioeconomic problems with a systemic approach accounts for why well-intentioned social investments have impeded the creation of economically viable community-based businesses and thus failed to remedy social problems (Porter 1995). As an alternative to the isolated, static view of economics, Nobbs (2013) advocates a "system approach" to economics: ecological economics. Such an approach, as "a response to the prevailing mania of economic efficiency and digital growth (Nobbs 2013), emphasizes not only market processes, but also "ecological processes" – both human and natural. A "system approach" to economics is considered to be highly beneficial to the "knowledge economy" (Ou and Bevilacqua 2018).

Principle 3: Emphasizing the pluralistic existence of the rural and rural landscapes and the pluralistic levels and pathways of rural development in different geographical regions

The patterns of rural development are often determined by the dominant factors of regional development, such as globalization, marketization and urbanization (Chen 2008). Given the pluralistic levels and pathways of rural development in different geographical regions, the rural and rural landscapes are evolving at different intensity, speed and scale driven by different sociocultural, economic and environmental dynamics. As a result, the rural and rural landscapes globally show diverse morphology and functionality. This requires that the definition of

the rural, rural landscapes and rural development be contextualized.

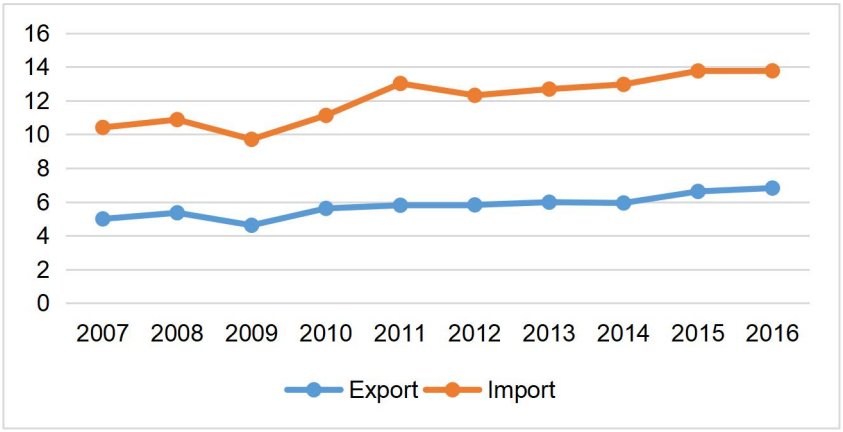

Figure 13. Italian international trade in the agricultural sector (values in millions of euro).
Source: The Author's elaboration on the data from the Economic Observatory based on ISTAT data (http://www.sviluppoeconomico.gov.it/)

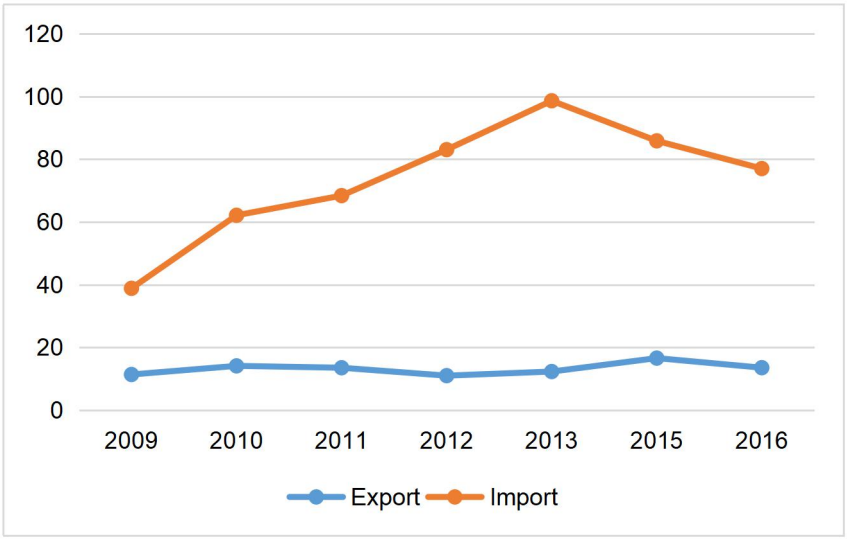

Figure 14. Chinese international trade in the agricultural sector* (values in billions of yuan).
* Including agricultural, forestry and animal husbandry products.
Source: The Author's elaboration on the data from the National Bureau of Statistics of China (http://data.stats.gov.cn/easyquery.htm?cn=C01)

Principle 4: Emphasizing the interaction and interdependence between human society and environment

Essentially speaking, rural landscapes are pre-structured by the natural environment and then restructured in the course of specific interactions of rural population with their environment. Such interactions are indispensable to rural development on the one hand, and to the socioeconomic construct of rural landscapes on the other. Indeed, only through interactions between human society and environment can a holistic landscape be formed. During its formation, the content and mode of human activities play a leading role in forming a unity of "mind and object" (Chen 2013).

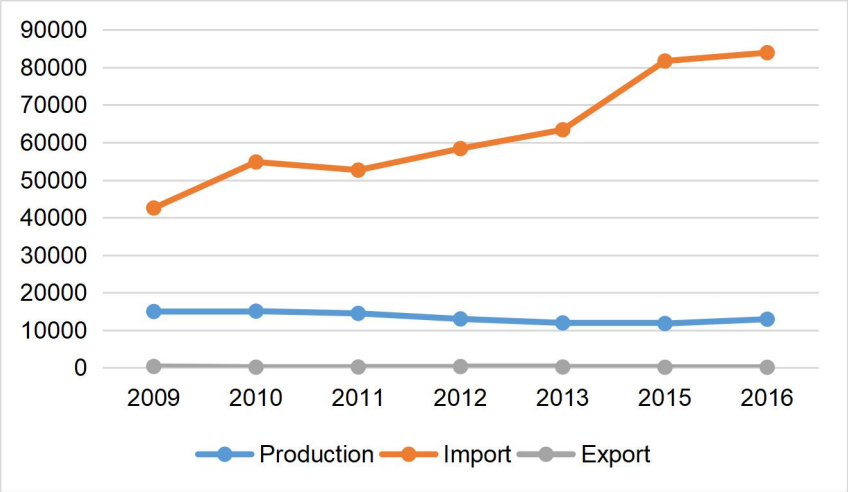

Figure 15. International trade and production of soya in China (thousand tons).
Source: The Author's elaboration on the data from the National Bureau of Statistics of China (http://data.stats.gov.cn/easyquery.htm?cn=C01)

Principle 5: Considering rural landscapes and rural development as mutually impacting processes

On the one hand, the process of rural development is one that sees constant exploitation of the environment. This inevitably affects the organic evolution of rural landscapes, that is to say, landscape changes are inevitable. On the other hand, rural landscapes provide fundamental resources of all kinds for rural development. Well managed rural landscapes often embody well coordinated sociocultural, economic and environmental dynamics and thereby can provide resources in a sustainable way, while degraded ones tend to have negative impacts on rural development. This means that rural landscapes and rural development are mutually impacting. In other words, the morphology of rural landscapes always corresponds to a specific level of rural development, while a specific rural development pattern determines the structural evolution of rural landscapes and their functionality.

Principle 6: Seeking a balance of diversified discourses of the rural, rural landscapes and rural development represented by different social groups

The rural and rural landscapes are spaces of vested interests. Definitions made by rural and urban residents can be quite different as perceptions vary. Urban residents may impose their definition onto rural residents. Likewise, rural development can trigger different forms of conflicts between different stakeholders. It is often the case that rural development is one from the developer's point of view, rather than from the rural population's perspective. How to make rural development process inclusive and equalitarian with a just allocation of benefits thus becomes a top issue. Defining the rural, rural landscapes and rural development therefore demands ethical considerations especially of people who are socioeconomically vulnerable.

3.1.2. The Rural and Rural Landscapes

Taking into account the context of China and Italy, "the rural" is defined according to three criteria for the purpose of this dissertation, i.e. demography, economy and landscape. First, the rural is a space in constant evolution wherein a single settlement has fewer than 3,000 residents. Second, the rural has an economy that is primarily based on agriculture, despite that natural resource exploitation, manufacturing and services (like tourism) industries also have various weight in its economy. In terms of its economic environment, the rural is increasingly subject to a joint force of both external and internal factors. Internal factors include demographic shifts, natural environment degradation, etc. and external ones are mainly related with urbanization and globalization. Third, the rural has an ever-evolving landscape that is composed of a settlement and surrounding it an extended open space showing various landscape covers of different degrees of anthropogenic modifications. Besides the perceivable, physical landscape, the rural also has a sociocultural landscape that is transforming from traditional values, social relations and norms, accumulated knowledge, etc. towards modern ones.

Based on the above six principles and with reference to the "ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage (2017)", rural landscapes are redefined in a holistic way as is shown in the table bellow.

Table 8. Redefinition of rural landscapes

Aspects	Attributes
Spatial Physicality	● terrestrial and aquatic areas ● land cover, soils and natural resources, airspace and water bodies both on and under the ground ● inalienable part of the "rural"
Formation Mechanism	● rooted in human perception and human-nature interdependence ● co-produced and being constantly reshaped by natural disturbances and interactions between human society and environment for the production of food, renewable natural resources, and other economic activities ● heavily affected by the functions and interactions of social institutions (land ownership, land use, social roles, value system and rules) embedded in human society ● changing together with changing production and living patterns and therefore stratified following cumulative interactions between human society and environment ● subject to both internal factors like natural disaster and demography and external factors like urbanization and globalization ● produced and managed through traditional and/or modern methods, techniques, accumulated traditional and/or modern knowledge, values and cultural practices
Systemic Nature	● dynamic and evolving systems ● linkage between history and modernity

	● encompass both material and immaterial rural elements and functional, socioeconomic, productive, spatial, visual, symbolic, environmental relationships among them and with a wider context
Typologic Diversity	● both well-managed and degraded or abandoned areas that can be reused or reclaimed ● both landscapes with outstanding values and ordinary landscapes ● extended rural spaces, peri-urban areas as well as small spaces within built-up areas
Multi-functionality	● multifunctional resources ● ability to serve as a regenerable, holistic asset for integrated rural development
Equity	● a right to all, especially socioeconomically vulnerable people to benefit from rural landscapes ● a right to all to determine the management and utilization of rural landscapes

Source: The Author's own work based on the "ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage (2017)".

The author's definition of rural landscapes above abandons the dominant, abstract interpretation of rural landscapes as human-nature interactions common in both political/institutional and academic texts. Instead, what is highlighted is the central role of social institutions, especially land ownership, land use, social roles, value system and rules, in the formation and evolution of rural landscapes. It also advocates the concept of "holistic rural landscape". A holistic rural landscape is composed of both material and immaterial elements which can be classified into four categories, namely, natural ecological landscape, agricultural production landscape, settlement landscape and sociocultural landscape (Bao and Zhou 2014; Liu and Ye 2016). Rural landscapes are an organic fusion of natural, agricultural and settlement landscapes (Lin 2016). These components all together form holistic rural landscapes which are a unity of materiality and immateriality. The architectural landscape, agricultural landscape and natural environment landscape make the materiality of rural landscapes, and the people and society make their immateriality.

3.1.3. Rural Development

As mentioned in the literature review, development has long been equated with quantitative growth measured by indicators of economic growth, such as jobs and income. Real-world experience tells that quantitative growth is not necessarily better (Gascoigne *et al.* 2013; Nie *et al.* 2007), as it often causes negative externalities that bring down quality of life. Affected by this concept, rural development has been popularly defined as rural economic growth, while ignoring the development of rural social culture and ecology, and rarely considering the quality of life of the rural population. In this regard, the dissertation maintains that it is better to consider development not only as economic growth, but also as a coordinated and balanced progress of the economy, society and environment which is critical to the improvement of the quality of life.

"Rural development" defined in this paper is the unity of process and result. As a process, rural development must be an integrated, coordinated and complementary development process of rural environment, economy and society, a process of sustainable development. As a result, rural development is able to bring about a simultaneous improvement of the rural environment, society and economy, improving therefore the overall quality of life of the rural population.

3.2. Relationship between Rural Landscapes and Rural Development

As the literature available shows, existing studies on rural landscapes in relation to rural development more often than not fail to adopt a "systems thinking" that can coordinate all significant dimensions of rural landscapes. Despite that academic discussions on rural development start to incorporate considerations of rural landscapes, they tend to focus on their environmental dimension. However, the issue of landscape degradation is often not taken into account when the environmental dimension of rural landscapes is related to rural development. At the meantime, the social and cultural dimensions are barely dealt with. Regarding the economic dimension, further studies are needed to investigate how innovation in the economic sphere is taking place and helping regenerate the rural economic landscape while affecting rural development and rural landscapes. Besides, the impacts of land regulations and changing production and consumption patterns in rural areas on the rural economy needs further articulation. All in all, the relevance of rural landscapes to rural development needs to be further studied.

The evolution of rural landscapes is primarily subject to sociocultural, environmental and economic dynamics, which also have an impact on rural development. Therefore, to explore the role of rural landscapes in rural development, what needs to be analyzed first and foremost is the relationship between these dynamics, and second, how to maintain their positive effects. As discussed in Section 2.1.1 above, a number of natural, cultural and economic resources are embedded in rural landscapes that can be mobilized to drive rural development. National and international instruments on landscapes also commonly highlight their relevance to public interest, socioeconomic and ecological services, cultural identity, well-being and quality of life and economic development. Apart from these socioeconomic and ecological functions, increasing attention has been paid to the communicative, regulative and regenerative functions of rural landscapes in relation to planning, land use management, and mitigating possible negative externalities due to territorial transformations.

However, rural development is as important to rural landscapes as the latter is to the former. As the unity of process and result, the development of rural landscapes marks not only the process of the coordinated development of rural

environment, society and economy, but also its inevitable result. Indeed, in human society, environment and development are inseparable (WCED 1987). But landscape and development are also inalienable one from the other. As a dynamic system evolving according to changing social needs and production and living patterns, rural landscapes are developing themselves along with the rural development process. The sustainable development of rural landscapes requires sustainability an three levels, namely, environmental sustainability, economic sustainability and social sustainability.

Rural landscapes reflect rural development and the two are complementary to each other. On the one hand, rural development is relevant to rural landscapes in that, the increasing topicality of the latter legitimates not only the need to preserve the places of memory and the social and productive patterns that have shaped the countryside in the past, but the need to give a contemporary meaning to landscapes through the creative reinterpretation of the relationship between heritage landscape and the process of future civilization (Morabito *et al.* 2008). Almost undoubtedly, this contemporary meaning is to be formed along the changing pathway of rural development following socioeconomic and environmental transformations. Co-produced by natural disturbances and interactions between human society and environment, rural landscapes can only maintain their vitality and continue to evolve if a rural development process is going on in which rural land is cultivated, houses are inhabited, and the environment is well maintained. Once a certain economic activity that helps maintain rural development comes into a halt, not only will rural development be negatively affected, but the evolution of rural landscapes. The common result is a landscape decline, and with its continuous decline, its positive effect on rural development is also to weaken, thus triggering a vicious circle. Therefore, in order to maintain the dynamic evolution of rural landscapes, economic activities must be supported. The economic means is also an effective way to combine rural landscapes with the market, thereby promoting the economic development in rural areas.

Worldwide, following the urbanization process, there is an unstoppable outmigration to cities for better job and education opportunities and public services. Affected by this demographic movement, the relative integrity of the rural social structure, and agricultural activities and transmission of vernacular culture are destined to be deeply, which altogether will affect the evolution of rural landscapes. Only by continuously revitalizing the rural economy and promoting an integrated, people-oriented rural development can the rural population's quality of life be considerably improved while the gap between urban and rural areas in terms of income and services narrowed. In this way, rural people will be more willing to remain in rural areas to live and work. This seems to be the primary precondition to foster an organic evolution of rural landscapes, as the rural population are central to the place-making and sense-making of rural landscapes. Also, the study of the social and economic

factors in the development process may be helpful to assess the possible future development of the landscape and of its constituting elements (Antrop 2000). This is because that rural landscapes essentially represent the patient adjustment to changing circumstances and the rural population's infinite ingenuity in finding short-term solutions" (Jackson 1984; Wang and Lu 2015). The morphology and functioning of a rural landscape are closely related to environmental, economic and sociocultural transformations. As a result, the differences in rural landscapes in different regions reflect regional differences at environmental, economic and sociocultural levels. Through the observation and research of rural landscapes, it is possible to know the history of the development and transformations of human society (Lin 2016).

On the other hand, rural landscapes are relevant to rural development in that, the former is an important type of rural resources, a valuable asset for rural economic and social development and landscape environmental protection. It is the basis for the development of emerging rural industries and an important way to get rid of the traditional rural concept and establish a new urban and rural landscape system (Wang 2014). As a soft capital, rural landscapes can promote the development and restructuring of rural industries. By regenerating rural landscapes, the functionality of the landscape at the economic, sociocultural, ecological and aesthetic levels can be revitalized and enhanced. In this way, the living environment and quality of life can be improved, laying thus the material and cultural basis for the development of rural tourism. Tourism development, when properly planned and managed, is able to promote rural economic restructuring, create employment and increase the income of the rural population. With the development of a diversified rural industry and the improvement of the quality of life, an integrated rural development is to be achieved. This is critical to fostering over time a circular self-regenerating mechanism integral to rural landscapes and the rural as a whole. Ultimately, an "*in situ* urbanization" is expected to occur, namely, the rural population will be urbanized on the spot, enabling them to enjoy the fruits of urbanization without migrating to cities. Such an urbanization is very likely to lead to a win-win situation where rural areas can continue to develop by retaining the rural population, while urban areas will experience less pressure due to rural migration. Consequently, in the long-run, it can help narrow rural-urban disparities in socioeconomic terms.

3.3. *Status Quo* of Rural Landscapes in Meixian County and the Locride Area

3.3.1. Overall Situation

Just as the above literature review illustrates, rural landscapes worldwide are undeniably going through tremendous transformations both at the structural and functional levels. Contemporary rural landscapes are changing at an

unprecedented speed and scale, differentiating themselves from traditional ones which had evolved in an incremental, organic way over an extended span of time given that "long periods of no change existed between the land reforms" (Antrop 2000). The main difference between traditional and new landscapes lies in "their dynamics, both in speed, and scale, as well as the changing perceptions, values and behavior of their users" (Antrop 2004a, 5). Rapid and far-reaching changes make it hard to integrate the newly created landscapes into the preceding ones. Contemporary rural landscapes, especially in developed economies, are characterized by a rupture between landscape structure and processes that shaped the landscape (Antrop 2004a), due to which the countryside is becoming a place only for consumption but not production (Cloke 2006; Halpern and Mitchell 2011; Lowenthal 1997; Marsden 2003; Matos Fernandes 2013; Pinto-Correia *et al.* 2010; Székely 2013; Willis and Campbell 2004) following a process of the commodification of rural areas (Halpern and Mitchell 2011; Hermans *et al.* 2009; Overbeek 2009; Pallarès-Blanch *et al.* 2014). The changes from traditional landscapes to modern ones of the two successive periods, showing "a visible break in the continuity with the past", have been mutative rather than evolutionary. This suggests that there have hardly been longer periods of internalization or stabilization critical to the harmonization of the existing landscape and the new landscape elements (Antrop 2000).

The dissertation focuses on ordinary rural landscapes in both case study areas, i.e. everyday rural landscapes. Such landscapes are often poorly understood, undervalued and neglected in the course of rural economic development. Both China and Italy boast rich rural landscapes which show a great natural and cultural diversity in terms of geology, built environment and land-cover at the material level and customs, values, norms, gastronomy and traditional knowledge at the immaterial level. As the two countries are currently at different stages of development (different degree of urbanization), their rural landscapes show different *status quo* and change at different pace and scale.

In rural China, biophysical, sociocultural and sensory (e.g. sound) landscapes are changing. As China now enters a transition period, the society, economy and environment of rural China are changing at an astonishing speed and scale. This has engendered drastic changes in rural territoriality and landscapes and led to the loss of the countryside's unique subjectivity (Lin and Cai 2012). In China, the decline of the contemporary rural landscapes has been holistic and far-reaching, mainly reflected in four aspects of decline in terms of the rural natural ecological environment, the agricultural production landscape, the rural settlement landscape and the historical and cultural landscape (Bao and Zhou 2014). Since the 1990s, "the organic evolution of rural landscape has gradually degenerated at four levels of layout, fabric, pattern and form" (Wang and Qian 2015, 17). Unfortunately, this is happening at a time when landscape

conceptualization is still underdeveloped and related legislation still absent[26].

Indeed, over the past 30 years, throughout the rapid economic development process in China, rural development has paid little attention to the preservation of the territorial characteristics, history and traditions. This has largely weakened the organic connection between the rural society and its environmental context. As a result, a rapid mutation and loss of the rural landscape features accumulated throughout the history have been a spreading phenomenon across the county. China's rural landscapes are facing five facets of threats, namely, urbanization, hollowing-out, rural modernization, rural industrialization and inflows of external capital (Lin 2016). Urbanization and rural modernization are inevitable processes that are closely related to the rural population's aspiration for modern life. The two processes have also fundamentally affected their collective perception of the immediate environment and landscapes. It is a perception based on their superficial understanding of "modern life", leading to the "unconscious mimicry" of alien imageries that are essentially urban and even foreign. This has ended up with the superimposition of modern forms void of identity and characteristics onto the existing rural landscapes, causing a drastic landscape mutation.

With the hollowing-out of rural areas following rural outmigration, the integrity, vitality and continuity of rural social and culture structures have been put at stake. As for rural industrialization, it has brought about various interconnected environmental issues. The inflow of private investments proves to be another threat to rural areas, especially those with cultural and natural amenities supportive of tourism. Such kind of external capital, often off-limits and fair-weather, tends to be overwhelming in the commercialization of rural tourism, and deprive the local population of their right to decision-making and benefit allocation in the long-run. The result is an unsustainable exploitation of cultural and natural resources. These threats have led to a series of rural problems. Li (2016) points out six problems the rural and rural landscapes are facing:

- socioeconomic issues such as depopulation and brain drain, lack of pillar industry, low comprehensive profits of the agricultural industry, little agency of farmers, and monotonous cultural/spiritual life;
- the rural human-land ecosystem is under threat;
- rural cultural heritage landscapes and the civil society structure are in crisis;
- new rural construction lacks territorial characteristics;

[26] At the legislative level, at present the *Cultural Relics Protection Law of the People's Republic of China (2015 Revision)* excludes "landscape" from the concept of "heritage". The concept of "landscape" is not introduced either into the *Environmental Protection Law of the People's Republic of China (2014 Revision)*, which stipulates the protection of areas of particular interests, such as natural ecosystem, habitats of wild animals and plants, important water conservation areas, geological structures with significant scientific and cultural values, etc. At the landscape level, there is only the *China Landscape Village Protection Convention* (2007), which is not legally binding and provides only regulations to help form a "social mechanism" for the protection of landscape rural settlements of universal values.

- the development of rural tourism has unnegligible negative impacts on rural landscapes and environment;
- currently universities in mainland China have not yet set up rural planning department or major;
- the countryside in China still does not have the basic conditions to become aesthetic objects.

The last point is especially worth noting, because rural China remains largely a productive space, and the main body of the aesthetic subjects, namely, the rural population, is yet to emerge. Indeed, the problems of rural landscapes in China at present are nothing but a reflection of rural problems.

The Fifth Plenary Session of the 16th CPC Central Committee made building a New Socialist Countryside 社会主义新农村 as a historic task in the modernization process of China. To achieve this goal, the Beautiful Countryside Construction[27] is both an integral part of the New Socialist Countryside and a fundamental tool. The construction of Beautiful Countryside should conform to "production development, well-off living, clean and tidy village, democratic management". Since the request was made, the State has attached more and more importance to rural ecological environment management and rural landscape protection. Under this discourse, rural revitalization and regeneration are inevitable challenges for rural China (Zhang 2016).

Most of the developed countries in the West have experienced rapid economic development after World War II, and basically realized industrialization and high-speed urbanization by the second half of the 20th century. On the one hand, industrialization and urbanization in these countries have promoted the transformation of rural areas from traditional agricultural space to multifunctional space. On the other hand, they have also seriously affected rural landscapes and environmental conditions of European countries, which have gone through serious problems such as rural land waste, landscape destruction, environmental pollution and population outmigration (Zhang 2016). In European countries, the current problems of rural landscapes are connected to the easing (sometimes destruction) of the bi-univocal relationship between community–territory–economies and agricultural practices, which modified the historic landscape: the relations of production, cultural perception, understanding and recognition have changed (Balestrieri 2015).

In the post-industrial era, developed countries have commonly demonstrated a state of "dynamic equilibrium", which is characterized by a relatively stable demography, a relatively slow urbanization pace and a post-industrial economic structure. On the spatial configuration level, this change has led to a relative stabilization of the layout of urban and rural areas. Such a spatial stabilization together with a developed economy has laid the socioeconomic foundation for

[27] "Beautiful Countryside Construction". Retrieved from <http://dangshi.people.com.cn/GB/165617/166499/9981395.html> accessed July 7, 2017.

scientific, rational cognition and protection of rural landscapes that had degraded during the industrialization process. Similar phenomena are taking place now in some developed coastal areas in China have gradually entered the post-industrial period as well. Together with this transition, rural landscape research and protection as well as optimization and regeneration are increasingly becoming the common concern and practices (Pan 2014).

In the post-industrial era, Italy, one of the pioneers in landscape studies and legislation[28], is not immune to rural landscape change and degradation. This is mainly due to, apart from natural forces like hydrogeological disasters, the changing socioeconomic and demographic structures as a result of the rural restructuring process driven by globalization, urbanization and European Union's rural policies. This is especially true in lagging regions whose rural areas are sparsely inhabited, economically stagnating and physically degrading (Ou and Bevilacqua 2017). According to Morabito and others (2008), the rural landscapes in Calabria has gone through significant changes over the past decades, as:

> After years of intense transformation of the rural areas, tourism development and uncontrolled settlement development, the diffusion of large and small infrastructural networks, the equilibria that had linked in the past local societies to the production of their landscape of life have indeed diminished, in addition to the form and ecological functionality of the environment that surround us[29]. (p. 523)

In the following section, based on the author's on-site investigations and interviews, the *status quo* of rural landscapes in Meixian County and the Locride area is analyzed at three levels, each of which is an integral component of holistic rural landscapes. The three levels are natural landscape, built and agricultural landscape, and sociocultural landscape.

3.3.2. Local Residents' Perceptions

To understand how local residents perceive their landscapes and related problems, questionnaire surveys were conducted in rural areas in Meixian County and the Locride area. The results are summarized as follows.

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[28] For example, the *Constitution of Italy* (Art. 9: It [The Republic] safeguards natural landscape and the historical and artistic heritage of the Nation.); the Law no. 778/1922 that focuses on the protection of natural beauties and historical architecture; the Law Galasso no. 431/1985 which introduces at the regulatory level a series of protections on landscape and environmental properties. This law was integrated into the Legislative Decree no. 42/2004 "Code of the Cultural and Landscape Heritage".

[29] The Author's own translation. See the original text in Italian: Dopo anni di trasformazione spinta degli spazi rurali, di sviluppo turistico ed insediativo incontrollato, di diffusione di grandi e piccole reti infrastrutturali, sono infatti venuti meno, oltre alla forma ed alla funzionalità ecologica degli ambienti che ci circondano, anche gli equilibri che in passato legavano le società locali alla produzione del loro paesaggio di vita.

All in all, 67.09% of the respondents from Meixian County perceived the village where they inhabited as beautiful, and 82.70% of them claimed that they felt happiness in their life. By contrast, 79.37% of the respondents from the Locride area perceived the village where they inhabited as beautiful, and 79.37% of them claimed that they felt happiness in their life. In both areas, outmigration proves to be a predominant phenomenon. As many as 85.23% of the respondents from Meixian County claimed that they themselves or had family members working or studying in cities, while 69.84% of the respondents from the Locride area claimed the same. In terms of the social fabric, the two case study areas show quite interesting picture. While 48.45% of the respondents from Meixian County reported little trust among neighbors, and 60.34% of them stated that the collective showed little cohesion, the respective percentages are 58.73% and 49.21% in the Locride area. The higher percent of low trust in the latter suggests that it is also more likely to have less social capital than in the former. As for the higher percentage of low cohesion in Meixian County than in the Locride area, a possible explanations is that, the organization and management of collective affairs prove to be a more prominent problem (35.02% of the respondents reported so) in the former than in the latter (28.57% reported so).

In both case study areas, the majority of the respondents (more than 50%) stated that they were satisfied with the ecological environment in the place where they inhabited (Fig. 16). More respondents from Meixian County (62.45%) claimed that they were satisfied with the living environment than from the Locride area (41.27%). This may be due to the New Countryside Construction movement in Meixian County in the past few years (to be discussed in the following sections), which has considerably improved the overall living environment in rural areas. Cultural life proves to be a major problem in both case study areas, as the majority of the respondents reported their dissatisfaction.

The respondents from Meixian County were more likely to have observed changes in the place where they inhabited over the past few years than those from the Locride area, in terms of new buildings and the improvement of infrastructure, services and environment (Fig. 17). However, the quality or accessibility of some services may be questionable, as 47.26% of the respondents from Meixian County claimed that they had never used the public amenities (such as library, recreation room, ethnographic museum) located at the Villagers' Committee. Less than 17% of them reported that they had ever used library, recreation room and ethnographic museum, and the most used amenity was fitness equipment. In the Locride area, instead, migrant worker proves to be a stronger phenomenon. The respondents from the Locride area expressed more need for green spaces, cooperatives, improved infrastructure, grocery stores, historical building restoration and religious sites than those from Meixian County, who desired more little squares and e-shopping service stations (Fig. 18).

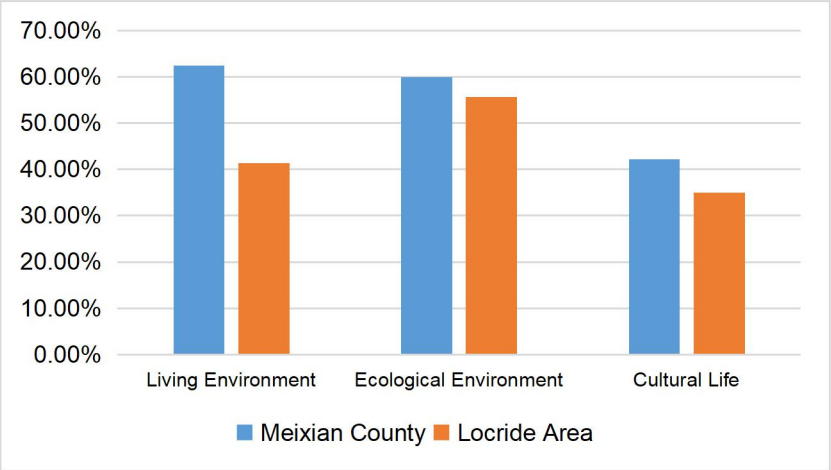

Figure 16. Residents' satisfaction of living environment, ecological environment and cultural life in Meixian County and the Locride area.
Source: The Author's own elaboration.

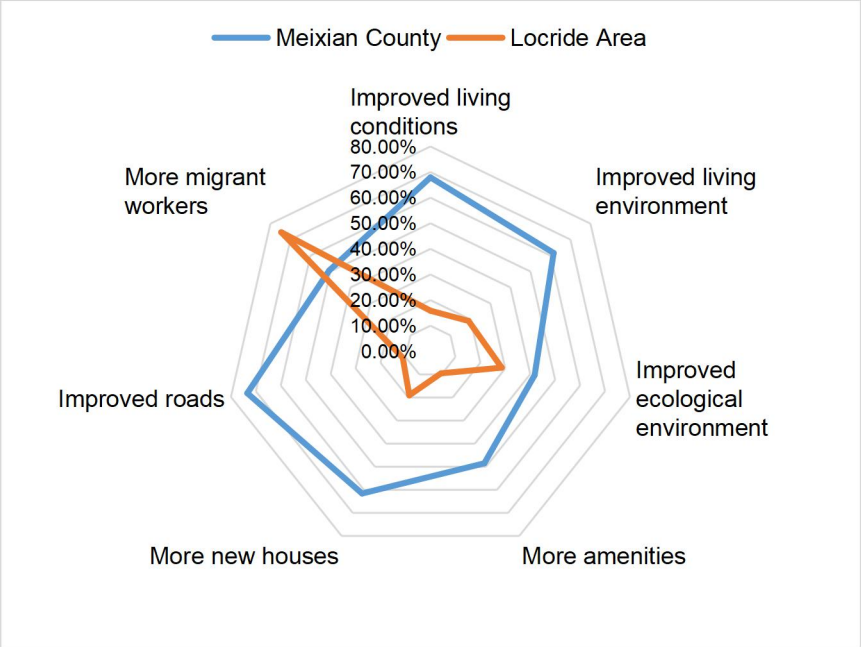

Figure 17. Changes that the respondents have noticed in recent years in the place where they inhabit.
Source: The Author's own elaboration.

Depopulation, economic development and public services, according to the majority of the respondents from the Locride area, are the major problems their communities were facing (Fig. 19). Indeed, economic development is a major social concern in the Locride area, as many of 73.02% of respondents believed so. However, it seems that agricultural activities at household level is no longer practiced by the majority of the rural population as an economic means. 54.69% of the respondents claimed that their agricultural products were only for their own consumption, while only 25.00% practiced agricultural activities with an economic scope. 20.31% of the respondents did not practice agricultural

activities any more. Transport and not supporting old people were also considered as more prominent problems in the Locride area than in Meixian County. By contrast, the respondents from Meixian County were more likely to consider monotonous cultural life, environmental sanitation, education and medical care, collective affairs management and garbage disposal as major problems there communities were facing.

3.3.3. Natural Landscape

The landscape in Meixian County can be generally classified into five categories, namely, mountainous landscape within the Qinling Mountains (over 700 meters above sea level), loess ridge-plateau landscape, piedmont alluvial plain landscape, alluvial plain landscape of the Weihe River, and loess plateau landscape to the north bank of the Weihe River. In the Locride area, the landscape is characterized by mountainous landscape within the Aspromonte Mountains, alluvial plain-coast landscape, dry hill-*fiumara*[30] landscape, dry hill-coast landscape and mountain basin landscape. These natural landscapes, following natural disturbances and human activities over tine, have been modified to different degrees. Some of them have been integrated or assimilated into the anthropogenic landscapes (like settlements, farmlands, etc.), while others may remain largely natural. The dissertation refers to the natural landscape as landscape that has experienced relatively fewer and less intense anthropogenic influences. It includes the water systems (streams and rivers, ponds and lakes), wetlands, grasslands, hills and mountains, woods and forests, etc.

For decades, under the pressure of food security and demographic increase, natural landscape in the proximity of rural settlements has been largely converted to productive and residential landscape. For example, it happened that farmland reclamation in floodplain areas and wet lands and forest clearing had been common practices in the 1950s-1970s. This has brought about a series of negative impacts on the eco-environment. Rural areas have been prone to soil erosion, water ecological deterioration, and hydrogeological risks like mudslides, landslides and flooding. In Meixian County, natural landscapes in rural areas have been under restoration with continuous efforts over the past few years. Under the current discourse of agricultural modernization, environmental issues are seriously taken into consideration. Measures taken include increasing the use of organic fertilizer[31] and traditional compost, "Grain for Green Project" to return the low-yielding farmlands into forests and pasture, rural wetlands restoration, reforestation, etc. so as to regenerate the soil, water ecology and biodiversity in rural areas. Under these efforts, the natural landscape in Meixian

[30] A fiumara is a torrential river common in Calabria, which often, with a very wide pebbly river bed, remains dry for most of the year.

[31] This is significant in reducing the emission of nitrous oxide as China has long depended on nitrogen fertilize to increase productivity. This greenhouse gas is 300 times more potent in global warming impact than carbon dioxide. Emissions of greenhouse gas from the entire nitrogen fertilizer life cycle in China could be reduced by up to 60% by 2030 (Sayer and Cassman 2013).

County has been significantly improved in recent years. Similar interventions were undertaken in the Locride during the 1950s-1970s in rural areas facing serious soil erosion, especially in hilly and mountainous areas. For example, as projects of public interest, uncultivated lands were reclaimed and transformed into eucalyptus plantations with public funding[32].

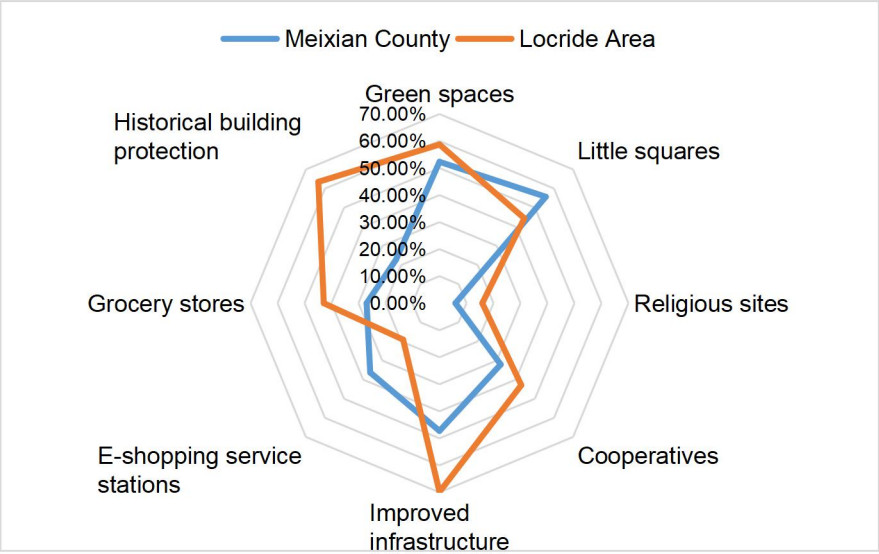

Figure 18. Services or amenities that the respondents expected to see an increase.
Source: The Author's own elaboration.

As field studies in the Locride area show, the natural landscape, like that in Meixian County, has been largely modified due to productive and constructive activities especially in hilly and coastal areas. Many dry hills, especially those close to rural settlements, are highly anthropized. The slopes, if not covered by meadows, are often terraced into olive groves of low density or vineyards, or left uncultivated. Due to geological characteristics, dry climate and social misbehavior, the natural landscape is prone to various risks, such as landslides, flooding and fire. The coastline has gone through continuous construction since the 1950s-1960s, first new settlements and infrastructural construction as people were moving to coastal areas for better living conditions and amenities, then real estate development, sometimes speculative in the form of illegal building (*abusivismo edilizio*), stimulated by the seaside tourism. In addition, agricultural expansion has also played a major role in reshaping the natural landscape. These forces jointly have considerably changed the natural landscape of the coast along the Ionian Sea.

[32] The original idea was that once the plantations had been productive, they had to be returned to the owners who had to follow a specific management plan. However, till today, this has not happened partially due to the ecological conditions of the plantations (clayey soils and long summer drought), which do not allow to achieve favorable results.

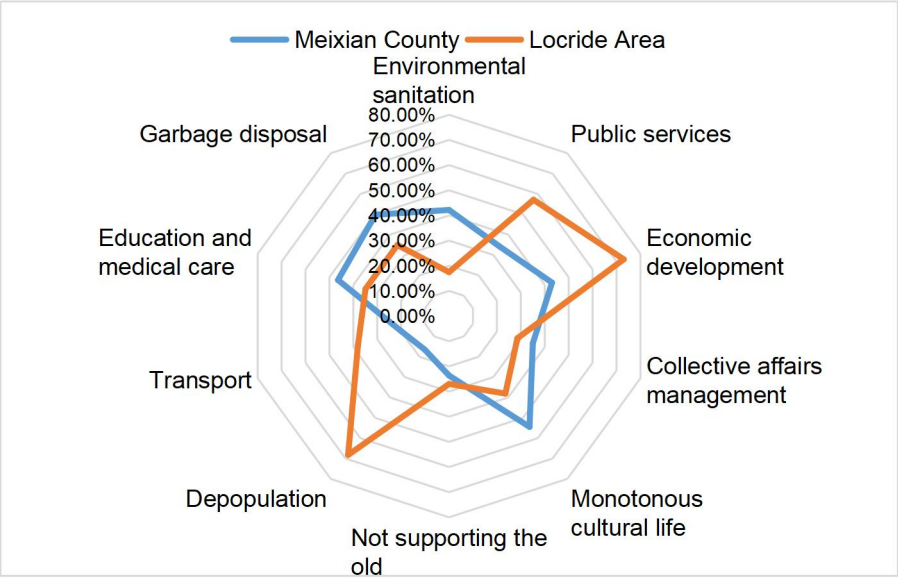

Figure 19. Problems that the respondents considered as prominent.
Source: The Author's own elaboration.

Another fact is, the current natural landscape in the Locride area is largely a result of the extended reforestation interventions led by the Italian government in the 1950s-1970s (Iovino and Nicolaci 2016). According to Nocentini (2000), reforestation has enabled the natural landscape evolve without abrupt changes, and the regenerated landscapes, regardless of the species used and the systems of planting adopted, have already become characterizing elements of many areas.

3.3.4. Built and Agricultural Landscape

At present, there are both similarities and differences regarding the built landscape of rural areas in Meixian County and the Locride area. In terms of similarities, first, in both cases, morphologically, the built landscape shows a mixture of tradition and modernity. Apart from economic considerations, such a change often tells that how people think about and value their landscape is undergoing a major shift (Taylor and Hurley 2016). New construction techniques and materials and living concepts have had a direct impact on not only the style and form but the subsistence of rural architecture. Traditional architecture has been either totally excluded or adjusted. In the first case, traditional architecture is abandoned and continues to degrade. When it concerns new buildings, no identity or territorial feature is kept and embodied in the new architecture, following a sheer detachment from the tradition (Fig. 20). The new architecture is invasive and superimposed onto the existing built landscape. In the second case, adjustment can take two forms. First, functional and structural adjustment, namely, giving a new function or retrofitting the existing structure of a certain building. This may result in a harmonious integration of the original architecture and modern interventions, or a morphological mutation (Fig. 21). Second, selective transmission, namely, the structure of the original architecture

is only partially transmitted in the new architecture. New materials, techniques, styles and even layout are adopted, and what is transmitted is nothing but the symbols and imagery of tradition, or the traditional spatial function (Fig. 22).

The second similarity is, in terms of the landscape formation mechanism, the current built landscape in both cases is a result of socioeconomic transformation and urbanization, although their impact on the pace and degree of changes differs considerably. Just like in the 1960s, with rapid economic development in the Locride area, the construction techniques, materials and styles of vernacular architecture peculiar to the territory were quickly replaced with modern ones (Fig. 23), the same process has been going on in Meixian County following the rapid economic development in rural areas since the 1990s (Figg. 24-25). This has led to the fragmentation and mutation of the built landscape. The fundamental driving force of such a phenomenon of "creative destruction" is local residents' yearning for modern living conditions.

The third similarity is the built landscape is in proximity to the agricultural landscape, and the two often form a harmonious overall landscape (Figg. 26-27). The built landscape of the two case study areas also shows two major differences. First, in terms of morphology, a greater homogeneity can been observed in villages in Meixian County, both in terms of architectural style (especially for new relocation sites) and structure and artificial vegetation (Figg. 28-29). In the Locride area, homogeneity is more present in coastal areas where seaside resorts take the form of an extended and homogeneous building complexes (Fig. 30). Another difference is that, the built landscape in some localities of the Locride area, as a result of a "territorial tertiarization" process, is becoming a sort of "exurban space"[33]. This is especially true in localities which are tourist attractions with excellent natural or cultural amenities. These spaces are characterized by the merging of a rural landscape form with economically and socially urban functions (Irwin *et al.* 2009).

The agricultural landscape in both Meixian County and the Locride area is subject to the shift of rural economic development trajectory. Since the beginning of the 21st century, rural areas in Italy, like many other southern European countries, have been experiencing a progressive tertiarization of their territory (Dijst *et al.* 2005). According to the Italian Statistical National Institute (ISTAT), there has been a 50% loss of cultivated lands between the 1930 and 2010 (Gullino *et al.* 2018). Opening to the global market in the globalization process has rendered the cultivation of traditional crops in most cases unprofitable, especially in places where modern agriculture of intensification and extended scale is little developed. This situation, following the urbanization process, is worsened due to the demographic shifts characterized by the continuous depopulation and aging of the rural population. The remaining work force tends

[33] "Exurbia" describes the result of rural transformations which results in a landscape that is no longer rural but is not urban either, but rather a particular kind of place which is both urban and rural (Taylor and Hurley 2016).

to be attracted to work in the tertiary sector. These factors jointly bring about crises to rural landscapes. Typical examples are the cultural landscapes of terraced vineyards in the Costa Viola and the olive groves in the plain of Gioia Tauro and Rosarno.

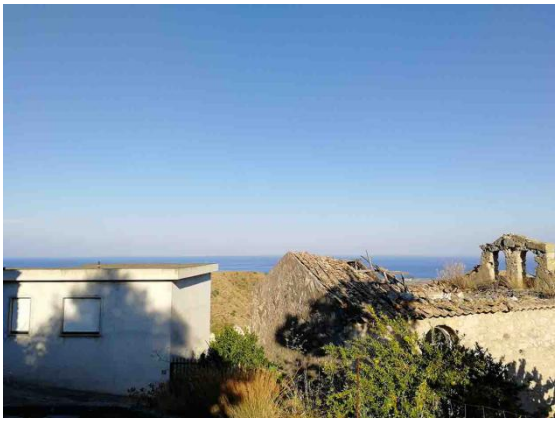

Figure 20. Mutation of the built landscape in Condojanni. © Y. OU (2018)

Figure 21. Morphological mutation of a building with modern additional structures in Sant'Ilario. © Y. OU (2018)

Figure 22. Modern house showing selective transmission of traditional architecture in Doujiabu Village. © Y. OU (2018)

Figure 23. Abandoned construction techniques and traditional knowledge embedded in vernacular architecture. © Y. OU (2018)

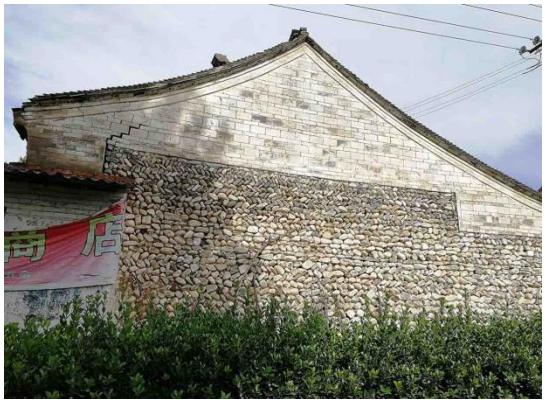

Figure 24. Abandoned construction technique of dry stone walls near Xizhai Village. © Y. OU (2018)

Figure 25. Abandoned house caves (*yaodong*) in Doujiabu Village. © Y. OU (2018)

Figure 26. Panorama of Condojanni surrounded by terraced olive groves. © Y. OU (2018)

Figure 27. Tianjiazhai Village surrounded by kiwifruit orchards. © Y. OU (2018)

In the first case, the vineyard terraces on the hilly slopes have been increasingly abandoned due to high production costs, high maintenance costs and increasing employment in the service sector. Meanwhile, traditional culture closely related to viticulture and vinification as well as traditional knowledge and techniques on terrace construction and maintenance have been quickly losing. In the second case, the landscape of olive groves on the plain of Gioia Tauro and Rosarno has been the result of decades of landscape evolution triggered by both socioeconomic and political changes. According to Morabito and others (2008), the dominant landscape on the plain used to be wet forests with cork trees as principal vegetation. In the 18th century, the landscape was characterized by mulberry trees and texitile facilities. Then with both demographic[34] and economic restructuring (from textile to oil industry), the agricultural landscape of the plain changed again, and finally the landscape of olive groves were formed[35]. Just as its own formation has been a result of demographic and economic restructuring, now this landscape of olive groves is increasingly under threats due to urbanization, degradation (illegal landfills), unemployment, black economy, excessive welfarism (*assistenzialismo*) and organized crime[36].

The organized crime has a far-reaching influence on the territorial culture, including the relationship between local population and the land, in that the latter, after the century-long "erosion" by social violence, has become a symbol of the 'ndrangheta power. To such an extent that even when confiscated from the 'ndrangheta, the land is still intimidating, and no one ever dares to reclaim it, leaving it abandoned and become a "rural blight". Besides, the crop reconversion (*riconversione colturale*) due to the crop's innate production life cycle and

[34] The plain experienced a significant population increase as people living in mountainous areas move to its coastal areas.

[35] Two reasons account for its formation. On the one hand, local farmers had already techniques of olive cultivation. On the other hand, there was an increasing international demand of olive oil in Britain, France and Russia for industrial usages.

[36] This paragraph has made reference to the website Rete Rurale Nazionale 2014-2020. See: <https://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/14364>.

changing national and international markets proves to be another factor that affects agricultural landscape (Fig. 31). Like the century-old olive groves, as the olive trees are "aging", the yield is diminishing and so is the quality. This means a negative impact on the economic gains, due to which the owners are tempted to cut off the trees and plant more profitable but alien crops like kiwifruit, goji, etc. The same thing is happening with citrus groves, which are increasingly converted into other cultivation or abandoned as the citrus market has been in downturn in recent years. Modern agricultural pattern that emphasizes efficiency proves to be another threat, as old olive groves are replaced with new high-density olive plantations. Both the introduction of alien crops and new agricultural patterns have fragmented or changed radically the landscape of century-old olive groves. The integrity of the landscape is undermined also due to the abandon of traditional farm houses and the associated community life which used to be integrated into the olive groves (Fig. 32).

Agricultural landscape in China shows a trend of fragmentation resulting from the conflict between arable land protection and urban development (Jiang *et al.* 2018). In Meixian County, the agricultural landscape has been ever changing since the founding of the P.R.C. There has been a perpetual crop reconversion mainly due to market changes and changing socioeconomic needs in different periods of time. Basically it has gone through three phases. First, the cultivation was principally food crops (mainly wheat and corn), then from the 1980s until the end of 1990s, the agriculture was a mix of cash crops (mainly apple and peach) and food crops. Since the 2000s, a reversion has occurred as it is increasingly the cash crops especially kiwi, cherry and grape that dominate the agricultural landscape. Today, kiwi orchard landscape is the dominant agricultural landscape in Meixian County, accounting for over 90% of the total area of cultivated lands. Kiwi fruit cultivation is also the pillar industry of the county.

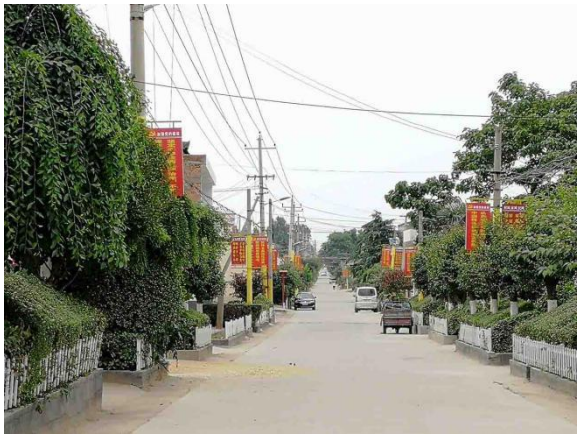

Figure 28. Standardized greening in Ningqu Village showing homogeneity. © Y. OU (2018)

Figure 29. New relocation site of Zuitou Village showing homogeneity. © Y. OU (2018)

Figure 30. Homogeneity in the costal areas in the Locride area. © Y. OU (2018)

Figure 31. Crop reconversion in Taurianova where century-old olive groves were replaced with kiwifruits orchards. © Y. OU (2018)

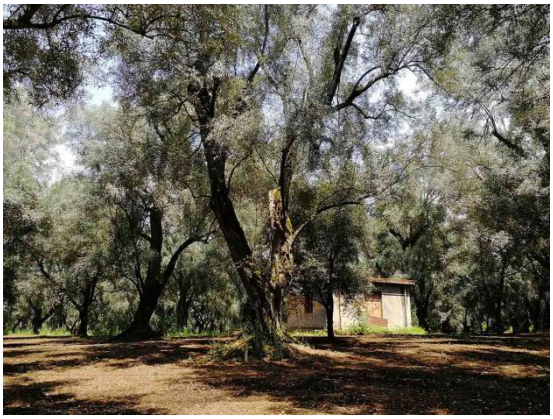

Figure 32. Abandoned traditional farm house in century-old olive groves in Taurianova. © Y. OU (2018)

3.3.5. Sociocultural Landscape

Generally speaking, the link between human and landscape, alternatively the structure-agency interrelationships, which has impacted the formation of human society and the landscape itself, tends to be ignored, or even worse, lost in our time (Fischer *et al.* 2012; Hoggart 1990; Palang 2006). The consequence of the weakening of this link therefore has two dimensions, i.e. physiognomic (visual representations) and physiologic (anthropological life behind landscapes and the latter's own evolution). This means a simultaneous change of the sociocultural landscape together with the perceivable landscape. It seems that a mutative rather than evolving external force had interrupted the trajectory of human culture in modern times. The modern society is actually characterized by a declining quality of life according to Debord (1967). The development of a modern society into one of "spectacle" has seen the replacement of authentic social life with its representation: "All that once was directly lived has moved away in a representation."[37] As a result, instead of directly living/experiencing and thereby establishing a relationship between the immediate environment, human beings are mutating from *Homo sabiens* to *Homo videns* (Sartori 2000):

[37] The author's translation. See Debord (1967): "Toute la vie des sociétés dans lesquelles règnent les conditions modernes de production s'annonce comme une immense accumulation de spectacles. Tout ce qui était directement vécu s'est éloigné dans une représentation."

"seeing without really seeing" as the direct, interactive and spontaneous perception of the immediate environment gives its way to the filtered, monodirectional and conventionalized focalization on social and environmental representations. This results in social alienation, cultural homogenization and mass media prevalence.

In the traditional Chinese rural society, most of the public management affairs are in the charge of clan organizations. This is a typical *Gemeinschaft*, characterized by a community organized by blood, mutual bonds, common beliefs and living habits. It therefore shows a social form of primitive capitalism, sustained by divided smallholder families (Liang 2011). Central to this blood-bound *Gemeinschaft*, the respect for the family has practically long remained the only value identified by almost all Chinese people (Baker 1979). For centuries, the sociocultural landscape of a traditional Chinese rural society is a collectivistic one according to Hofstede (2011), as people are seen as fundamentally connected with each other and their communities (Cohen and Hill 2007). Confucianism and Taoism (also Chinese Buddhism) have played a fundamental role in its shaping, and two values are central to them: relationship and harmony. On the one hand, both stress the relationship and wholeness of all things, and explore how to live in harmony within a system. While Taoism relates man to nature, Confucianism sets up norms for family, collective and social relationships which are organized in "concentric circles" extending outward from the starting point of all relationships, namely, family. In this way, each level of relationship is independent but also dependent on relationships of a lower or higher level. Family, as the fundamental relationship, is therefore both individualistic (introversive) and collectivistic (extroversive), in that it is organized in a way to pursue individual interests and meanwhile subject itself to the norms of the collectivity. The superiority of the collectivity to the individuality suggests a *collectivistic familism*. On the other hand, "harmony 和", as the core value that runs through Confucianism and Taoism, is best illustrated by the "*yin* and *yang*" thought, which describes how polar opposites or seemingly contrary forces are interconnected and interdependent in the natural world, and how they give rise to each other. *Yin* and *yang* seem to provide a dividing line, which can divide a continuum into distinct but interdependent constituents of the same system. Harmony, as a state of dynamic equilibrium following the interaction between *yin* and *yang*, is critical to the development of the system, in that it can coordinate "differences" and associated conflicts within the system so as to achieve a new harmony and integration. "Differences" do not mean irrelevance, but rather coexistence and reciprocity in different networks of relationships. For this reason, each individual family, different from each other, can never get rid of the interrelationships and exist in isolation. Instead, it must fit its individuality into the collectivity to maintain the harmonious coexistence and reciprocity of all families within the community[38].

[38] This part has referred to and adapted the Author's master's thesis on "Intercultural Conflict and Dialogue

The contemporization of the traditional sociocultural landscape of rural China has been greatly affected by both rural (internal) and national (external) reforms since the end of the 1970s. Internally, China implemented the "household contract responsibility system" in rural areas in the early 1980s. Under this rural land and economic system, the family has become the basic, individual unit of the rural economy. The social, economic and organizational relations and even basic values of the rural population are deeply affected by this system (Zheng 2011). Externally, since the 1990s, rural China has been exposed to the market mechanism established with the national economic reform policy of "Reform and Opening-up" since 1978. The establishment of this mechanism has greatly stimulated the rationalization of economic activities, which inevitably influenced social organization in rural areas. Consequently, traditional family system and family-centered values quickly declined. Under the dual influence of the internal and external reforms, the rural sociocultural landscape has undergone three negative changes. First, individualism and egoism have become the prevailing value orientation. The rural population tend to pursue personal interests maximization while disregarding family and collective contractual relationships and responsibilities (*ibid.*). Social alienation begins to appear, and rural governance becomes more difficult. More rapid economic development compared to sociocultural development is very likely to be the fundamental reason, as there exists a positive correlation between the degree of individualism and economic growth (Inglehart 1997). Second, there has been a significant loss of the traditional values conducive to social stability, cohesiveness, harmonious interpersonal relationship, harmonious coexistence between human society and environment, and cooperation and mutual help critical to reducing the risks related with production and livelihood. Third, due to the disjointment and alienation of endogenous driving forces, social and cultural development of rural China has been lagging behind economic development. There has been a lack of social and cultural services and facilities, hence a monotonous social and cultural life.

The sociocultural landscape of southern Italy attributes its formation for multiple factors at historical, political, religious and sociocultural levels. Feudalism, unending centuries of colonial occupation (successively the kingdom of the Swabians, the Anjou, Spain and the Bourbons), violent organized crime, and more recently the immigrant issue have all played a role: "No one has ever set foot on this land except as an enemy, a conqueror, or a visitor devoid of understanding" (Levi 1946). These historical factors prevented the social structure of the South from evolving fully from the pre-capitalist community society (*Gemeinschaft*) into a bourgeois capitalist society (*Gesellschaft*) as in the North (Spooner 1984). Romeo (1998) attributed the problems of the South to sociocultural traits, characterized by individualism and a lack of civic sense, and historically the industrial protectionism (revolutionary and bourgeois forces) of

from the Perspective of Multicultural Discourse" (2012).

the North and the granary one (semi-feudal forces) of the South. Under the joint forces, there has been an ever deepening gap in economic and civil development between the North and South, causing not only the economic inferiority of the South to the North, but also its social and civil one[39]. Consequently, there has been a persistent "socioeconomic dualism" throughout the modern history of Italy. This idea is echoed by Sylos Labini (2002) who argues that there has been a widening gap between the economic development and the civil development in the South, as the former has gone further than the latter. For this reason, the problem of civil development has increasingly been central to the problem of the South, while the economic one has been less conspicuous today than in the past[40]. According to him, the civil development in the South has been largely undermined by the problem of mafia, to which the impact of immigrants is to be added today.

Catholicism, individualism and familism are three values central to the traditional sociocultural landscape of southern Italy. Perceiving the sociocultural landscape of the rural southern Italy opens an important door to understanding the century-long debate on the "*questione meridionale*", namely, question of the South. In *La Questione Meridionale* (2008) edited by Calledda, Antonio Gramsci wrote:

> The South can be defined as a great social disintegration; the peasants who make up the vast majority of its population have no cohesion among them. … The southern society is a large agrarian block consisting of three social strata: the large, amorphous and disrupted peasant mass, the intellectuals of the small and middle rural bourgeoisie, the great landowners and the great intellectuals[41]. (p. 81)

Social disintegration and decohesion are two attributes of an individualistic society in general, and a familist individualistic one in the case of southern Italy. Individualism is often correlated with Protestantism (Cohen and Hill 2007),

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[39] See the original text: Nell'incontro fra il protezionismo industriale del Nord e quello granario del Sud si è visto spesso lo sbocco del compromesso tra forze rivoluzionarie e borghesi del Nord ed elementi semifeudali del Sud, sul quale si era fondata la soluzione unitaria del 1860…, [e] …anche se poi il discorso vada articolato in modo assai più complesso e sfumato di quanto solitamente non comportino siffatte semplificazioni… E volle dire, tutto questo, accentuazione non solo della inferiorità economica del Sud, ma anche del suo scadimento sociale e civile, e della miseria e della sofferenza delle genti meridionali, che avrà la sua espressione più vistosa nel grande dramma dell'emigrazione, ma che si rinnova ogni giorno nella vita di tanti borghi e città, o pseudocittà, sparse per le assolate campagne del Sud.

[40] See the original text: Il problema del Mezzogiorno è diventato sempre più un problema di sviluppo civile, perché quello economico è stato cospicuo in passato, oggi è assai meno grave. Purtroppo qui c'è stato un divorzio e lo sviluppo economico è andato più avanti di quello civile. Non si può tenere conto solo degli indici economici, come il reddito pro capite, ma si devono considerare anche gli indici sociali.

[41] The Author's own translation. See the original text in Italian: Il Mezzogiorno può essere definito una grande disgregazione sociale; i contadini che costituiscono la grande maggioranza della sua popolazione, non hanno nessuna coesione tra loro. … La società meridionale è un grande blocco agrario costituito da tre strati sociali: la grande massa contadina amorfa e disgregata, gli intellettuali della piccola e media borghesia rurale, i grandi proprietari terrieri e i grandi intellettuali.

which has legitimized worldly success as a criterion of "God's chosen". Such an ideology, emphasizing and encouraging free development and personality cultivation of the individual, has not only led to the pursuit of individual freedom, but also greatly stimulated entrepreneurial spirit and spirit of adventure. As a result, the interpersonal relationship has become one that is interactive and competitive; therefore, while individual freedom is emphasized, social and moral responsibility of the individual is relatively overlooked. This has led to the social rationalization of Protestant societies, through which, according to Max Weber (2005), traditions, values and emotions as motivators for behavior in society are replaced with concepts based on rationality and reason (such as the "Spirit of Capitalism", work ethic, pursuit of worldly success and progress). "Cult of rationality" has actually become canonic in modern economic theories (Buchanan 2003).

Often, differences in religious groups can be understood as differences in culture (Cohen and Hill 2007). Southern Italy has deep-rooted Catholic traditions, which normally "resonate more with collectivistic aspects of religion and spirituality" (*ibid*., 736). A possible reason for its seemingly paradoxical individualism is its rigid and prevailing familism. Banfield (1958) coined the term "amoral familism" to refer to a typical southern society that is self-interested and family-oriented, the deep-rooted reasons for the community members' inability to "act together for their common good or, indeed, for any end transcending the immediate, material interest of the nuclear family" (p. 10). In an "amoral familist" society, community members behaviors are consistent with such a rule: "maximize the material, short-run advantage of the nuclear family", and "assume that all others will do likewise" (p. 85). Consequently, nepotism serving the immediate family has become the mainstream ideology. This has very likely hampered the rationalization process of southern Italy in modern times, and the formation of a civic culture and collective responsibility, which is critical to developing the patterns of associationism, trust, and cooperation that facilitate good governance and economic prosperity (Putnam *et al.* 1994). The absence of these social capital has led to two major results, i.e. social isolation due to the mistrust among community members and unwillingness to cooperate (e.g. pooling common resources) to solve common social problems (e.g. infrastructure). The two results in turn are impact factors accounting for socioeconomic stagnation and even in a worse situation, retrogression, in dire contrast to strong territorial identity and vibrant traditional culture.

3.4. *Status Quo* of Rural Development in Meixian County and the Locride Area

3.4.1. Brief History of Rural Development in China and Italy

Since the founding of the P.R.C., each administration has faced different

domestic and international situations, and its rural development ideas and strategies have also reflected specific demands of the changing times. The table below summarizes the ideas and strategies of five historical periods to address the "Three Rural Issues", namely, three issues relating to rural development: agriculture, rural areas and farmers. It can be seen that first agriculture has always assumed a central position in rural policies. Second, coordinating rural and urban development has been a coherent national strategy. However, rural development has long been subordinate to urban development due to the deep-rooted urban-rural dual system. Such a dual system is largely due to: 1) the gap between the prices of industrial and agricultural products have continued to enlarge; 2) the fiscal funds and financial policy have skewed towards industry and urban areas; 3) the price of rural land expropriation and transfer is biased towards cities; 4) the discriminatory household registration (*hukou*) system and employment system; and 5) limited support to rural areas in the compulsory education, medical care and social security (Nie *et al.* 2007).

Table 9. Key thoughts and strategies of rural development in China since the foundation of the P.R.C.

Phases	Key Thoughts and Strategies
Mao Zedong (1949-1976)	• the importance of agricultural production (social stability, industrial development, national defense consolidation, improvement of living conditions); • agricultural development strategies (develop diversified operations, develop rural commodity economy, rural technological improvement and agricultural technology promotion, etc.); • attention to farmers' role in the Chinese revolution and construction (farmers as the main force of the revolution and their extreme importance to the country); • attention to rural construction ("surrounding the cities from the countryside", rural political power construction, urban and rural coordination and urban and rural mutual assistance)
Deng Xiaoping (1978-1989)	• agriculture as the foundation of the national economy; • science and technology are the key to developing agriculture; • adaptation of central policies to local conditions and diversified operations; • coordinated rural and urban development to achieve overall common prosperity
Jiang Zemin (1993-2003)	• the "Three Rural Issues" as a fundamental issue that affects the overall situation; • the protection and mobilization of farmers' production enthusiasm; • the market-oriented support for agricultural and rural economic development; • the idea of achieving an industrialized agricultural operation; • the key role of science and technology in agricultural modernization; • the development of rural enterprises and the construction of small towns as the inevitable trend of rural industrialization and modernization;

	• attention to rural poverty; • the construction of a prosperous, democratic and civilized new socialist countryside (the Third Plenary Session of the 13th Central Committee in 1988)
Hu Jintao (2003-2013)	• the "Three Rural Issues" as the top priority of the work of the whole Party; • the two-trend conclusions: the first universal trend is, in the early stage of industrialization, industrialized countries supported agriculture to provide accumulation for industry; the other trend is, after industrialization reached a certain degree, industry supported agriculture and cities support the countryside to realize a coordinated development of industry and agriculture, and of cities and the countryside; • integrated urban and rural development (first proposed by the Third Plenary Session of the 16th Central Committee in 2003); • increasing farmers' income; • definition of the goals and tasks of building a New Socialist Countryside ("production development, well-off living, clean and tidy village, democratic management" requested by the Fifth Plenary Session of the 16th CPC Central Committee in 2005; the No. 1 Central Document of 2006)
Xi Jinping (2013-present)	• modernization of agricultural production and modernization of agricultural management system; • professionalization of farmers, attracting high-quality labor with knowledge and quality to engage in agricultural activities; • increasing farmers' income; • reform of rural land system by dividing the three rights of land ownership, contracting and operation; guiding farmers to orderly transfer their rights of land operation; • realizing urban-rural integration by promoting equalization of urban and rural public services and diversification of rural social governance; National New Urbanization Planning (2014-2020); • construction of "Beautiful Countryside" (the No. 1 Central Document of 2013); • simultaneously implementing the Rural Revitalization Strategy from five aspects: industry, talent, culture, ecology and organization (the 19th National Congress of the CPC in 2017; the No. 1 Central Document of 2018) • Structural reform of the agricultural supply side, while ensuring effective supply, improving the quality of agricultural supply; developing new industries and new business modes, and expand the value chain of the agricultural industry (the No. 1 Central Document of 2017)

Source: The Author's adaptation based on Nie *et al.* (2007).

In Italy, since the 1900s, the "agrarian question" and the "question of the South" have been considered as the crucial problem of the economic and civil evolution of the country (Farolfi and Fornasari 2011). Continuous efforts have been made to address this problem since the World War II, especially since the 1950s as the the "dualistic" character of the Italian economy was taken into account by the State (Pescatore 1962). The picture depicted by Spooner (1984) over 30 years ago about the economy in southern Italy, although somehow disturbing, is a vivid

representation of this North-South dualism:

> In the South a 'traditional' rather than a 'modern' economy still prevailed. Not only was the structure heavily skewed towards agriculture rather than industry, but in both sectors 'traditional' features dominated - in industry small-scale family-based units, artisan types of production and a reliance on local resources and markets; in agriculture a polarized land ownership pattern, antiquated techniques, lack of capital, overpopulation and underemployment. (p12)

However, this picture has never been entirely changed to date. From the table below, it can be seen that between the 1950s and 1960s, the policies related to rural development in Italy were centralized and focused on agricultural modernization. In these two decades, the principal ideology guiding policy-making can be summarized as "holism" and "territoriality", both introduced for the first time. By "holism", different from the conventional approach of isolated intervention, rural issues were addressed with a holistic perspective. By "territoriality", the regeneration of southern Italy was not only about responding simultaneously to a set of interdependent and connected needs, but about intervening at the territorial level with the recognition that these needs were territorially inseparable. Indeed, it was the entire southern regions that needed to be integrated into the economic circuit of the country rather than individual provinces (*ibid.*). Then from the 1970s, two fundamental changes occurred. On the one hand, a decentralization process started and the competence of the State in the agricultural sector was transferred to regions. On the other hand, regions were increasingly imposed to European policies following the integration process of the European Common Market. Policies such as agricultural integration in Europe in the framework of Common Agricultural Policy (CAP) and Integrated Rural Development Plans (*Piani di Sviluppo Rurale Integrati*, PSRI) enabled regions to interact directly with the then European Economic Community (EEC) (1957-1993).

Generally speaking, the primary concern of these three decades' rural development is economic growth. It was until the 1980s that environmental issues began to be integrated into the agenda. There was a further decentralization in the 1990s, with regions gaining more autonomy. Entering the New Millennium, the "bottom-up" approach continued and the Integrated Rural Development that highlights rural multifunctionality became the predominant concept. Under this discourse, territorial cohesion, innovation and competitiveness have been both national and EU's top priorities.

Table 10. Key concepts, programs and legislation in relation to rural development in Italy since the 1950s

Period	Key Concepts, Programs and Legislation
50s	• 12-year plan (1950-1962) aimed at the economic and social progress of southern Italy (Law of August 10, 1950, n. 646); • major works related to the arrangement of mountain basins and related watercourses, to reclamation, irrigation, aqueducts and sewers, agrarian transformation, land reform programs, on ordinary non-state traffic, plants for the enhancement of agricultural products, infrustructure, tourism development; • Land Reform of 1950 (transitional Law n. 841): forced expropriation (*esproprio coatto*) of latifundium in particular in the South and reallocated to peasant families; • *Cassa del Mezzogiorno* (English: Fund for the South), established in 1950 and dissolved in 1984 with the primary purpose to finance the construction of public works and infrastructure projects in rural areas, and to provide credit subsidies and tax advantages to promote investments
60s	• first national Five-year Plan (1961-1965) for the Development of Agriculture (also known as "Green Plan") intended to provide public support for the transformation of small family farms into "efficient and rationally organized companies" (Law of June 2, 1961, n. 454); • major works: provision of subsidized loans and the granting of incentives for investments in equipment, construction of rural buildings, construction of irrigation works, mechanization and crop reconversion; increasing productivity and employment, improving living conditions and increasing the income of rural populations, adapting agricultural production to the demands of the internal and international markets (also through crop reconversion), stabilizing the prices of agricultural products; • Second national Five-year Plan (1966-1970) for the Development of Agriculture intended to facilitate the inclusion of national agriculture in the Common European Market (Law of October, 27, 1966, n. 910); • major works: providing general services; control over price and agricultural market; purchasing operating capital; developing cooperation and producer organizations; specialization of tree crops and vegetable crops; structural, functional and economic adjustment of (family) enterprises; development of irrigation works and reclamation, forest development, access to agricultural credit
70s	• started to consider rural development as a model aimed at ensuring a territorial balance to avoid the exodus from rural areas; • agricultural integration in Europe in the framework of CAP; • launch of the first European policies, the PSRI: the transfer of competence in the agricultural sector to the regions and direct dialogue between the EEC and regions; • optimizing employment of rural populations and not limited to the agricultural sector
80s	• referring to national programs of rural development of already developed countries with different characteristics; • integrating environmental protection and development
90s	• assigning specific competence to the regions for the conservation

	and development of the rural territory (Law of December 4, 1993, n. 491); • assigning regions the administrative functions relating to agriculture, fishing and reorganization of the central administration (Legislative Decree of 4 June, 1997, n. 143); • adopting the term "rural development" instead of the previous "development of the rural territory"; • ideological shift from conservation towards the territorial development in the long run (environmental problems are closely linked to agricultural enterprises)
2000s	• Integrated Rural Development that enlarges the outreach of agriculture to make it multifunctional: the agricultural sector should align with other sectors to offer new, diversified services (Legislative Decree of May 18, 2001, n. 228); • achieving a balanced growth of the entire rural territory (in line with the EU's objective of achieving a well-functioning market); • diversifying the activities and creating new employment opportunities for the inhabitants of rural areas; • more flexible aid scheme for rural development to facilitate decentralization, concertation and partnerships, tools capable of representing the needs of the territory

Source: The Author's own elaboration based on Farolfi and Fornasari (2011), Pescatore *et al.* (1962) and Saija (2009).

The two tables above demonstrate that, the major difference in the trajectory of rural development in China and Italy is, since the 1950s, while the policies in China has always been made following a centralized planning tradition, those in Italy has shifted from a centralized, national planning to decentralized, localized planning based on EU policies since the 1990s. Another difference is, while China currently highlights coordinated rural and urban development in its "National New Urbanization Planning (2014-2020)", it seems that in Italy, although integrated rural development marks a conceptual advance, how to relate it to an integrated regional development that is able to coordinate the rural and the urban still remains problematic.

Rural development in the two countries shows three similarities. First, agriculture occupies an unwavering position in rural development. Second, both countries have gone through a shift from a development pattern that prioritized quantity and economic efficiency to one that balances quantity and quality, and economic efficiency and environmental sustainability. This shift suggests that in the early stage of rural modernization, rural development is often synonymous with economic growth, which tends to be divorced from environmental and landscape considerations. It is until when economic growth reaches a certain level that economic and environmental issues start to be coordinated. For example, Italy remained quantity-oriented until the CAP reform in 1992, which demanded agri-environmental issues be addressed with measures of reducing agrochemical inputs, assisting organic farming, facilitating shifts to extensive forms of production or grassland management and supporting production methods that protect the environment and maintain the countryside. In China,

since the 2000, environmental issues in rural areas, mainly in terms of the development of eco-friendly agriculture and rural environment protection, have been increasingly stressed on the political agenda. Nevertheless, these actions were somehow marginalized in the beginning as sustaining economic growth and increasing farmers' income were still the predominant priority. In this sense, the recent policies on the structural reform of the agricultural supply side and the new urbanization have marked a fundamental paradigmatic change. Third, both countries have highlighted agricultural multifunctionality to diversify the rural industries.

3.4.2. Governance

3.4.2.1. Governance in Rural China

The 1980s has seen local governance reform in rural China. In 1982, the people's commune system (both a production organization and grassroots administration) was abolished and replaced by the "villagers' committee", which was recognized as "a local autonomous governing body" in the *Constitution of China*. Then in 1988, the village self-governance system has been widely implemented all over China. The disintegration of the people's commune system and the subsequent establishment and implementation of the villagers' autonomous governance system marked the withdrawal of state power in rural society and the beginning of democratization of rural society. However, the centralist characteristic persists in local governance. One possible reason is, rural China is quite different from its urban counterpart in that the former is maintained by a complex network of blood and geopolitical relationships among the rural population. Centralized governance is able to effectively negotiate among different interest groups to reach a consensus and therefore guarantee efficiency. Another reason is, in rural China, villagers' committees are accustomed to undertaking all tasks all by themselves, from decision-making, planning and implementation. Due to this tradition, the agency of the rural population is largely neglected, as an emphasis is attached to the top-down "poverty alleviation" and "assistance" rather than to foster the autonomous development ability of rural localities (Zhang 2016).

In China, the public policy making is centralized, and policies are delivered hierarchically to the local governments at different administrative levels for implementation. Because of this tradition, the governing of rural areas has long been "top-down". Basically it is "government" rather than "governance" that is guiding the management of rural localities' affairs. This implicates that the local government is the key actor in charge of all, from planning, decision-making to implementation of a certain policy. The centrality of the local government, while guaranteeing efficiency, a clear chain of command, focused vision and reduced costs, has put the self-regulation ability of the rural society and rural population's autonomy at a secondary place. This results in rather limited local autonomy as the initiative, enthusiasm and participativeness of the rural

population tend to be negatively affected.

The drawbacks of this governing system is best illustrated by the implementation of the new project-based financial transfer payment in rural areas. The project application often involves only the interaction between the village cadres and the county government. "Participation" is commonly misunderstood as "attending and cooperating" from the villagers' part when the local government has already planned and set up development goals (Ye and Wang 2016). The absence of a full participation of the rural collective in the planning phase makes the public interest underrepresented on the one hand. As a result, village cadres, village elites and beneficiary farmers are in a more advantageous position to participate in the allocation of the project resources. On the other hand, the lack of full participation is also not conducive to the social supervision during the project implementation phase. In fact, the centralized approach used in the project-led transfer payment shows three major disadvantages by nature. First, it makes little contribution to the building of local capacity and protagonist consciousness of the local population. As a result, once the capital flow is over and technical assistance is withdrawn, local people cannot or are not inclined to invest themselves in the project management to keep it continue to function. Second, centralized approach may lead to costly mistakes due to a lack of understanding or consideration of local customs and deeply internalized values (e.g. tacit knowledge). Showing no respect to the local context and local people's actual needs explains why seemingly well-thought projects are doomed to fail. Third, such an approach, no matter how well-intentioned and expert it may be, tends to arouse suspicion and mistrust of the local population; therefore, it has difficulty in obtaining their cooperation. Altogether these disadvantages may lead to an alienation from the central government, which can and has had rather fundamental implications for political processes (Bertrand 1972).

It is acknowledged that, during rapid transformation, the main obstacle to rural democratization is the traditional rural power (interest) structure (Wu 1999). Despite the deep-rooted centralist tradition in the governing of rural areas mentioned above, continuous efforts have been made, also from the central level, to promote local autonomy. This can be clearly seen from a series of No. 1 Central Documents[42], the first policy document jointly released every year by the Central Committee of the Communist Party of China and the State Council. Starting from 2004, the major focus of this document has been on agriculture, rural ares and farmers (referred to as the "Three Rural Issues"), highlighting the importance of these issues in coordinating socioeconomic development in both rural and urban areas. In the most recent 2018 Document, the 15th consecutive document focusing on this theme, it is required to establish a three-level social

[42] The first Document dated back to Oct. 1, 1949, when the P.R.C. was founded. Between 1982 and 1986, the major focus was on the "Three Rural Issues" and therefore planning for rural area reforms and agricultural development. After a period of focus on other issues, starting in 2004, the theme of the Document has returned to the "Three Rural Issues".

governance model of rural communities based on autonomy, rule of law and rule of morality. This governance structure was also integrated into the Report of the 19th National Congress of the CPC (2017), the first time in a document as important as the report. Five components are integral to this structure, namely, local party organization, local government, urban and rural enterprises, urban and rural social organizations and rural community members. Actually, improving and innovating the existing governance structure has long been a consistent requirement in the No. Central Documents of recent years. For example, it is required in the 2014 Document to improve rural governance mechanisms by exploring effective forms of villagers' autonomy in different situations; in the 2015 Document innovate and improve the rural governance mechanism by exploring the effective forms of villagers' autonomy in line with local conditions; and in the 2016 Document innovate and improve the rural governance mechanism by constructing service-oriented government, enabling villagers' lawful autonomy and exploring its effective realization led by the rural party organizations, and diversifying the governance structure of rural communities.

It can be seen that, generally speaking, the rural governance improvement and innovation are to be achieved by following four principles, first, under the leading role of the local party organizations; second, localization of rural governance; third, diversification of the realization form of rural governance; and fourth, creation of synergy between the autonomy of rural community members, rule of law and rule of morality. Given that China's well-established urban-rural dual system is rather unfair to the rural, its comprehensive national strength still limited and the difficulty in institutional reform, the rural governance improvement and innovation is extremely important to mobilize the autonomy and agency of local people in rural areas. It is equally important to integrate fully and effectively the power of the public, enterprises, residents and social organizations. This is undoubtedly the best way to accelerate rural revitalization (Zhang 2016).

3.4.2.2. Governance in Rural Italy

In Europe, generally speaking over the recent decades there has been a shift in the ways and processes of governing in rural societies. This shift has been one of the decision-making power from the government to local governance (Macken-Walsh 2009; Marcianò 2013; Marsden and Murdoch 1998), understood as process of participatory planning that involves both public and private entities as well as the civil society. In this way, public action is decentralized and consultation becomes a tool for representing the interests of all stakeholders, through which a consensus is to be reached (De Luca *et al.* 2013). Governance highlights partnership and territoriality. On the one hand, "governance" requires that the actor of development become the territory itself, which is critical for the definition and implementation of development strategies (De Luca *et al.* 2013; Gulisano and Marcianò 2009; Marcianò 2013). On the other hand, governance is

synonymous with a multilevel partnership (De Luca *et al.* 2013), and partnership between a variety of stakeholders including public and private entities and civil society is central to the participatory process, by which local development policies are able to take into account the specific nature and needs of territories (Fortunato and Mirabelli 2008; Gulisano and Marcianò 2009).

The rationale of governance lies in that it is an effective institutional structure favorable to the new multifunctional role assigned to agriculture in recent years. Multifunctionality requires the search of new mechanisms for managing the changed agricultural reality which involves a multitude of political and economic processes necessary to respond to the different needs of the rural area (De Luca *et al.* 2013). This multitude unavoidably, while likely to link a variety of socioeconomic sectors, may lead to conflict due to vested interests within a given socioeconomic system. However, although governance has been widely practiced at local levels in Europe over recent years, some scholars argue that in "the era of decentralization", government is not to be replaced by governance, which still seems to need forms of hierarchical co-ordination to be implemented successfully (Böscher 2008; Fortunato and Mirabelli 2008).

The LEADER program (*Liaison entre actions de développement de l'économie rurale*) offers an important framework to execute governance at local level. As an EU initiative to support rural development projects initiated at the local level in order to revitalize rural areas and create jobs, within the LEADER, Local Action Groups (LAGs) represent the territorial governance of rural development, which give concrete form to local development policies by planning and subsequently implementing Local Action Plans (LAPs). LAGs play a key role in organizing and carrying out concertation activities between the members of the Socioeconomic Partnerships (PSEs), the promoters of the LAPs, in order to identify the strategic priorities to be pursued for the development of the areas concerned. In a participatory multistakeholder process, in order to plan a shared development model, it is essential to integrate and harmonize the potential divergent interests of the groups of actors involved.

3.4.3. Current Policies and Strategies

3.4.3.1. Current Policies and Strategies in Meixian County

Given the centralized tradition of governance in China, current policies and strategies in Meixian County follow the provincial policies according to the national ones. Wherever necessary, adjustments are made to fit these policies into local contexts.

At present, China faces a major challenge of maintaining social stability and long-term sustainability in an explosive context of economic growth, industrialization, and urbanization on the one hand, and the mitigation of escalating inequalities on the other, so as to construct a "harmonious society" (Escher *et al.* 2018). This challenge fundamentally is due to, as the report of the

16th National Congress of the CPC (2002) acknowledged for the first time, that "the urban-rural dual structure has not changed"[43]. According to the Development Research Center (DRC) of the State Council of China (2014), one of the major structural issues China is facing still remains the obvious dual urban-rural structure jointly determined by institutional factors, development stages and the low integration of urban and rural development. This dual urban-rural structure, established since the founding of the P.R.C., manifests itself in four aspects, i.e. land rights and markets, urban-rural and intra-urban labor markets, financial and institutional arrangements, and allocation of public resources, all to the disfavor of rural areas. In China, the economic outcomes resulting from rapid urbanization and industrialization have long not been distributed in a just way to rural and urban populations. This politically biased distribution has led to escalating rural-urban disparities, and doubts about the "land-based local finance" (Li 2017). To respond to this challenge, the current rural policies and strategies are defined under the discourse of integrated rural-urban development.

Regarding the need to change the dual urban-rural structure and implement integrated rural-urban development, two recent national policies are having profound, far-reaching impact on the evolving trajectory of rural development and rural landscapes in China, namely, the "Rural Revitalization Strategy (RRS) (2018-2022)"[44] and the "National New Urbanization Planning (NNUP) (2014-2020)". Before these two national policies, there have already been national initiatives like the ongoing initiative of "Beautiful Countryside Construction", which is aimed at building up a rural China that is economically and culturally dynamic and ecologically sound. However, these two recent policies prove to be more systematic and holistic, and have incorporated some of the previous initiatives like "Beautiful Countryside Construction". The RRS is aimed to improve the system and mechanism for the integration of urban and rural development, and promote rural development by relying on rural reform and innovation. Three pivotal tasks have been envisioned in the implementation of the RRS, namely, promoting the structural reform of the supply side of agriculture, comprehensively deepening rural reform (mainly land-related reforms), and promoting the integrated development of various rural issues (including public services, infrastructures, living environment, social ethos, governance system and talents).

As for the NNUP, one of its strategic tasks is to promote the integration of urban and rural development. To this end, interventions that integrate the

[43] The Report proposed, to change the urban-rural dual structure, that "coordinating urban and rural economic and social development, building modern agriculture, developing rural economy, and increasing farmers' income are major tasks for building a well-off society in an all-round way".

[44] First put forward at the 19th National Congress of the Communist Party of China (NCCPC), the RRS was then elaborated in detail in the "Opinions of the CPC Central Committee and the State Council on Implementing the Rural Revitalization Strategy", the "No. 1 Central Document of 2018" and in the "2018 Government Work Report". The national "Rural Revitalization Strategic Plan (2018-2022)" was issued in July 2018, which is to be translated into local "Rural Revitalization Strategic Plans".

sociocultural, economic and environmental spheres are to be undertaken, including promoting social equity and justice and full development of people. The ultimate goal is to 1) make sure that both rural and urban population can share the fruits of modernization; 2) promote the integration of informatization and industrialization, benign interaction between industrialization and urbanization, and coordination between urbanization and agricultural modernization; 3) integrate the concept of ecological civilization into the urbanization process, focusing on promoting green, circular and low-carbon development and strengthening environmental protection and ecological restoration; and 4) transmitting cultural heritage and territorial characteristics, respecting the regional natural and historical endowments, and maintaining morphological diversity during rural and urban construction.

China has long seen a faster industrialization than agricultural modernization and urbanization (Chen 2008; Li 2014), and now stands at a precarious and challenging position in its development, with a slowing down growth (Ning *et al.* 2017). Considering such realities, these two national strategies prove to be of great significance, especially in terms of changing the existing dual urban-rural structure deep-rooted in the national economic and social organization. Indeed, under the Chinese context, the integrated rural-urban development is essentially aimed to solve the "Three Rural Issues" and change the well-established urban-rural dual system. The resulting rural development dynamics currently under way entail on the one hand the re-alignment of agriculture to the environment and society to create new pathways for food production, distribution and consumption (Li 2017); and on the other hand, the integration of existing local resources and platforms to foster cooperation among different sectors.

These policies are implemented mainly through the financial transfer payment system. Apart from the taxation system, the "project-based financing system" has become a new financial transfer payment that the state and local government deploy for the construction of rural public facilities in rural areas. This system, similar to the EU framework of rural development programs discussed in the following section, plays an important role in the governance of the countryside, aimed at solving the rural public goods supply, improving the ecological and living environment, improving the infrastructure, and narrowing urban-rural disparities. It is also expected to, by means of capital input, organize and mobilize rural institutions and population so as to increase their agency in autonomous development (Ye and Wang 2016).

3.4.3.2. Current Policies and Strategies in the Province of Reggio Calabria

Generally speaking, with the growing squeeze on agriculture and rural economy, Europe is moving from the dominant agricultural modernization model (based on scale-enlargement, intensification, specialization and industrialization) towards the rural development model as the main paradigm and guiding

principle for policy formulation, enterprise development, and new institutional arrangements (van der Ploeg and Roep 2003). Within the EU, rural development is promoted under the overall aim to maintain the balance between social cohesion and economic competition objectives (Wiggering *et al.* 2010). The rural development programs that have been implemented in Europe since the 1990s have consolidated the vision of local-territorial development promoted through participatory and bottom-up processes, by drawing up development policies that are calibrated to actual needs and characteristics of the territories. This has marked a shift towards development processes that involve more stakeholders in the planning stages (Marcianò and Romeo 2019). An integrated approach to rural development is adopted at present. Its major characteristics are bottom-up approach, intersectorial, coordinated use of several intervention tools, presence of a specific strategy of development, and formation of a partnership more or less structured (Tarangioli 2013).

All in all, the EU regional strategy for the development of rural areas and agri-food chains is implemented through an integrated approach that has combined different types of instruments. The EU's rural development policy, funded through the European Agricultural Fund for Rural Development (EAFRD), is an increasingly important component of the Common Agricultural Policy (CAP). It is aimed to help the rural areas of the EU meet their economic, environmental and social needs in an integrated way. Frequently called "the second pillar" of the CAP, it complements the system of direct payments to farmers and measures to manage agricultural markets (the "first pillar"). The EU framework for Rural Development Programmes (RDPs) (2014-2020) allows Member States and regions to draw up their RDPs based on the needs of their territories. RDPs stress the importance of achieving a balanced territorial development of rural economies and communities (2014-2020), enhancing the quality of life in rural areas and promoting diversification of economic activities (2007-2013) (EC 2011). Rural areas are therefore conceptualized as "multifunctional spaces" that satisfy purposes of recreation, environmental, landscape protection, and economic development.

To ensure a balanced approach to policy, rural areas are required to address at least four of the six common EU priorities, including 1) knowledge transfer and innovation; 2) viability and competitiveness of agriculture; 3) food chain organization, animal welfare and risk management; 4) restoring, preserving and enhancing ecosystems (agriculture and forest); 5) resource efficiency and low-carbon, climate-resilient economy; and 6) social inclusion, poverty reduction and economic development in rural areas. These priorities are broken down into "focus areas", against which Member States or regions set quantified targets under their RDPs and then define specific measures to be taken to achieve these targets and the funding[45] needed for each measure[46].

[45] At least 30% of funding for each RDP must be dedicated to measures relevant for the environment and climate change and at least 5% to the LEADER program.

Under this EU framework of rural development programs, the Province of Reggio Calabria plans and implements the rural development programs (RDPs) for the development of its rural areas and agri-food supply chains. The implementation of the strategy adopts an integrated approach provided by the "Rural Development Programme (RDP, or PSR as in Italian) 2014-2020 of the Calabria Region" (hereinafter referred to as "PSR Calarbia 2014-2020") that deploys four major instruments (Table 11), namely, Strategic Thematic Projects (*Progetti Tematici Strategici*, PTS), Integrated Supply Chain Projects (*Progetti Integrati di Filiera*, PIF), Integrated Projects for the Rural Areas (*Progetti Integrati per le Aree Rurali*, PIAR), and Local Development Plans (*Piani di Sviluppo Locale*, PSL) (De Luca *et al.* 2013). The PIF and PTS are instruments for the panning of collective projects with a sectoral character, while PSL and PIAR are instruments for the panning of collective projects with a territorial or local character.

Table 11. The instruments and integrated approach provided by the PSR Calarbia

Instrument	Actors Involved	Aims
PTS	Calabria Region	• effectively implementing various initiatives of general interest concerning the support of productive activities that involve agroenergies, value-adding of the territories and products and, finally, protection of the water resources
PIF	Individual agricultural entrepreneurs, processing and marketing companies, private bodies of collective interests (producer organizations, cooperatives, consortia ...)	• improving aggregation and cooperation by integrating the interventions related to training, information and value-adding of production and services
PIAR	Provinces, municipalities, associations of municipalities, mountain communities, public bodies.	• promoting and implementing public interventions aimed at adapting infrastructural facilities for mobility; • improving public services essential to local populations; • disseminating ICTs; • improving the quality of life and the attractiveness of rural areas
PSL	only be implemented within the local development strategies proposed by the local action groups (through LEADER program)	• promoting and implementing interventions that, in compliance with the development strategies set for the different reference geographical areas and in connection with PIF and PIAR, allow to:

[46] See the European Commission - Agricultural and Rural Development - Rural Development 2014-2020 at <https://ec.europa.eu/agriculture/rural-development-2014-2020_en>, accessed on August 11, 2018.

	• orient and support the operators in the processes of economic diversification; • implement territorial marketing actions by developing the relational capital of the areas concerned

Source: The Author's own elaboration based on De Luca *et al.* 2013.

The recent reforms of the CAP showed a recognition of the multifunctionality of agriculture (not only producing food) as a basis for (EC 2006) and a multi-sectoral and integrated approach to the rural development. This is aimed to not only diversify activities and create new sources of income and employment, but also conserve the rural heritage and landscape (van Leeuwen 2010). The new CAP places greater emphasis on the participative approach, and promotes a landscape-based approach, although the dominant focus of landscape management is on environmental issues (Agnoletti 2014). The new programming marks the emergence of a place-based "new rural paradigm" characterized by a shift away from financial redistribution and agricultural subsidies towards strategic investments which capitalize on local strengths and opportunities (OECD 2006).

3.4.4. Major Problems

The current policies on rural development in China and Italy show three constraints, in terms of integration at local level, methodology and concepts for territorial promotion and value-adding, and how the trade-off issue between economic development and environmental protection is addressed at the landscape level.

First, integrated rural development sometimes sees merely a formal or insufficient integration of all local resources and individual interventions. This has to do with both local natural conditions and socioeconomic factors. The diversity of geographic typology and morphology often means that, without mentioning about the land right system, it is impossible to practice everywhere industrial agriculture based on intensification and scale enlargement. In southern Italy where large portions of the territory are mountainous, marginal agricultural areas composed of small high-natural-value agroecosystems are widely diffused (Agnoletti 2011). In such agricultural areas, there is the need to effectively integrate between the various tasks such as incentivizing agriculture, economic diversification, improvement of public services, management of natural resources, environmental enhancement, and promotion of cultural and leisure activities. Although this need is recognized by the relevant stakeholders and taken into account in EU and regional policies, this has not led to an integrated approach in rural areas (Guarino *et al.* 2017). According to Tarangioli 2013, under the EU integrated rural development framework, decentralization may mean a disadvantage for small municipalities, which lack the essential experience and capacity for the management of integrated planning tools. They also lack a sound, effective organization of administrative processes especially

those interrelated ones. Besides, various regional administrations tend to confuse the concept of "integration" with that of multi-measure intervention. As a result, an integrated project may be structured as an opportunistic action aimed to obtain funding. Consequently, the integrated rural development is reduced to a formal integration that contains many projects that are separate but not integrated between them. In addition, although aimed at overcoming the rural-urban dualism, it has "failed to promote hinterland functional heterogeneity and improve city-region environmental sustainability, as current trends have shown more homogeneity and increased travel distances for work, leisure and services" (Hoggart 2005, 161). As for China, an integrated rural-urban development proves to be a challenging task to achieve (Wang *et al.* 2016).

Second, the promotion of rural areas, which should be integral part within the integrated rural development discourse both in China and Italy, needs to introduce innovated and creative methods and make best use of ICTs and social networks. At present, in the Province of Reggio Calabria, the common way to improve the socioeconomic conditions of inland areas was the promotion of local products through appellation schemes such as DOP, DOC and IGP labels[47], economic subsidies and direct payment through the CAP and the promotion of the best practices and organic farming. Undeniably, the appellation schemes have helped protect the reputation of the regional products, promote rural and agricultural activities, help producers obtain a premium price for their authentic products, and curtail the unfair competition and misleading of consumers by non-genuine products. However, these practices have not always been successful due to local geographic and socioeconomic limitations. For example, it is not always possible to produce at a reasonable cost the much-desired non-commodity outputs on the one hand. On the other hand, once produced, these outputs are not readily marketable, as places and products that need to be "rediscovered" tend to lack the essential capacity to convince the national and global market of their outstanding value (Guarino *et al.* 2017). In the absence of a sound communication and general understanding of consumers, it proves rather hard to enhance the value-adding process, which is critical for achieving a circular production system. Consequently, without an endogenous growth mechanism, these practices, despite considerable public spending they may have received, are doomed to failure. Similarly, in China, the Protected Geographical Indication (PGI) is also endorsed to help protect and promote the reputation of the regional products. This has helped increase producers' income, improve product quality and upgrade production techniques. However, the supervision of these labels and the value-adding methodology of related products still remain to be improved. Like the financial transfer payment system provided by the EU framework for RDPs that brings about the above-mentioned problem of the sustainability and effectiveness of the funded projects, the "project-based

[47] The EU now applies three schemes of geographical indications, known as protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialities guaranteed (TSG), to promote and protect names of quality agricultural produces and products.

financing system" in China also proves to be questionable given the existing institutional and social limitations at local levels. Project-based financial transfer payment has shown unsatisfactory efficiency in bringing vitality or cohesiveness to rural collectives. The capacity of local governance has not been fundamentally enhanced. Meanwhile, the projects have failed to bring direct economic and social benefits to the rural population. Instead, villagers, psychologically unbalanced, have been reluctant to participate in the projects due to a lack of trust among them and local government resulting from an unfair distribution of resources (Ye and Wang 2016).

Third, public policies on rural development in both China and Italy have substantially affected rural landscapes. In Italy, the CAP has brought about both positive and negative impacts on rural landscapes (Lefebvre *et al.* 2012; Rovai *et al.* 2016). On the one hand, while facilitating the agricultural modernization and intensification, the CAP's emphasis on increased productivity has impoverished the landscape (Agnoletti 2014) through the rationalization of farm size and structure. This reflects the main even only interest of rural producers was one to enhance the production efficiency, resulting in relatively mono-structured, homogenized rural landscapes and serious environmental problems such as soil erosion, nutrient losses, groundwater pollution, decrease in biodiversity and loss of landscape aesthetics (Wiggering *et al.* 2010). This has resulted in a loss of many traditional landscape features and crop diversity and undermined ecological sustainability. Another negative facet of the CAP's impact on landscape is, landscape objectives tend to be defined in the CAP in terms of conservation, in a defensive manner (Lefebvre *et al.* 2012), rather than in an evolving, dynamic one which is fundamental to fostering the partnership able to link environment/agriculture with society, the key value that the CAP itself advocates. It is therefore argued that the EU project towards a more sustainable agricultural development cannot avoid taking into account a more holistic concept of landscape to recover the linkage between human society and environment. Therefore, holistic landscape projects should be included in the EU framework of RDPs, and correspondingly landscape considerations in the redesign of direct payments provided by the CAP are also to be taken (*ibid*.).

On the other hand, through direct payments and the Less Favoured Area scheme, the CAP has contributed to the continuation of traditional farming in marginal areas, therefore avoiding land abandonment and the disappearance of these vulnerable landscapes (*ibid*.). Although in both the ELC and CAP, the development of agriculture goes along with the enforcement of a territorial culture, the cultural and historical contents of landscapes are often reduced to their representations, or visual perceptions (Moreno and Montanari 2008 cit in Guarino *et al.* 2017). In China, like mentioned in Section 3.3., rural development has long been focused on digital growth, and rural landscapes have quickly mutating during the continuous modernization process characterized by the so-called "creative destruction". National policies in the past decades, like the

ongoing "Beautiful Countryside Construction" initiative, although paying increasing attention to the balance between economic growth and sociocultural and environmental protection, have led to landscape homogenization and alienation in rural areas due to misconceptualization of rural modernization and lack of capacity at the local level on the one hand. On the other hand, this has to do with the centralized governance, which values efficiency over quality, and favors short-term perceivable change over long-term sustainability. For this combined reason, the connotation of "beautiful countryside" has been simplified and equated with rural urbanization and formal beautification, and "protective destruction" has been a widespread consequence. During the construction process, homogenization and reproduction are two major problems, which have destroyed the authentic characteristics of rural landscapes (Wang and Wang 2016)

3.5. Conclusions

In order to achieve successful management of urban growth which is critical to achieving sustainable development, integrated policies to improve the lives of both urban and rural dwellers are needed (UN 2018). Such policies should be able to strengthen the linkages between urban and rural areas and build on their existing economic, social and environmental ties. This requires that an integrated rural development be incorporated into these policies.

A shift of policy-making towards an integrated rural development has been going on in both China and Europe. China and Italy, despite their disparate geographic, historic, socioeconomic and politic contexts, have quite similar trajectories in terms of rural landscape transformations and agricultural development since the rural modernization up to date. In terms of landscape transformations, as the two countries are currently at different stages of development (different degrees of urbanization), their rural landscapes show different *status quo* and change at different pace and scale. However, despite their different political and socioeconomic systems, a diachronic comparison suggests that their rural landscapes have been evolving following a similar trajectory, namely, during the early and middle stages of rural modernization, landscapes have been changing at a greater pace and scale. As the urbanization has reached a certain degree and slowed down, landscape change tends to slow down as well.

Currently, public policies in both China and Italy have attached great importance to the role of rural landscapes in promoting economic diversification and improving people's quality of life. Regarding rural development, while Italy has gone through, more than two decades ago, a shift from a development pattern that prioritized quantity[48] and economic efficiency to one that aimed to

[48] A good example is the olive oil produced based on quantity maximization from the plain of Gioia Tauro and Rosarno, which was once nicknamed as "*olio lampante*" (literally lamp oil) due to its poor quality. Backward olive collection (the olives were not collected until they were fallen on the ground, which increased their acidity) and processing techniques also account for the poor quality.

balance quantity and quality, and economic efficiency and environmental sustainability, China has started to experience the same process in recent years. China has a tradition of centralized governance, and the current rural policies and strategies are defined under the discourse of integrated rural-urban development to change the existing urban-rural dual structure. Policies are implemented mainly through the financial transfer payment system. In contrast, rural development in Italy follows the decentralized, participatory governance that highlights partnership, and rural development policies are made and implemented based on an integrated approach and with four major instruments (PTS, PIF, PIAR and PSL) within the EU framework for Rural Development Programmes (RDPs) (2014-2020).

The relationship between governance and government is not dualistic, and the former shall not be deemed as an alternative to the latter (Böscher 2008). Rather, they should be complementary as a mixed regulation form between unilateral public rules (hierarchical top-down coordination) and negotiation practices (bottom-up process) (Böscher 2008; Fortunato and Mirabelli 2008). Indeed, the presence of public actors is often critical to rural development process (Esparcia 2014), and an effective governance requires strong and powerful institutions able to, besides involving and supporting partners, guide economic development processes (Fortunato and Mirabelli 2008).

Results of policies may differ depending on the geographical context (Vanwambeke *et al.* 2012). Geographical diversity of rural areas is a global reality (Almstedt *et al.* 2014), and "different localities are positioned at different points in a transition from 'pre-productivist' to 'post-productivist' agricultural regimes" (Wilson 2001, 77). An uncontextualized, "forced" transition in policy-making can generate negative outcomes. Within the EU, for example, policies supporting post-productive activities (e.g., extensification of agriculture) applicable to northern European countries are rigidly applied to some Mediterranean countries/regions that still show productivist practices and mind-set (Wilson 2001). This spatial blindness implies that "transition [from 'pre-productivist' to 'post-productivist']" may not be a helpful concept since it is very likely that a "good" policy is applied to wrong places (Almstedt *et al.* 2014). Post-productivism is not a transition that marks a stage following productivism and replacing agricultural production. Rather than as a singular manifest change of rural economic activity (post-productive change), it represents within political discourse "a new set of ideas, a way of looking at change in rural areas that also affect policy" (*ibid.*, 301). There is the need to further the current understanding of post-productivism by integrating into this conceptual framework different development paths and land use patterns in developed and developing regions. Only when understood within a political rather than a "transitional"discourse, post-productivism can serve as a conceptual framework to diversify rural economic activities (Macken-Walsh 2009).

Chapter 4 Landscape Approach to Rural Development

4.1. Overall Construct: Coordinating Landscape Management and Rural Economies

For a long time, rural development has been synonymous either with agricultural development or economic development. As a result, rural development policies and landscape and territorial planning have been largely separate, as the former have adopted a sectoral approach focused on agriculture-based economy while the latter has simply ignored the socioeconomic needs of the rural society (Rega 2014). Although over the past decades, rural landscapes have gained increasing academic and political attention, it seems that what is central to related debates are not the living rural landscapes but rather their visual representations, generally referred to as "countryside" and the associated "picturesque". This has led to a created landscape void of vitality and agrarian productivity but instead full of agrarian imagery (Roncken 2006), and rural landscapes are somewhat forced to evolve into "post-productivist heritage-scapes" and then "leisure-scapes of mass consumption" (Halpern and Mitchell 2011). This implies that great attention tends to be attached to the physiognomy of rural landscapes rather than to the interpretation of their physiology (Turri 2000). Also, it is the urban need rather the rural one that determines the transformation of rural landscapes. Therefore, how to make sure that rural landscapes are transforming towards living rural landscapes in the future rather than fashionable images that reflect (sub)urban demands proves to be an urgent issue to address.

On this regard, as the conceptual map below illustrates (Fig. 33), the dissertation proposes an improved landscape approach to rural development that attempts to achieve simultaneously two goals. First, at the landscape level, the aim is to manage rural landscape changes, and bring about a vibrant, livable countryside. This reveals the fact that the improved landscape approach to rural development has a broader scope compared to popular rural development concepts. It sees rural areas as rural landscapes constituted of interacting and interdependent landscape elements. Therefore, it is not aimed at individual rural issues, but rather examines, with a system-thinking, one issue in relation to another, under the overall rural landscape context. Besides, the landscape approach is concerned not only with the management of the current rural landscapes, but more importantly, the shaping of the future ones. Second, at the economic level, the approach recognizes that healthy landscape evolution depends largely on healthy development of rural economies (Lin 2016). It equally acknowledges that rural development often engenders changes in rural landscapes. It therefore tries to spur innovation economies to reinforce the competitive advantages of rural communities, and meanwhile curtail the pressure of economic growth on rural landscapes. Besides, the approach, rather than isolating, integrates the process

of economic development into the interconnected system of sociocultural, economic and environmental dynamics that drive the evolution of rural landscapes. In so doing, it is able to foster a balanced and synergizing relationship between these three dynamics, therefore helping mitigate negative social and environmental externalities following economic growth.

In fact, the two goals are fundamental for responding to the central concern of the improved landscape approach: improve the rural population's quality of life by optimizing their living environment and spurring endogenous innovation economies to meet their multilevel needs. This requires that this approach be aimed at adapting in a simultaneous way the physical landscape, sociocultural and economic structures and environmental system of rural areas to changing production patterns and way of life in the course of rural development. Just like Agnoletti (2014) argues, a landscape approach to development is aimed at a harmonious integration of social, economic and environmental factors in space and time. Integration means that during rural development process, simultaneous environmental and sociocultural processes need to be integrated into the economic development process. For the purpose of maximum integration, the improved landscape approach needs to comply with three fundamental principles:

- *the synergy principle*, namely synergy between economic, sociocultural and environmental dynamics, between instrumental rationality and ethics, between spontaneity and normativity, and between government and governance;
- *the balance principle*, namely, balance between efficiency and equity, and between the part and the whole;
- and *the continuity principle*, namely, continuity between tradition and modernity, and between short-term and long-term.

It is opportune to adapt and implement this approach at local level to achieve a possibly high effectiveness and compatibility with local context. However, it is also applicable at territorial/regional level, serving as a coordinating mechanism critical to achieving integrated urban-rural development.

The proposed landscape approach is expected to help achieve sustainable rural development while promoting the contemporization and an organic evolution of rural landscapes by mitigating negative sociocultural and environmental externalities. Regeneration is the pivotal tool indispensable to the mitigation of these negative externalities. In this landscape approach to rural development, the relationship between landscape and regeneration can be illustrated with the Chinese philosophy. Landscape can be seen as the unity of *ti* 体 (or *ben* 本 which means essence) and *yong* 用 (or *mo* 末 which means form)[49], and regeneration

[39] *Ti* refers to "trunk", body, subject and foundation, hence the essence. *Yong* means "foliage", activity, subordinate and development, hence the form. The relationship between *ti* and *yong* is, *ti* precedes *yong*; *ti* commands the subordinate *yong*; and *ti* is *yin* (inactive) while *yong* is *yang* (dynamic).

is a vital tool to maintain the vitality of the essence and guarantee the functionality of the form. Regeneration is the fundamental means to foster processes favorable to innovation economies and achieve the ultimate goal of integrated rural development. Essentially, the landscape approach to development fundamentally is bi-polarized. On the one pole centered on landscape, it is aimed at the management of the sociocultural and environmental process of landscape evolution and regenerates the landscape functionality so as to maintain or where necessary optimize it. On the other pole centered on economy, it seeks to spur innovation economies. Landscape approach can coordinate these two poles, fostering therefore a regenerating ecosystem that coordinates and synergizes sociocultural, environmental and economic dynamics.

The two poles are competing and complementing to each other, resulting in a dynamic and harmonious equilibrium. Competing is due to the inevitable trade-off between development and environmental protection. Complementing means that while the landscape pole can provide essential resources, both material and immaterial, to the economy pole while mitigating possible negative externalities it engenders, the economy pole underpins the landscape pole with capital indispensable to landscape management and regeneration. Only by maintaining the synergy between the two poles can the landscape approach keep the ecosystem it creates sustainable and self-regenerating. This is key to achieve simultaneously: 1) *a sustainable landscape evolution* rather than mutation both in terms of physical landscape and the embedded sociocultural landscape on the one hand, and 2) *a sustainable development* that coordinates environmental, sociocultural and economic development.

The proposed landscape approach to rural development is conducive to two ultimate results. First, it can lead to a continuous improvement of the quality of life of all people, in terms of not only economic benefits and opportunities, but also living environment and sociocultural life. Second, more importantly, it is expected to foster the *process* of development of new local systems rather than generating merely the result of renovation. The emerging local systems are characterized by greater social legitimacy and equity, respect for the environment and endogenous systems that help add value to the territory (Guarino *et al.* 2017).

Particular legislation or policies may imply legitimacy of a particular "rural" while undermining or excluding others (Sibley 1994). The landscape approach to rural development highlights therefore the implication of "landscape perception", especially that of the rural population, in relation to rural development and landscape transformations. Landscape perception tends to be impacted by one's knowledge and past experience, therefore, it is "primarily subjective and can be understood only relative to the characteristics of the observer" (Antrop 2000a, 19). The subjectivity of perception is a fundamental factor in the organization of environment and, thus, for the shaping of environment (*ibid.*). Therefore,

analyzing individual perception of the driving forces and transformations affecting rural landscapes and their effects should be considered as a way to support future local planning policies (Gullino *et al.* 2018). A focus on the local context and the adoption of an inductive and actor-oriented approach are critical to uncovering meanings that different groups of the rural population attach to their landscape and to understanding how these meanings indicate different perceptions of the past and the future. In rural theories and policies, the knowledge on such meanings is currently mostly needed to make sustainable development a reality (Sonnino 2004).

The proposed landscape approach shall not be confused with "landscape-based approach", in that the former highlights not only the contribution of landscape to economic development, but also ways to maintain and contemporize the functionality of landscape. This makes the landscape approach able to coordinate economic development and landscape transformations often in the form of negative sociocultural and environmental externalities (such as loss of traditional values, cultural heritage and environmental degradation) triggered by economic development.

4.2. Landscape Management

Rural modernization is the modernization process of not only production and way of life, but rural landscapes, which, similar to rural modernization, need to have a pathway distinct from cities. This requires that, while the living conditions and living environment of the rural population being improved during rural modernization, the bi-univocal relationship between community–territory–economies and agricultural practices that drives rural landscape change (Balestrieri 2015) be properly managed and adjusted wherever necessary so as to satisfy simultaneously two goals. First, the contemporary socioeconomic needs shall be met, and second, rural landscapes need to maintain a connection with local natural conditions and cultural traditions, so as to keep the territoriality identifiable (Lin 2016). However, given that rural landscapes undergo continuous, inevitable and sometimes even irreversible changes to respond to changing socioeconomic needs, it is increasingly important to manage rural landscapes so that their transformations can be sustainable and compatible with the changing bi-univocal relationship between community–territory–economies and agricultural practices.

Managing rural landscape, increasingly seen as an evolving outcome of ongoing negotiation and frequent conflicts among different interest groups (Sayer *et al.* 2013), requires essentially managing the conflicts between rural landscapes and modernity (Cloke 1985) as there is always a trade-off issue.

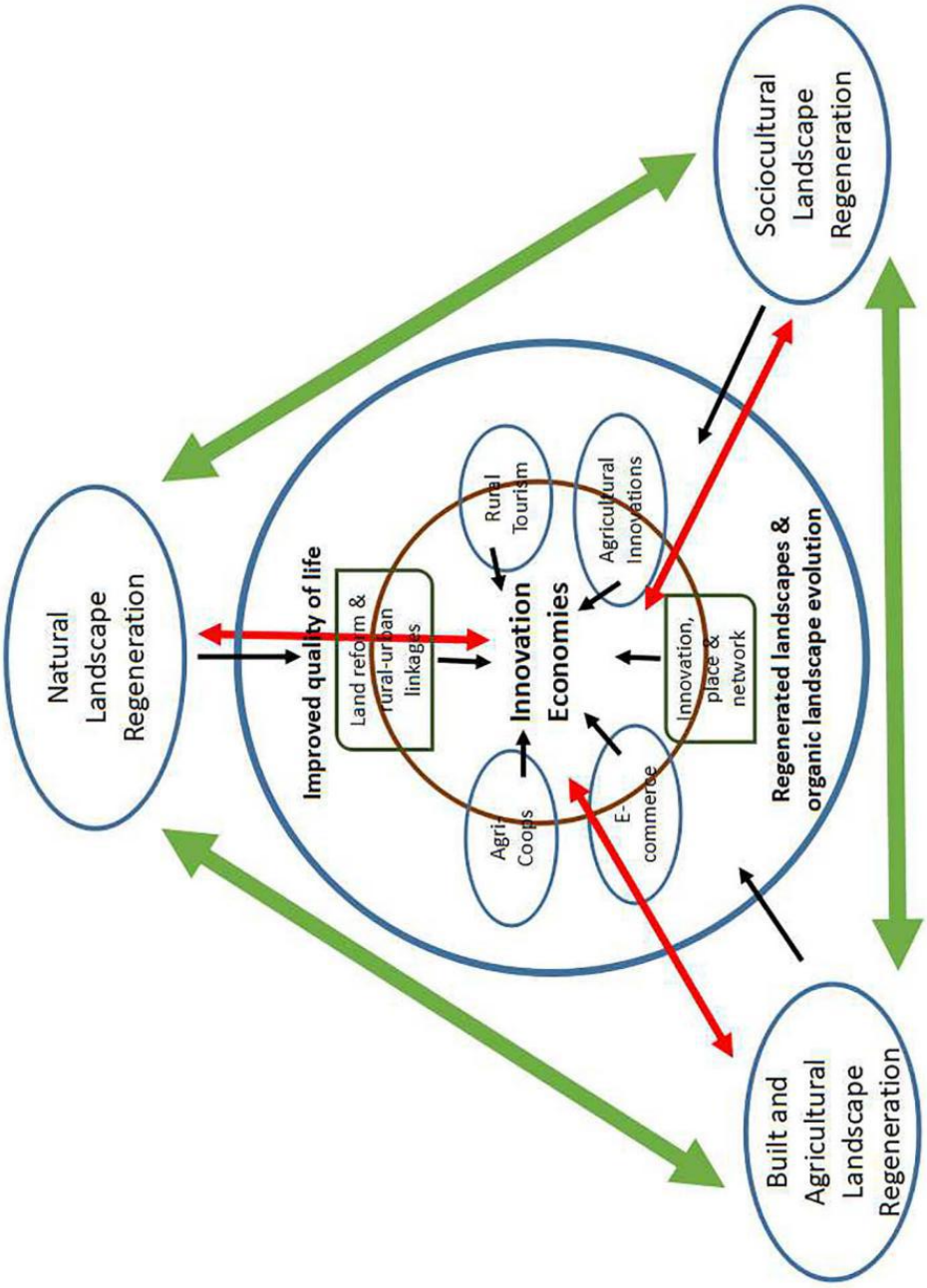

Figure 33. Conceptual map of the landscape approach to rural development.
Source: The Author's elaboration.

Generally speaking, there are two notable shifts with this regard, namely, an ideological shift from static preservation to dynamic management, and a scope shift from elitism to universalism and from agricultural landscape to rural landscape. The first shift has made the preservatist approach no longer viable in practice. Although long being the dominant landscape management paradigm, this approach recognizes only "the land use link, but not the ecosystem services link between people and nature—it therefore does not ascribe any particular

importance to managing the social-ecological system as a whole" (Fischer *et al.* 2012, 171). With a system thinking, ICOMOS and IFLA instead advocate a "sustainable transformation" rather than adverse changes of rural landscape heritage, which requires "an appropriate balance between economic, social, cultural, and environmental aspects"[50] (ICOMOS-IFLA 2017). Accordingly, rural landscape policies should focus on managing acceptable and appropriate changes over time (*ibid.*). This approach implicates that only by fully understanding the changes of rural landscapes and their processes and causes can they be effectively managed, and a coordinated and sustainable rural development on environmental, sociocultural and economic levels be promoted during the process of rural transformations (Bao and Zhou 2014). The emphasis on the importance of understanding landscape changes actually marks a shift from a preservative approach to a developmental one regarding landscape management (van Der Valk 2014). It recognizes both the fact that rural landscapes are "developing" by nature and that they are an unalienable part of the rural development process.

As for the second shift, the importance of management of rural landscapes is not restricted to traditional landscapes of extraordinary heritage value as are represented by the UNESCO agricultural cultural landscapes. Rather, all rural areas have started to be considered as heritage, both outstanding and ordinary, traditional and recently transformed by modernization activities: heritage can be present in different types and degrees and related to many historic periods, as a palimpsest (ICOMOS-IFLA 2017). This conceptual amplification of heritage based on "totality" stimulates the move of attention from agricultural landscapes to rural landscapes as a whole, as agriculture is an integral part of the latter. Also, in a terminological sense, compared to the "agricultural landscape" or the "landscape", "rural landscape" proves to be a more comprehensive term as it describes better the complex interactions between humans and nature in rural areas (Kizos *et al.* 2010). Accordingly, managing rural landscapes involves not only agricultural and built landscapes, but also natural and sociocultural ones, not only the "elite" landscapes, but also the "everyday" ones. All in all, the connections between cultural, natural, economic, and social aspects across large and small landscapes shall be considered in the development of sustainable management strategies for rural landscapes (ICOMOS-IFLA 2017).

Landscape management requires not only the maintenance of the *status quo* (preventive), but also reasonable development of the existing landscapes (interventional). The two can be coordinated through rural landscape regeneration. The scope of this dissertation is focused on the interventional dimension of landscape management: how to properly intervene to better manage landscape changes.

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[50] ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage, Adopted by the 19th ICOMOS General Assembly, New Delhi, India, 15 December 2017. Retrieved from https://www.icomos.org/en/resources/charters-and-texts, accessed April 23, 2018.

4.3. Rural Landscape Regeneration

4.3.1. Definition

Landscape regeneration is a process of adaptive adjustments of the sociocultural, economic and environmental fabrics of landscapes in the course of landscape transformations engendered by development-related forces such as modernization, industrialization, urbanization and globalization. Similar to the regeneration of urban landscapes wherein five factors, namely, social, political, economic and cultural transformations, as well as the historical factor that represents the development and positioning of the city, serve as the internal stimulus for the regeneration process (Chen 2013), rural landscapes are regenerated also under the joint force of the five factors. As an adaptive activity, landscape regeneration is by nature holistic (system), incremental (process) and contextualized (place). In this adaptive process, while maintaining some landscape elements and structural relationships, landscape has the possibility of disintegration and reconstruction, into which the structural law adaptable to the contemporaneity is incorporated, so as to complete the construction process of the landscape object (*ibid*.). Consequently, what is achieved is a balance between the continuity and non-continuity of history reflected in the regeneration process.

As a means to promote the integrated development of rural environment, society and economy, rural landscape regeneration, to begin with, should not only focus on the improvement of the external physicality of rural landscapes, but more importantly pay attention to the development of their core, that is, people, society and economy. Especially only when people and society are integrated into the economic development process can the improvement of the physical dimension of rural landscapes be sustainable through a process of internalization. This process is critical for fostering, especially in an autonomous term from the local people's side, benign social and spatial expressions that help regenerate rather than radically or even irreversibly changing rural landscapes. Second, rural landscape regeneration, as a "proactive trigger" of landscape change, should not be simply perceived as a sort of human-nature interaction, the oversimplified interpretation of landscape evolution mechanism that seems to prevail in both the academic and political worlds. Rather, it is a process that involves the interaction among all forms of social institutions, especially land ownership, land use, social roles, value system and rules. Third, rural landscape regeneration should be considered as an effective way to address the tradeoff issue between economic development and environmental protection. Essentially, landscape regeneration is the means to achieve development while curtailing the pressure of economic growth on rural landscapes, and development is the ultimate end of landscape regeneration which is characterized by a continuous improvement of the quality of life of all people. Fourth, rural landscape regeneration should ideally comply with a participatory, multistakeholder and mixed governance approach. Such an approach highlights the agency of rural

population, prioritizes their needs and interests, and seeks to achieve a balance between economic efficiency and social equity especially when there is an inflow of private capital in regeneration projects. Fifth, rural landscape regeneration should be contextualized. This means that its objectives and practices should take into full consideration local socioeconomic, environmental and political conditions and needs. For example, in China, currently the objective of rural landscape regeneration should be to protect, restore and optimize rural landscapes while enhancing their core ecological, sociocultural and economic values, enhancing the social vitality of the countryside, revitalizing and diversifying the rural economy, and ultimately achieving the overall improvement of the quality of life.

4.3.2. Regeneration in the Rural Landscape Context

In recent years, there has been, from a governance perspective, an increasing need for greater linkage between urban and rural regeneration, in terms of experience sharing and resource management, i.e. through partnerships, networks, resource management, targets or related government projects (Shand 2016). In seek of rural sustainability, the concept of regeneration, which stemmed from the urban sphere, has been experimented in the rural context as well. Obe (2013), for instance, maintains that sustainable agriculture, sustainable food systems, sustainable rural communities, and financial support and new policies are critical to rural sustainability, where regeneration can play a linking role. "Rural regeneration" or "rural revitalization", mainly used in North America, is named alternatively as "rural renewal" in European countries (Chigbu 2012, 210). Considered as a tool to help achieve sustainable rural development, rural regeneration is aimed at four goals related to rural development at infrastructural, jobs/agricultural, environmental/ecological and social/cultural levels (Liu 2010; Magel 2007 cit in Chigbu 2012). For rural regeneration, it has been acknowledged that aspects of reviving social and economic activities within the rural areas have become a major challenge, and rural communities should be enabled to decide on their future to *rurally* improve their living conditions (Chigbu 2012). Their active and effective participation is a precondition of successful rural regeneration (Liu 2010).

It is commonly acknowledged that rural regeneration needs to be ideally an endogenous process pursued with the participation of local people. Besides local participation, it is equally important for rural regeneration to form partnerships between different stakeholders including the public, private and community and voluntary sectors, because the success of regeneration-led rural development projects largely depends on cooperation and innovation (Chigbu 2012), which are critical to achieving the ultimate objective of improving the quality of life for all. In this conception, the role of the state is to provide financial and institutional support to those who actively help renew the rural areas, be them individuals or institutions (Zografos 2007). However, in reality, endogenous rural regeneration tends to turn out to "function as a pretext and a license, under the

aegis of contemporary neo-liberalism, for the ongoing scale enlargement and industrialization of agriculture… as well as the relentless activities of property developers looking for investment opportunities, which tend to suffocate the very process of 'renewing the countryside' (Frouws 1998, 64)".

Existing concepts and practices of rural regeneration, such as partnerships, local participation, endogenous approach, etc. can serve as useful references for rural landscape regeneration. However, rural landscape regeneration and rural regeneration, although both are characterized by holism and comprehensiveness, differ from each other in three aspects. First, while in practice, rural regeneration tends to be focused on the individualistic project with a specific target which is often economic growth, rural landscape regeneration pays, "with systems thinking", special attention to harnessing positive externalities generated by an integrated project and creating co-benefit scenarios able to simultaneously address more than one of the three interrelated sociocultural, environmental and economic dynamics embedded in rural landscapes. In so doing, it is able to scale up the impact of a certain project. Second, while the ultimate goal of rural regeneration is rural development, a generic term, that of rural landscape regeneration is human development indicated by a continuous improvement of the quality of life of local people and enhancement of their collective consciousness. Third, whereas rural regeneration is likely to be overwhelmed by private capital and leads to rural gentrification just like in cities, rural landscape regeneration seeks to integrate and mobilize locally embedded resources (physical, financial, human and social capitals as well as natural resources) with systems thinking and place-based approach. This means that rural landscape regeneration complies with an endogenous methodology.

Regeneration under the rural landscape context poses such a central question: how to contemporize rural landscapes which are destined to change facing urbanization and globalization? To answer it, regeneration is used as a tool to manage landscape transformations towards a resilient landscape of tightly interconnected landscape elements. Rural landscapes, as a carrier of vernacular culture and rural society, their regeneration can contribute to the transmission and more importantly *contemporization* of vernacular culture, and the mitigation of risks during the rural society restructuring. It also possesses the capability of stimulating a cognitive transformation in the rural population, which can in return stimulate a sociological and productive transformations in rural areas. In the process of high-speed urbanization in China, rural landscapes are rapidly and widely mutating following fast economic and social transformations. For rural landscapes themselves, landscape regeneration helps preserve the vernacular culture, values and picturesque, revitalize the rural society and economy by facilitating the rural restructuring, and foster contemporary rural landscapes with peculiar territorial characteristics and functional adjustments to satisfy modern needs.

Under the rural landscape context, regeneration in any case does not imply

making or to make rural areas become new and modern or making it become a city or urban center. Rather, it implies making them maintain or recover their original rural identity, positive values and characteristics. It demands social, physical and environmental improvements that do not negatively affect rural area's identity as a rural space (Chigbu 2012). Nor does it try to bring back the landscapes of the past, but rather to seek ways to preserve and embed functionally valuable elements in the modern and globalized society (Antrop 2004a). Regeneration recognizes that rural areas are distinct from urban ones at geographic, demographic and resource levels apart from their distinct features regarding the nature of community, transport and accessibility and local political relationships (Osborne *et al.* 2004). First, rural areas' geographic scale and distinctiveness have significant impact on the mode of community organization and community involvement. Second, rural areas generally lack human capital, and consequently regeneration initiatives tend to be dominated by local community elites probably to the detriment of the collective. Third, rural areas have more limited resources or difficulties in accessing them compared to urban areas (DRC 2014; Xiong and Ye 2013).

Regeneration contributes to the formation of contemporary rural landscapes of life, that manifests a balance between their physiognomy (visual representations) and physiology (anthropological life behind landscapes and the latter's own evolution). Besides, landscape regeneration is able to coordinate the seemingly incompatible need of landscape preservation and exploitation. On the one hand, structurally, it is aimed at maintaining or restoring the landscape equilibrium by balancing the ethical, ecological, social, economic, technical, political and legal dimensions of sustainable development; and on the other hand, functionally, it allows for the introduction of new landscape functions without undermining the existing landscape values (Sobala and Myga-Piątek 2016).

Given that rural landscapes are in essence the result of continuous land reconfiguration (García-Llorente *et al.* 2012; Wang and Lu 2015) wherein land has to be constantly adapted to the changing production and socioeconomic patterns, regeneration requires that rural landscape changes at best be integral to the regeneration process of landscape structure and function. The changes can be adapted and internalized by the landscape system in terms of intensity, scale and content and form, rather than in the form of intrusive superposition or disintegrative attenuation. On the morphological level, landscape changes should result in an organic evolution of the landscape characterized by the integration of tradition and modernity, form and content instead of irreversible mutation. The difference between evolving and mutating landscapes lies in that landscape mutation is in essence a process of alienation. Landscape mutation often not only undermines the integrity of landscapes on the morphological level, but also splits the linkage between form and content within the internal regenerative mechanism of landscapes. This weakens the functionality of landscapes while causing negative impacts on the interdependence and

harmonious interaction between human society and landscapes. On the functional level, landscape changes should meet the needs of integrated rural development and the development needs of all people. What is accompanying landscape changes should be the improvement of the quality of life in an entire rural area.

Rural landscape regeneration seems to be practiced only when urbanization and the associated socioeconomic development have reached a certain level. In developed countries, representative rural landscapes, such as the idyllic landscapes of Europe (like Val d'Orcia) and the *satoyama* 里山 landscape[51] in Japan, have basically gone through in the process of urbanization a period of decline and degradation following changes in production and life patterns and demographic structure. When the degree of urbanization reached a certain level, which implicates also a certain level of economic development, these landscapes have started to draw public attention again and then be protected. In the end, they have been able to maintain a relatively stable morphology while being regenerated and evolving organically. This implicates that regeneration in the rural landscape context must be built upon a certain socioeconomic foundation, namely, two conditions are indispensable: a collective consciousness and understanding of rural landscapes and an endogenous economic system that is resilient, sustainable and sufficient for landscape interventions.

In terms of regeneration practices, it can take the form of ecological restoration (soil, riparian areas, water, wetlands, forest, etc.), reclamation of both abandoned buildings and arable lands, revitalization and contemporization of traditional culture, values and knowledge, proper reconstruction of lost cultural heritage, upgrading and optimization of the living environment, etc. In the following section, six guiding principles of rural landscape regeneration are listed, including integrated and participatory planning, mixed governance, minimum intervention, conformity to process and incrementalism, functional diversification, and participatory management mechanism. Under these principles, a set of guidelines are also provided.

4.3.3. Principles and Guidelines

According to Chen (2013), landscapes can be regenerated according to three principles, maintaining the continuity of history and order, sense-making of the forms[52], and organizing social life to shape a network-like landscape structure. Wu (2015) proposes four principles for designing rural landscape regeneration:

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[51] According to the more recent definition, *satoyama*, as a compound rural ecosystem, represents not only mixed community forests, but also the entire landscapes used for agriculture and rural communities within it. It is there composed of a mosaic of natural, semi-natural and artificial landscape elements, such as mixed forests, rural settlements, rice paddy fields, grasslands, streams, ponds and reservoirs for irrigation.

[52] As the order is the unity of form and meaning, the process of (re)establishing an order of forms is the process wherein the forms gain meanings. The order of forms not only plays the role of visual continuity, but also the role of meaning connection. In this way, it can evoke the sense of meaning in the process of the subject's experience of landscapes through the form, which is right the sense-making of the form (Chen 2013).

ecological principle, subtractive principle (using existing resources and retaining regional characteristics), moderate principle (not blindly expanding in land use), and original principle (integrating into the natural landscape as much as possible to reduce the artificial traces). These principles, while they are reasonable references, do not cover the entire process of landscape regeneration. To bridge the gap, this dissertation proposes below six principles that cover planning, implementation and management of rural landscape regeneration. The proposed principles and guidelines can serve as general decision-making support for policymakers, and are applicable under various scenarios, including individual projects at local and territorial/regional levels and territorial/regional strategic planning.

Principle 1: integrated and participatory planning

Planning is crucial for any landscape interventions. To a large degree, it determines not only whether the interventions will help restore the degraded environment and landscape in a scientific, sustainable way, but also whether a certain project will be beneficial for local population both socially and economically. Landscape approach entails not only an environmental action, but also a sociocultural and economic one. It therefore demands an integrated approach which takes into full consideration all relevant aspects of rural development. In this sense, planning should be integrated, one that coordinates sociocultural, economic and environmental objectives. The strategic key of rural development is the amenities it can offer, first of all, to satisfy the local demand for quality of life (Guarino *et al.* 2014b). Effective participation of the local population is therefore indispensable.

Guideline 1.1. Undertake highly contextual and interdisciplinary literature study and field study, which serve as the basis of planning, and engage all stakeholders in the planning and decision-making process

Rural landscape regeneration should be based on a comprehensive study and understanding of the territorial traditional knowledge system, history and cultural practices, as well as contemporary social systems, and changes in production, lifestyle and ecological environment. Therefore, its planning under no circumstances should be isolated from the socioeconomic and political contexts. This means that it has to deal with a process of constant power and social struggle, namely, planning is in essence about how to achieve a balance between political rigidity[53] and social process (for instance, changing human needs along with social changes and innovation). Besides, it should reveal existing problems and anticipate forthcoming ones. In one word, it is expected to provide a comprehensive knowledge of the rural landscapes and territory. Multistakeholder participation in the planning process is of great importance.

[53] The author defines "political rigidity" as the inefficiency and ineffectiveness of a certain political entity (not necessarily obsolete) in responding to or mitigating a series of both external and internal adverse elements, such as uncertainties, instability, risks and crises due to a lack of preparedness, capacity and flexibility and the difficulty in changing such a political system.

This is because first, common needs must be considered and properly addressed so as to optimize the expected utility of the regenerated landscapes. Second, multistakeholder participation is vital to the modeling and exploration of future landscape scenarios, which contributes to the sustainable development of future landscapes (Bohnet and Smith 2007 in Gullino *et al.* 2018). The participatory planning therefore needs to achieve a consensus through the effective participation and cooperation of all stakeholders including local residents, public administrators, town planners, experts, real estate developers and business owners in the planning and decision-making processes. The ultimate goal of the planning process is to set clear, realistic operational objectives based on a consensus and shared vision.

Guidelines 1.2. Carry out the environmental impact assessment (EIA) with regard to a regeneration intervention's possible impacts on the overall environment, landscape and sociocultural development

EIA is able to indicate the necessity, feasibility and potential effects of a certain rural landscape regeneration project. Rural landscape system possesses a certain degree of self-regenerating and self-recovery ability, in other words, resiliency. Therefore, it happens that the best choice is not the active regeneration intervention but rather "simply removing pressure [which] would result in natural recovery" (Holl and Aide 2011). The assessment of the current self-recovery ability of rural landscape system supports also the minimum intervention principle. Besides, the EIA should anticipate potential externalities of a regeneration intervention, especially possible risks and hazards to the environment and landscape.

Guideline 1.3. Adopt systems thinking-based, place-based, people-centred and future-oriented perspectives while considering the impacts of urbanization and globalization

First, planning needs to be guided with a systems thinking critical to balancing the interconnection between the intervened part and the whole landscape on the one hand. On the other hand, with systems thinking, planning is able to position the objectives of a given regeneration initiative in relation to the broader landscape system (e.g. an ecological objective in relation to sociocultural and economic functions) and thereby anticipate externalities. In so doing, co-benefit situations are very likely to be formed. Second, planning should take into full consideration the natural, sociocultural and economic conditions of the place. Besides, it should try to mobilize and integrate all asset, both tangible and intangible (natural, economic, human and other resources) embedded in the place. Third, a human dimension needs to accompany the process of planning (Hudson 1979). This means that planning should not limit itself to ecological and natural conservation; rather, it should aim to benefit the local population, the central beneficiary, while improving their living conditions. Fourth, with accelerating urbanization, rural landscapes are inevitably changing along with

the urbanization process, which therefore asks for a future-oriented perspective in landscape management that highlights sustainability and stability. This requires that a regeneration project be able to continuously generate environmental and sociocultural benefits in the long-run. Also, globalization is no negligible factor that affects rural landscapes, especially in economic and cultural terms. It therefore needs to be taken into account during the planning process.

Principle 2: mixed governance

Rural landscape regeneration is suggested to take a mixed governance that combines the advantages of centralized government (e.g. a clear chain of command, focused vision, reduced costs, efficient implementation of decisions, etc.) and decentralized governance (e.g. equity, consensus and cohesion among stakeholders, agency and enthusiasm of local population, etc.).

Guideline 2.1. Highlight the institutional stewardship and multistakeholder partnership

The regeneration process can be driven either under the stewardship of local government, under the public-private partnership or under the grassroots leadership. What is really important is, first, strong and powerful institutions are in place to guide the regeneration processes. Second, all stakeholders can effectively participate in the decision-making process and collaborate in the project implementation and post-project management.

Guideline 2.2. Guarantee the balance between equity and efficiency

The mixed governance should seek to achieve a crucial balance between social equity (regarding the allocation of resources and benefits and empowerment of local people) and economic efficiency (in terms of cost-efficiency on the one hand and the balance between short-term outcomes and long-term functionality on the other).

Guideline 2.3. Build up grassroots democracy with a sound, effective participation and supervision mechanism

To build up grassroots democracy and make the leadership accountable to the collective, the mixed governance should guarantee transparency and openness in planning and decision-making, steady and effective political participation, public evaluation of local leaders, democratic direct elections and inner-administration and extra-administration supervision. The significance of grassroots democracy with a sound, effective participation and supervision mechanism is that it tends to foster cohesion within the collective and make the local leadership more invested in furthering social and economic development agendas.

Principle 3: minimum intervention

The principle of minimum intervention demands that rural landscape regeneration be based on the environmental and sociocultural context, cultural and landscape connectivity and continuity and harmonious coexistence of human society and environment.

Guideline 3.1. Take into account rural landscape ethics

Since the spirit of sustainable development always asks for moral principles which highlight such inherent values as moderation, harmony and coexistence, the regeneration of rural landscapes cannot do without guiding ethics. The core value of rural landscape ethics is that of the harmony between human society and environment and the return of humanistic spirit towards rural landscapes. On the basis of moral considerations, it treats rural landscapes as a living organism with dignity. It helps improve the collective understanding of the relationship between rural society and rural landscapes and provides rules for human behaviors.

Guideline 3.2. Adopt holistic regeneration approach

Given that rural landscapes are formed and reshaped under the joint force of closely interconnected sociocultural, economic and environmental dynamics, their regeneration should address all related aspects with a holistic approach. Such an approach is able to not only regenerate the damaged ecosystem and environment and the sociocultural landscape, but also create opportunities for innovative economies such as rural tourism. Indeed, a central issue to enhance the rural landscapes is the combination of both its tangible and non-tangible aspects (Overbeek 2009). Therefore, a holistic regeneration approach is aimed at linking environmental protection and socioeconomic development so as to enable rural landscapes to fully perform their environmental, sociocultural and economic functions.

Guideline 3.3. Maintain or revitalize positive traditional cultural values, knowledge and practices

The practical functions and historical and cultural values of rural landscapes can serve as the source for passing on cultural heritage and landscape contemporization and innovation (Wang and Wang 2016). Therefore, these values of rural landscapes need to be highlighted in the regeneration process. Positive traditional cultural values, knowledge and practices, accumulated throughout the long process of land-use and adaptation, have contributed to the environmental and sociocultural sustainability of rural localities. They have also played an important role in the formation and evolution of rural landscapes. In the regeneration process of rural landscapes, their key intrinsic values should be maintained or revitalized, so as to achieve a sustainable development (Lin 2016). Their maintenance or revitalization can not only help carry on landscape values (e.g. sustainable use of natural resources) or recover lost ones and interrupted

landscape continuity during rural modernization, but also potentially reduce unnecessary or even mistaken artificial interventions.

Guideline 3.4. Emphasize the actual regeneration needs of the structure and functionality of ecosystem and landscape and support reuse and repurposing

The extent to which a regeneration intervention can be undertaken is determined by the restoration needs of the structure and functionality of ecosystem and landscape, because the degree of intervention, timescale and approach will depend on the degree of degradation (Keenleyside *et al.* 2012). Therefore, a holistic knowledge of the *status quo* of the structure and functionality of ecosystem and landscape is a precondition. According to the actual needs, a degraded ecosystem, built environment or sociocultural landscape can be regenerated. Irreversible and aggressive restoration practices, such as vegetation removal must be avoided. When revegetation is needed, it is highly advised to adopt a mixture of planting according to the vegetation composition and vegetation landscape common to the locality. In terms of landscape restoration, destructive agricultural, industrial and constructive activities in rural areas should be prohibited. Interventions, such as the introduction of artificial "historical buildings", modern buildings of large dimension, non-native flora and fauna, alien landscape design, excessive hardening with impermeable materials, etc. must be avoided. Landscape design should have a minimum impact on the existing natural landscape, therefore the rule of "cautious addition and proper subtraction" is highly recommended. This rule disfavors unnecessary, abusive new constructions whereas encouraging the creative reuse and repurposing or retrofitting/enhancement of existing buildings and facilities on the one hand; and on the other hand the removal of modern landscape elements which are superimposed onto rather than integrated into the overall landscape system.

Guideline 3.5. Enable regeneration practices to restore and strengthen resilience

The resilience of both natural and semi-natural and sociocultural landscapes enables them to recover through adaptive reaction from not only environmental crisis, but also social shocks within a certain degree. Regeneration practices thus should restore by means of ecological restoration or cultural revitalization the current damaged resilience and strengthen it. In so doing, natural and sociocultural landscapes will not become over-dependent on human interventions. Rather, they could recover from internal and external threats.

Guideline 3.6. Bridge nature and culture

Often, rural landscapes have witnessed historical, sociocultural and economic transformations, which bestowed them rich immaterial cultural values. Therefore, landscape regeneration should give equal importance to the natural values, in term of biodiversity, environment, etc., and cultural values, such as cultural identity, traditions, rituals, anecdotes, etc.

Principle 4: conformity to process and incrementalism

It takes time and continuous commitment before the regenerated landscape could generate perceivable, quantifiable changes and outcomes that local people can accept. This requires that not only ecological restoration should be process-oriented (Décamps *et al.* 2004), so should the regeneration of sociocultural landscape and built landscape. It is equally important to recognize landscape regeneration as a process that involves the interaction among all forms of social institutions, especially land ownership, land use, social roles, value system and rules.

Guideline 4.1. Adopt a process-oriented, incrementalist approach to landscape regeneration

The regeneration process does not end upon the conclusion of the project. Rather, it has to be long-lasting process wherein post-project complementary measures (e.g. management and interpretation of a restored wetland) are to be taken to keep the regenerated landscape functioning in the long run. For the regeneration project of an extended natural landscape, it is highly recommended the incrementalist approach: multi-phase regeneration. This can be done first with a pilot project, and then proceeding to the following phases based on the evaluation of the preceding ones. The incrementalist approach also means gradually diversifying the functions of the regenerated landscape and creating a functional synergy between different sections over a certain period of time.

Guideline 4.2. Highlight the role of social institutions in the process of landscape regeneration

Landscape regeneration may not happen or be successful if social institutions such as land ownership, land use, social roles, value system and rules are not supportive. Therefore, reform or change of existing social institutions tend to be preconditions. This suggests that any regeneration at physical level demands a simultaneous regeneration of social institutions. Also, the interaction among these social institutions should be considered in the regeneration process. Often, social institutions are nested, and social roles, value systems and rules may affect land ownership and land use, which in turn may consolidate or weaken the former.

Guideline 4.3. Keep both project and post-project monitoring on a long-term basis

Rural landscape regeneration is not to create landscapes, but rather to maintain, optimize and restore the existing ones so as to improve the living environment. This can be achieved in a responsible and sustainable manner only when reliable data and meaningful indicators become available. Therefore, monitoring landscape changes is urgently needed (Antrop 2004b). Monitoring can indicate environmental and landscape evolution, whether they are improving or continuing to degrade and to what extent. Accurate and detailed monitoring

data can show the project progress and serve as references for adjusting the upcoming activities where necessary. Monitoring can also contribute to the evaluation of completed regeneration projects. Besides, well-documented monitoring data may also contribute to the planning of future projects (Keenleyside *et al.* 2012), and the management of landscape change which can be improved by learning from outcomes.

Guideline 4.4. Undertake process-oriented regeneration evaluation

As rural landscape regeneration needs to follow a process-oriented, incrementalist approach, its evaluation should be process-oriented as well. It is recommended that each phase of a regeneration project is evaluated. The rural landscape regeneration evaluation should be based primarily on two criteria, namely environmental sustainability and sociocultural sustainability. Environmental sustainability requires the stability, connectivity and integrity of the overall landscape system and possible environmental and landscape improvement. Sociocultural sustainability refers to the fact that the regenerated landscape can continuously generate benefits for sociocultural development. Evaluation should pay special attention to local people's perception of the regenerated landscape, as landscapes that evoke people's enjoyment and acceptance are more likely to be sustained over the long term (Schaich 2009). This process-oriented evaluation is able to provide evidence for the adjustment and improvement of successive regeneration practices.

Guideline 4.5. Ensure long-term capacity building

During the implementation of a rural landscape regeneration project, it is not unusual to encounter difficulties due to both subjective and objective, and internal and external reasons. Sometimes, this may result in suspending and even abandoning the project, causing a waste of time, resources and investment. In order to overcome realistic problems and augment the possibility of project success, long-term capacity building is of great importance. The long-term capacity building, targeted at both the local public institutes and community members, can involve 1) developing knowledge capacity in cultural and natural amenities management, ecology, environmental protection, landscape, anthropology, planning, etc.; 2) learning from local and regional even national best practices and referring to the existing science-communication-policy networks; and 3) providing continuous team building and training both in technical and managerial aspects.

Principle 5: functional diversification

Rural landscapes have economic, environmental and sociocultural functions which contribute to sustainable development. A certain regeneration project should reinforce these functions and create channels for sustainable utilization and value-adding of rural landscapes. Therefore, for complex landscapes in continuous evolution like the rural ones, a common policy of conservation and

regeneration must be made with considerations of a diversified utilization of landscapes and new forms of sustainable development (Morabito *et al.* 2008).

Guideline 5.1. Diversify the utilization of the regenerated rural landscapes while communicating the values to the public via varied and innovative interpretations

Any rural landscape regeneration project shall not confine itself to the ecological restoration field, nor shall it prohibit reasonable utilization. Instead, it must simultaneously address relevant sociocultural and economic issues. That is to say, it is expected to satisfy the needs of different stakeholders. Therefore, regenerated landscapes need to offer a portfolio of diverse functions, including environmental improvement, risk and disaster prevention, sociocultural development, improvement of living conditions, didactic, recreation, etc. In diversifying the utilization can regenerated rural landscapes benefit the local population and other groups of people, create a connection between human society and regenerated landscapes while making due contributions to local economic and sociocultural development. Given that the public may not be culturally conscious of the significance of rural landscapes, it is indispensable to interpret and disseminate the regeneration outcomes in diversified and innovative ways especially with the help of mass media and social networks. In so doing, local people are able to reshape their collective cultural identity, and all users can be sensitized to the values embedded in the regenerated landscape, which is a precondition of mobilizing them to participate in its management. What is urgently needed are new interpretative principles of rural landscapes that are 1) simple and readily adaptable to local context; and 2) not only a description but an interpretation of reality, that is, defining landscapes by processes, not only by forms (Balestrieri 2015).

Guideline 5.2. Update the utilization according to actual conservation and sociocultural needs

With the deepening of urbanization and globalization, social and people's needs are ever changing. The rural landscape regeneration is thus expected to generate fruits in a sustainable way so as to meet the changing needs. This requires that the current utilization and interpretation patterns be updated in a continuous way. In so doing can the sustainability be maintained, both for sociocultural development and the regenerated landscape itself.

Principle 6: participatory management mechanism

When a rural landscape regeneration project is accomplished, there needs to be a management mechanism so as to guarantee its long-term functionality. Such a management mechanism will help maintain the regeneration fruits, such as continuous environmental improvement and landscape recovery, and guarantee the environmental and sociocultural benefits for the society in the long run.

Guidelines 6.1. Adopt the approach of participatory and multidisciplinary management

Similar to the rural landscape regeneration project planning, the management also requires that all stakeholders, both private and public, and experts from a variety of disciplines, actively participate in the development of a management plan of the regenerated landscape. This is meant to regulate its reasonable utilization and interpretations and more importantly, help add value to the regenerated rural landscapes. With a long-term perspective, the management plan needs to consider all relevant aspects, including environmental protection, landscape conservation, recreation, sociocultural and economic development, communication, didactic, etc. When the management plan is ready, it should go through a wide dissemination and executed with a full, effective participation of all stakeholders, especially local population, students, experts, etc. The participation could also be in the form of voluntary work.

Guideline 6.2. Optimize the accessibility

Greater accessibility to the regenerated landscape and interpretation installations such as museums, riparian and wetlands parks, didactic farms and gardens, etc. could increase the local population's and visitors' opportunity to experience the ecological values, biodiversity, landscape beauty, sustainable way of life and traditional culture. This will help disseminate the regeneration fruits and promote the didactic and recreational function of the regenerated rural landscape. The accessibility, nevertheless, needs to be restricted according to the environmental and sociocultural sustainability.

4.4. Conclusions

The proposed landscape approach to rural development attempts to achieve simultaneously two goals. First, at the landscape level, it aims to manage rural landscape changes, and bring about a vibrant, livable countryside, a contemporized "picturesque" distinct from the "purified" and "gentrified" urban landscapes. Second, at the economic level, it recognizes that the sustainable development of rural landscapes must be based on the sound development of the rural economy, and therefore tries to spur innovation economies to reduce the tension between environmental protection and economic growth. The resulting rural development will be characterized by an integration of economic, environmental and sociocultural processes. For the purpose of maximum integration, this approach needs to comply with three fundamental principles, i.e. the synergy principle, the balance principle and the continuity principle. All in all, the landscape approach is expected to help achieve sustainable rural development (social, economic and environmental) while promoting the contemporization and evolution of rural landscapes by mitigating negative sociocultural and environmental externalities. Regeneration is the pivotal tool indispensable to the mitigation of these negative externalities. The landscape approach is conducive to two ultimate results. First, it can lead to a continuous improvement of the quality of life of all people, in terms of not only economic

benefits and opportunities, but also living environment and sociocultural life. Second, more importantly, it is expected to foster the *process* of development of new local systems rather than generating merely the result of renovation.

Landscape regeneration is a process of adaptive adjustments of the sociocultural, economic and environmental fabrics of landscapes in the course of landscape transformations engendered by development-related forces such as modernization, industrialization, urbanization and globalization. As an adaptive activity, landscape regeneration is by nature holistic (system), incremental (process) and contextualized (place). As a means to coordinate and integrate the sociocultural, environmental and economic dynamics into the rural development process, rural landscape regeneration should not only focus on the (improvement of) the physicality of rural landscapes, but more importantly pay attention to the development of their core, that is, people, society and economy. In contrast to rural regeneration, rural landscape regeneration makes a difference in three ways. First, with a "systems thinking", it pays special attention to harnessing positive externalities generated by a singular project and creating co-benefit scenarios able to simultaneously address more than one of the three interrelated sociocultural, environmental and economic dynamics embedded in rural landscapes. Second, its ultimate goal is to promote human development indicated by a continuous improvement of the quality of life of local people and enhancement of their collective consciousness. Third, it conforms largely to the endogenous methodology and seeks to integrate and mobilize locally embedded resources (physical, financial, human and social capitals as well as natural resources) with systems thinking and place-based approach.

In practice, rural landscape regeneration can be implemented in compliance with six principles that cover planning, implementation and management. First, the principle of *integrated and participatory planning*, which requires 1) undertaking highly contextual and interdisciplinary literature study and field study, which serve as the basis of planning, and engage all stakeholders in the planning and decision-making process; 2) carrying out the environmental impact assessment (EIA) with regard to a regeneration intervention's possible impacts on the overall environment, landscape and sociocultural development; and 3) adopting systems thinking-based, place-based, people-centred and future-oriented perspectives while considering the impacts of urbanization and globalization. Second, the principle of *mixed governance*, which requires 1) highlighting the institutional stewardship and multistakeholder partnership; 2) guaranteeing the balance between equity and efficiency; and 3) building up grassroots democracy with a sound, effective participation and supervision mechanism. Third, the principle of *minimum intervention*, which requires 1) taking into account rural landscape ethics; 2) adopting holistic regeneration approach; 3) maintaining or revitalizing positive traditional cultural values, knowledge and practices; 4) emphasizing the actual regeneration needs of the structure and functionality of ecosystem and landscape and support reuse and

repurposing; 5) enabling regeneration practices to restore and strengthen resilience; and 6) bridging nature and culture. Fourth, the principle of *conformity to process and incrementalism*, which requires 1) adopting a process-oriented, incrementalist approach to landscape regeneration; 2) highlighting the role of social institutions in the process of landscape regeneration; 3) keeping both project and post-project monitoring on a long-term basis; 4) undertaking process-oriented regeneration evaluation; and 5) ensuring long-term capacity building. Fifth, the principle of *functional diversification*, which requires 1) diversifying the utilization of the regenerated rural landscapes while communicating the values to the public via varied and innovative interpretations; and 2) updating the utilization according to actual conservation and sociocultural needs. Sixth, the principle of *participatory management mechanism*, which requires 1) adopting the approach of participatory and multidisciplinary management; and 2) optimizing the accessibility.

Part 3 Optimizing Rural Landscapes: Landscape Regeneration

Chapter 5 Natural Landscape Regeneration

5.1. Recovering Human-Nature Harmony[54]

Human beings are now living in the Anthropocene, a new geological epoch where they have transformed the earth's surface and caused environmental change to an unprecedented degree (Zalasiewicz *et al.* 2011). Under this broad context, the resilience and adaptability of rural communities to environmental uncertainties is one of the fundamental areas that present key challenges for rural areas in the 21st century (Woods 2012). There is little doubt that a harmonious relationship between human society and environment is critical to moderating socioeconomic transformations. On the one hand, it helps balance the need for rural socioeconomic development and ecological protection, which is the premise of rural sustainability. On the other hand, it is vital to managing the changing interactions between human society and environment, the principal driver of environmental, and more generally landscape change. The changing interactions themselves are triggered by changing human preferences and demand subject to national and global markets and technological advances (Verburg *et al.* 2013). All in all, this harmonious relationship can prevent rural landscapes from mutating due to excessive human activities that are beyond the environmental capacity.

According to Chinese classic philosophy, such as Taoism, human and nature are barely separable. As Zhuangzi[55] remarks, "Heaven, Earth, and I were produced together, and all things and I are one 天地与我并生，而万物与我为一"[56], which clearly shows his deep interest in "integrating all things of the world into 'One' rather than dividing them into 'Many'" (Ames 2009, 163). The formation of this "One" is represented by "the grand harmony of all things 太和万物"[57]. As already discussed above, "harmony" in essence suggests a network of harmonious relationships, either the relationship between human and nature (Taoism) or the relationship between human and society (Confucianism). However, in the real world, the vital human-nature harmony is often times put in jeopardy. Indeed, one of the fundamental features of modernity is the separation of the natural and the human (Woods 2005). Besides human-nature divide, spatially there is a rural-urban divide, and temporally a tradition-modernity divide. This deep-rooted binarist ideology has considerably affected theories and practices of development. Over the past decades, rural China, for example, has blindly

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[54] This section has referred to, with necessary adjustments, the Author's conference paper "Recovering Human-Nature Harmony: Knowledge and Values Based Heritage Revitalization under the Beautiful Countryside Construction in China", presented at the 19th ICOMOS General Assembly.

[55] Zhuangzi (c. 369 BC - c. 286 BC) is credited with writing the book under the title Zhuangzi, which is one of the foundational texts of Taoism.

[56] From Zhuangzi: Inner Chapters: The Adjustment of Controversies: Chapter 9 (《庄子内篇•齐物论：9》), extracted from <http://ctext.org/>.

[57] For the complete chapter, see Zhuangzi : Outer Chapters : The Revolution of Heaven : Chapter 3 (《庄子外篇•天运：3》), extracted from <http://ctext.org/>.

imitated cities and gradually broken away from well-established traditions like *feng shui*, which had played a significant role in helping maintain the natural environment in rural areas. There exists "a decoupling between ecosystems and social systems" (Fischer *et al.* 2012, 170) resulting from social changes, including cultural and demographic shifts, economic development, declining agriculture, and a general breakdown of the traditional institutions governing land use. This decoupling has marked the rupture of an interactive, interrelated and interdependent relationship between the natural environment and human society, bringing about consequential damages to the natural environment.

Modern agriculture, based on rationality and thus largely driven by the pursuit of efficiency, demonstrates how breaking the harmony between human society and environment can have a huge impact on the natural environment and rural landscape as a whole. Individual farmers' decision-making of production is seldom conscious of or takes into account the external costs of modern farming. Negative externalities such as soil erosion and water contamination and their negative impacts on health are often neglected (Pretty 1998). Valbuena and others (2010) therefore argue for an agent-based approach to analyzing the interaction between farmers and their environment that takes into account the diversity of farming decision-making by farmers. Such an approach is important to help recover human-nature harmony in that it allows for better understanding of why and how the local population would influence natural landscapes in response to the exogenous processes in rural areas.

Ecological and scenic values of rural landscapes are critical to making rural areas more attractive to new economic and leisure activities (Prados 2009), and more livable spaces. Given ecological and environmental problems tend to undermine the attractiveness of rural areas, natural landscape regeneration is an inevitable need to maintain the rural sustainability. A possible regenerative paradigm for the natural landscape should be aimed at addressing the dysfunctional human society-environment relationship by entering into a co-creative partnership with nature, which requires to restore and regenerate the socioecological system through a set of localized ecological design rooted in local socioecological context (du Plessis 2012). The rationale of such a regenerative paradigm is determined by the relationship between the landscape's spatial structure and the socioecological processes that determine its functioning (Verburg *et al.* 2013). Therefore, natural landscape regeneration needs to integrate both the structure and functioning of landscape, that is to say, it should regenerate not only the physical landscape, but more importantly the embedded ecological system and social dynamics so that the landscape can sustain and evolve. Such a bi-dimensional regeneration in essence recognizes that humans and associated cultural diversity are integral components of ecosystems (Agnoletti 2014). The objective of natural environment regeneration, on the one hand, should be ideally aimed at restoring the regenerative capacity of the natural environment. On the other hand, it should also contribute to the recovering of the harmonious

relationship between the natural environment and human society. This is quite helpful to adjust the conventional concept of landscape management which tends to equate landscape with nature and therefore encourages renaturalization, particularly in the form of reforestation. As a result, the relationship between human society and natural environment embedded in pre-existing landscape patterns is largely neglected (Agnoletti 2014; Rovai *et al.* 2016). Besides, it is also able to mitigate the conflict between development and protecting the regenerative capacity of the natural environment (du Plessis 2012).

At present, rural landscape regeneration at environmental and sociocultural levels in rural China is primarily undertaken within the national policy framework of the "Beautiful Countryside Construction". Recovering human-nature harmony can serve as a guiding principle of the Beautiful Countryside Construction, in that it is able to fuel socioeconomic development without compromising ecological progress. Meanwhile, this national policy can serve as a precious opportunity to recover human-nature harmony, given that culture and ecological progress are its two priorities. In fact, since its implementation, grassroots governments in rural areas have implemented various initiatives to regenerate rural ecological environment. Major practices are ecological agriculture, reforestation, returning farmland prone to soil erosion to groves of perennial trees and shrubs with comprehensive ecological and economic benefits, and water ecology restoration. In Italy, the human-nature harmony is recovered through the positioning of agriculture under the discourse of multifunctionality and the tertiarization of the rural space has led to an emerging *modello delle reti ecologiche* (ecological networks model) in response to the conventional *modello agricolo produttivista* (productivist agricultural model) in crisis (Presidency of the Council of Ministers 2016). The ecological networks model is deemed as capable of putting biodiversity and landscape at the center of land planning and management.

5.2. Traditional Knowledge

As a cross-cutting issue within the UN Convention on Biological Diversity (CBD), traditional knowledge is defined as the knowledge, innovations and practices of indigenous and local communities developed from experience gained over the centuries and adapted to the local culture and environment and transmitted orally from generation to generation[58]. The traditional knowledge system embedded in traditional rural landscapes is formed cumulatively through centuries of interactions between human society and environment. Throughout rural transformations, it has helped maintain the human-nature harmony vital to the sustainability of the ecological system, landscape continuity and social stability.

[58] "Traditional Knowledge and the Convention on Biological Diversity", Article 8(j) - Traditional Knowledge, Innovations and Practices, accessed on July 21, 2017, <https://www.cbd.int/traditional/intro.shtml>.

Today, as the international community's call for sustainable development continues to rise, the importance of traditional knowledge in terms of ecosystem and landscape management and socioeconomic development is becoming increasingly prominent. First, in the context of ecosystem management, it proves to be indispensable to a more fundamental model of mutual benefit that relies on joint knowledge creation and exchange between local community (traditional knowledge systems) and scientists/experts (technocratic, scientific knowledge systems) (Buytaert *et al.* 2014). This knowledge generation model paves the way for citizen science[59] that often has an important role to play in facilitating a better representation of local experiences and priorities (*ibid*.). Second, at the landscape level, in a preventive sense, it contributes to the maintenance of the functionality of natural landscape by favoring a more eco-friendly use of natural resources. In so doing, the trade-off between environmental protection and socioeconomic development can be curtailed. In an interventional sense, it contains "unexplored wisdom and inspiration for making better future landscapes and offer a base for restoration" (Antrop 2004a, 11). Third, development and the preservation of traditional knowledge are not contradictory (World Bank 1995). In terms of socioeconomic development, traditional knowledge is popularly considered as critical to driving social innovation and development. As a collective knowledge, it can make a significant contribution to sustainable rural development, serving as "a source of social progress and knowledge innovation" (Xue and Guo 2009, 141). Clarke (1990) maintains that traditional knowledge needs to be integrated into present development, because it is "environmentally sound" and highlights respect for the long-term requirements of nature, an intrinsic value of sustainable development. This means that traditional knowledge, when properly revitalized, is able to recover human-nature harmony and bridge the gap between the past and the present. All in all, as "community knowledge", traditional knowledge is "an important resource for maintaining biodiversity and cultural diversity" (Zhang 2006, 3) as well as for economic development (Calafati 2007).

However, traditional knowledge in rural areas tends to be abandoned in modern times. The rapid inflow of modern knowledge, fast changing itself, is rather erosive to the stability of the traditional knowledge system. The local population, central to the creation and transmission of the traditional knowledge system, tend to be tempted by the "convenience" and "efficiency" of modern knowledge and thus stop, usually unconsciously, to create, appreciate and apply it. An interruption in the transmission of traditional knowledge required for local landscape maintenance has destabilized sociocultural and even economic structures of rural areas (Agnoletti 2014). On this regard, rural landscape regeneration should create opportunities for traditional knowledge revitalization, so as to contribute to both landscape management and socioeconomic development. In China, it is widely recognized that, the current

[59] Citizen science refers to the participation of the general public (i.e., non-scientists) in the generation of new scientific knowledge (Buytaert et al. 2014, 1).

focuses of integrated rural and urban development and New Urbanization should be to 1) fully explore rural values; 2) promote traditional rural restructuring; 3) enhance rural values; and 4) truly achieve urban-rural equality and urban-rural integration (Wang and Lu 2015).

5.3. *Laochi* Revitalization[60]

5.3.1. Background

As the examples from Meixian County demonstrate, practices related to natural landscape regeneration during the implementation of the Beautiful Countryside Construction have followed the principle of recovering human-nature harmony. Therefore, the revitalization of traditional knowledge has played a significant role. Water has been considered as a crux of rural ecology, and a vital link between the rural society and environment. Therefore, the regeneration of water ecology in rural areas has been defined as an interface between different interventions. As an immaterial heritage, traditional knowledge embedded in water management has been revitalized and reinterpreted in a way that the water ecology is improved and rural spaces are reshaped and upgraded. A typical example is the revitalization of *laochi* 涝池, initiated by the Provincial Government of Shaanxi Province in 2016 in response to the deteriorating water ecology and water environment as well as risk of flooding and drought in rural areas. *Laochi* is a traditional flood pond which used to be common in almost all villages in the Guanzhong Region in Shaanxi Province. It was often constructed in low-lying zones in villages and towns based on traditional knowledge of site selection and anti-seepage techniques. Its main functions include rainwater collection, flood drainage and stagnation prevention, and provision of water for agricultural production and domestic use (Liu and Liu 1992; Jia 2010; Geng 2013). For centuries, as a facility supportive of risk reduction and effective utilization of limited rainwater resource in arid and semi-arid areas, it has played a significant role in rural socioeconomic development (Zuo *et al.* 2016).

Since the late 1980s, with rapid rural economic development, *laochi* has been gradually either transformed into arable land, homestead site, landfill site or abandoned because local people started to deem it as "old-fashioned" and thus no longer valued it. There seems to be no need to keep *laochi*, as water supply both for domestic and agricultural needs has been largely improved and modernized. However, regarding its other functions like drainage and water ecology maintenance, *laochi* still proves to be a valuable facility in rural areas. This is because, currently rural China still has an infrastructure whose development is not well balanced. Compared to its greatly improved transport

[60] This section has referred, with necessary adjustment, to the Author's conference paper "Traditional Knowledge and Sustainable Rural Development: on the Revitalization of Laochi in Shaanxi Province, China", presented at the 5th Annual International Conference on Sustainable Development (2017) at Columbia University, New York, US.

infrastructure, its "grey infrastructure", namely, conventional piped drainage and water treatment systems, remains lagging behind. For example, different from cities, it has no sound drainage system (Geng 2013), nor rain water and sewage separation system. In fact, rural construction has long blindly imitated cities, abandoning traditions. For example, the yards of residential buildings and roads have been excessively hardened with impermeable concrete. The impermeabilization in rural areas makes the drainage problem even more prominent. At the same time, not only the water cycle is undermined, but also the rural water ecology and farmland soil are contaminated due to the discharge of mixed rain water and domestic sewage directly into the environment.

In view of the deteriorating rural water ecology in rural areas of the Guanzhong Region, some scholars suggested that artificial wetlands like *laochi* should be restored as ecological treatment technology, which has the advantages of low construction cost, simple maintenance and low operation cost (Zhu *et al.* 2015). Besides, a beautiful rural landscape can be regenerated by landscaping interventions.

5.3.2. Traditional Knowledge Embedded in Traditional *Laochi*

Traditional knowledge is deeply embedded in traditional *laochi*. To begin with, it shows the smart site selection of a low-lying spot with dense and solid soil, so that it is most conducive to rain water gathering. A site of this kind is a natural "waterway" prone to gather and drain rain water (Liu and Liu 1992; Jia 2010). Secondly, *laochi* is a good example of reasonable use of rainwater resources and disaster reduction and prevention at the meantime. Through the collection and utilization of rainwater, over-reliance on groundwater and consequent possible excessive exploitation are avoided to some extent, thus ensuring a benign water cycle in rural areas. It helps rural localities adapt to micro-climate change in a flexible way: when drought occurs, it can store rain water, and discharge it when there is a heavy storm to prevent stagnation. Thirdly, the construction techniques[61] of traditional *laochi* also demonstrate the extraordinary wisdom of traditional knowledge. The construction techniques of the anti-seepage layer in particular represent the most valuable traditional knowledge embedded in *laochi*, because it can at the same time prevent excessive seepage and allow appropriate seepage. For this reason, the water in the pond is always connected to the ground, which prevents it from becoming stagnant. Fourthly, *laochi* is a model of comprehensive utilization of natural resources. In the past, the water

[61] In his outstanding *Nongzheng Quanshu* (or *Comprehensive Treatise on Agricultural Administration*), Xu Guangqi (1562-1633) wrote on how to construct an artificial pond with an anti-seepage bottom, "… ram to build its [artificial pond's] bottom, … drill holes [in the bottom], and tamp them with clay, so that no leakage occurs 筑土者，杵筑其底，椎泥者，以椎椎底，作孔胶泥实之，皆令无漏也". Construction techniques of traditional *laochi* are similar to the record in *Nongzheng Quanshu* 《农政全书》: collect clay (an economical and convenient local material), beat it repeatedly with wood hammer until it becomes fine, remove the impurities with sieve, add 20% of lime and mix well. When the fine clay and lime are evenly mixed, lay and level the mixture on the bottom of *laochi*, sprinkle it to saturation, ram the watered mixture to compaction, so that the infiltrating mud blocks cracks causing seepage. This is repeated several times and eventually an anti-seepage layer of 10-15cm thick is built (Yang 1960; Liu and Liu 1992 cit in Ou 2017).

from *laochi* was used in manifold ways both for agricultural activities and daily life, just to name a few, for aquaculture, drinking water of livestock, kneading clay for house building, farmland irrigation and domestic use such as washing laundry. *Laochi* is also a recreational space, serving as a "swimming pool" in summer and "skating rink" in winter. Besides, the sediments accumulating in the pond over time are used as farm manure, which also prevents *laochi* from being silted up. Last but not the least, as an important component in the rural "green infrastructure", *laochi* is also a small water purification facility. Through natural sedimentation, solar radiation and aquatic adsorption, the water in the pond is purified as impurities and harmful substances sediment and degrade. This to a certain extent avoids farmland soil contamination due to direct discharge of domestic sewage into the environment. These traditional knowledge, demonstrating harmonious interaction between human society and environment, are undoubtedly a significant asset for sustainable rural development in the Guanzhong Region.

However, traditional *laochi* has the following shortcomings: first, its anti-seepage layer is not ideal, and often there are no supplementary water supply facilities. This refrains *laochi* from performing its comprehensive functions in the Guanzhong Region, due to its quite dry weather and great evaporation in summer. Second, the main function of traditional *laochi* is water storage and stagnation prevention, and water supply for production and living. As a result, there is a lack of vegetation and landscaping in its immediate environment. The banal landscape fails to improve the rural living environment. Third, there are no safety facilities and warning signs, which often times causes security risks. Fourth, the productive, social and cultural functions of traditional *laochi* seem outdated in the increasingly well-off countryside, therefore unable to satisfy local community's need of a higher quality of life.

5.3.3. Reconstruction and Improvement of Traditional *Laochi*[62]

The "Technical Guidelines for *Laochi* Construction in Shaanxi Province (Tentative)" (2016) formulated by the Shaanxi Provincial Soil and Water Conservation Bureau defines the revitalization of five types of *laochi* according to their specific functions, including flood control and stagnation prevention, cultural landscaping, water storage and irrigation, water system connection, and ecological wetland. To address the limitation of traditional *laochi*, a central question that must be responded to in the process of *laochi* revitalization is, how to improve traditional *laochi* according to actual needs of local people while properly inheriting its traditional knowledge and keeping its advantages. On this regard, the "Guidelines" requires *laochi* revitalization to conform to the "6

[62] The construction concepts and techniques applied in *laochi* revitalization in this section were based on the study of the "Technical Guidelines for *Laochi* Construction in Shaanxi Province (Tentative)" (2016), and the *laochi* construction plans and technical explanations provided by Mr. Fu Youquan from the Water Resources Bureau of Meixian County. In addition, the literature and technical explanations provided by Mr. Geng Naili from the Shaanxi Provincial Department also helped the discussions. Finally, the discussions were complemented by the Author's field investigations.

Cans principle", namely, the revitalized *laochi* can "store water and prevent stagnation, restore natural ecology, connect water system, benefit livelihood, transmit historical and cultural heritage, and be continuously managed". Technically, it must comply with the "4 Nots principle", namely, water does not "overflow, leak, dry, stink".

In Meixian County, *laochi* revitalization has followed the principles set in the "Guidelines" and responded to the central question above in two ways: traditional knowledge revitalization that integrates proper modern techniques, and landscaping and functional diversification. First, it has largely respected and revitalized traditional knowledge by revitalizing traditional construction techniques and, where necessary, improving them with modern ones. Complying with the principle of minimum intervention, the reconstructed *laochi* are all a renewal of the original abandoned ones[63]. The reconstruction of the anti-seepage layer of its bottom and slopes has followed traditional techniques and procedures, following successively laying mixed sieved clay and lime, leveling, sprinkling and ramming. Necessary adjustments and improvements have been made to traditional techniques, for instance, the proportion of lime and clay is adjusted to 3 : 7 instead of the traditional 2 : 8. Compared with traditional *laochi*, the reconstructed *laochi* has an additional loess protection layer above the conventional lime-clay anti-seepage layer. Both layers are constructed with several pavings following the same procedures. Each paving has been laid and leveled with a thickness of less than 25 cm, sprinkled to saturation and then rammed to compaction. Finally, a lime-clay anti-seepage layer of 30 cm thick and a loess protection layer of 20 cm thick on the top of it have been constructed. This type of anti-seepage layer takes into account the need of flood infiltration, therefore mainly applied to *laochi* aimed at flood control, stagnation prevention and water system connection, such as the *laochi* in Heiyu Village. In order to facilitate flood discharge and reduce soil erosion on the nearby farmland, the slopes of this *laochi* is reinforced with a stone dam well fitted into the actual terrain.

Different from the *laochi* of Heiyu Village, the major function of the *laochi* of Changxing and Tongzhai villages is cultural landscaping. Both are located in zones rich in loess characteristic of loose soil structure and poor erosion resistance. Since the principal function of cultural landscaping *laochi* is to beautify rural environment, create water landscape, and build up livable environment, the anti-seepage capacity is the major concern of the two *laochi*. Therefore, the anti-seepage layers of their bottom and slopes are reinforced with modern impermeable material, namely, an HDPE geomembrane impermeable layer is added between the lime-clay anti-seepage layer and loess protection layer. In addition, to make the slopes more solid and improve water purification and

[63] Once the site is selected, the original site needs cleaning up before the construction. The humus soil must be removed, so that the primary soil layer is exposed. Then the primary soil layer is sprinkled to saturation and rolled to compaction with a rolling density of greater than 1.6t/m^3.

storage, a stone layer is rammed into their loess protection layer below the water level (Fig. 34).

Figure 34. *Laochi* under construction with a stone layer in Xiaoqiang Village, Qishan County. © Y. OU (2017)

Figure 35. Excessive removal of original vegetation and hardening of pathways of the *laochi* in Heiyu Village, Meixian County. © Y. OU (2017)

Second, in terms of landscaping, major efforts are made aiming at ecological restoration and vernacular culture revitalization. To this end, natural landscaping and cultural landscaping, and ecological functions and socio-cultural functions are well integrated into *laochi* revitalization. Original trees, especially old ones, are kept as much as possible. Meanwhile, slopes and water surface are revegetated. Ryegrass, crownvetch (*coronilla varia*), winter jasmine (*jasminum nudiflorum*), willow trees, etc. are planted on the slopes and banks. In the pond, lotus, calamus (*acorus calamus*), water lilies and other aquatic plants are planted in shallow waters. *Laochi* is also home to goldfish and other aquatic animals. All this helps to improve *laochi*'s water absorption and water storage capacity, beautify its natural landscape and surrounding environment, and improve its water purification capacity at the same time. Finally, to ensure personal safety, the reconstructed *laochi* is enclosed by fences, and safety warning signs are set up.

The construction of the anti-seepage layer and landscaping of *laochi* and its surroundings determine its long-term function after the reconstruction. The former ensures that water in the *laochi* does not leak, dry, or stink; therefore, it determines whether it can perform its water management function of water storage, purification and stagnation prevention. The latter enables *laochi* to improve living environment, enrich cultural activities and perform other new functions.

5.3.4. Discussions

Laochi revitalization in Meixian County has resorted to traditional construction techniques with necessary adjustment and improvement and reasonable application of modern techniques. There has been an integration of *laochi* reconstruction and landscape regeneration, and an integration of *laochi*'s water management, ecological and sociocultural functions. These comprehensive functions can effectively improve rural living conditions and quality of life. The

reconstructed *laochi* has created a co-benefit scenario able to simultaneously address the sociocultural and environmental issues. Such a scenario helped it generate not only ecological benefits, but positive sociocultural externalities. The revitalization of *laochi* is a place-based solution to achieve both ecological and social objectives. On the one hand, it is an embodiment of how culture and nature can be integrated in a new form while serving new social needs. On the other hand, it helps realize the integration and complementarity between the traditional and the modern at levels of function and form, which helps "restore" the continuity of rural landscapes. It also demonstrates a localized conceptualization and implementation of the Beautiful Countryside Construction, especially in terms of the diversity, livability and resilience of rural landscapes that are in rapid transformations.

Revitalizing traditional knowledge as traditional *laochi* embodies is very beneficial to the Beautiful Countryside Construction, because first, it is very cost-efficient to address rural problems compared to the conventional exogenous technical solutions which often times turn out to be incompatible with local contexts. Second, traditional knowledge revitalization, as the reconstructed *laochi* shows, showcases how recovering human-nature harmony can generate both sociocultural and environmental benefits to local community. Third, it represents a source of inspiration for innovatively reshaping and upgrading rural landscape while meeting contemporary needs of local people. Last but not the least, it is also a viable solution to urban problems. The "National New Urbanization Plan (2014-2020)" proposed an urbanization principle that adheres to follow the laws of nature and differentiated urban and rural development (Chapter 22)[64]. "Sponge City" (also called permeable city) is a pivotal project in the construction of new urbanization in China. In this sense, the revitalization of *laochi* in rural areas, especially the revival of traditional knowledge and return of traditional culture in the revitalization process, as well as rural public space building based on the actual needs of local community, can not only promote the differentiated development of urban and rural areas, but also provide empirical experience for "Sponge City" construction (Ou 2017).

Despite the above-mentioned achievements, the reconstructed *laochi* also show some shortcomings in terms of revegetation, community involvement and accessibility. To begin with, with a rather simple vegetation structure, the natural landscape is not "robust". The arrangement of grass, shrubs, trees and flowers on *laochi*'s slopes and banks is not "natural" and "inviting" enough, and the planting density of shade trees is too small. Besides, there has been destructive construction, such as large-scale removal of surrounding vegetation, excessive hardening of pathways, etc. (Fig. 35). Secondly, local participation has been limited in the construction phase but absent in the planning phase. This

[64] "National New Urbanization Plan (2014-2020)", retrieved from the website of the National Development and Reform Commission <http://www.ndrc.gov.cn/fzgggz/fzgh/ghwb/gjjh/201404/t20140411_606659.html>, accessed July 7, 2017.

absence of local participation tends to cause an asymmetry between the construction content/form and actual needs. As a result, a reconstructed *laochi* may fail to fully perform its sociocultural functions. Finally, the accessibility of *laochi* needs to be reasonably improved. The reality is, the strengthened protective measures also refrain the villagers from being hydrophilic.

5.4. River Restoration and Management

5.4.1. Wetland Restoration in Meixian County

Wetland restoration has played an important role in the river restoration and management in Meixian County, especially regarding the Weihe River, the largest tributary of the Yellow River and very important in the early development of Chinese civilization. The drainage basin of the section of the Weihe River in Meixian County, like other sections in close proximity to urban centers in Baoji City, used to be degraded both in terms of ecosystem and landscape due to excessive sand and soil extraction, deforestation, and excessive agricultural, industrial and construction activities. In 2011, Shaanxi Province launched the comprehensive ecological restoration and improvement project of the Weihe River. In response, the then Baoji Cultural Relics and Tourism Bureau (now Baoji Tourism Development Committee) made the master plan of the "Weihe 100-Mile Gallery" project in accordance with the requirements of "flood prevention, embankment consolidation, water purification, greening river banks and beautiful landscapes". This project was aimed to regenerate the entire section of the Weihe River in Baoji City. The ultimate goal was to develop "the largest ecological park, the most beautiful landscape promenade and the longest riverfront avenue" that ran through the west and east of the Guanzhong region. The master plan adopted an integrated approach, namely, integrating landscape planning and Weihe River management planning, integrating environmental optimization and livelihood improvement, and integrating the projects completed or in progress in all counties and districts. All counties along the "gallery" adapted the master plan according to local conditions and made specific plans and implemented them with a top-down approach.

Under the framework of the "Weihe 100-Mile Gallery" project, Meixian County implemented a series of wetland restoration and landscape regeneration projects along its section of the Weihe drainage basin. Major projects included the Reed Marshes Park, Black Locust Woods Park, Lotus Park, etc. To strengthen the resilience of the ecological system, improve water quality and natural landscape, trees and grasses have been planted in riversides, riverbanks and floodplains. Aquatic plants planted are mainly common local species, such as reeds, bulrushes and water lilies (Fig. 36). The revegetation was participatory, which involved not only civil servants, but also local population, students and teachers.

Figure 36. Aquatic vegetation restoration: replanted lotus flowers and reeds. © H. WEN (2016)

Figure 37. Abandoned lotus ponds near Hedi Village. © Y. OU (2018)

The Lotus Park is a representative example showing how integrating ecological restoration and folkloric culture reinterpretation can generate ecological, sociocultural and economic benefits. The Lotus Park is located in Hedi Village (Jinqu Township), about 5 km west of Meixian County, which has a long history of lotus cultivation, though mainly for agricultural rather than aesthetic and recreational purposes. "Lotus", as a symbol of both local identity and characteristic and Chinese cultural, was therefore chosen as the theme of the park. Besides the cultural consideration, lotus was chosen also for its ecological function of water purification. Its small dimension also prevents the regenerated lotus landscape from conflicting with the need of flood discharge.

The site used to be a deserted floodplain with poor vegetation and abandoned ponds (Fig. 37). As a pilot project planned by Meixian County, its construction involved the collaboration between the municipalities of Meixian County and Jinqu Township as well as the Villagers' Committee of Hedi Village and respected the principle of minimum intervention and made full use of the surrounding original ecological environment. A total of 72 lotus ponds were newly built or regenerated, and more than 20 kinds of lotus and aquatic plants were planted. The site's original topography was respected, and the largest alteration was the connection of the original scattered ponds into bigger ones. The regenerated lotus landscapes show local characteristics and recall traditional lotus culture. In addition to the lotus culture, the landscaping of the Lotus Park also integrated and reinterpreted traditional values that highlight the importance of human-nature and human-society harmony, such as traditional landscaping techniques, ecological knowledge and Confucian values. As a result, compared to traditional lotus landscape, the regenerated one shows a fusion of nature and culture, integrating the functions of ecological restoration, sightseeing, recreation and didactic (Fig. 38).

Through wetland restoration and landscape regeneration projects, Meixian County has transformed the degraded drainage basin of its section of the Weihe River into an ecological landscape corridor showing beautiful scenery and

territorial culture. The regenerated natural landscape and improved ecological environment, while generating sociocultural and ecological benefits, are able to turn into economic benefits as well. In fact, the Lotus Park, in particular, was an instant sensation when it was completed in 2015. Ever since, it has attracted not only local tourists, but tourists from neighboring counties and cities, contributing greatly to the improvement of local people's quality of life. It also helps retain and attract investors, and drives the development of tourism.

Figure 38. Sightseeing in the Lotus Park in Hedi Village. © Y. OU (2018)

As for its management, the Lotus Park, owned collectively by Hedi Village, is currently managed and operated solely by the Villagers' Committee, although its construction was led and financed by the municipality of Meixian County. Such a management implicates two advantages: first, reducing the financial pressure of higher administrative divisions; and second, enabling localized decision-making and involvement of local population, therefore enhancing local capacities.

5.4.2. Innovative River Management: River Contract and "River Chief"

In terms of river management, mistakes were made in the past in Italy: many drainage basins were partially altered and made more fragile by unsustainable water extractions, excessive overbuilding and arable land reclamation, and inadequate maintenance, which have led to negative consequences on the quality and availability of water and even serious impacts on natural habitats (Bianchini and Stazi 2017).

According to the Second World Water Forum in 2000, river contract (RC) is an agreement that allows to adopt a set of regulations in which criteria of public utility, economic return, social value and environmental sustainability equally take part in the search for effective solutions for the river basin's regeneration. As a tool for strategic and negotiated planning with voluntary adhesion, it is aimed to pursue the protection and management of water resources, value-adding of drainage basins and prevention of hydraulic risks, thus contributing to local development. RC provides a framework to bring together professionals,

politicians and the residents of the area. Following the negotiations among all stakeholders, the resulting contract shows the possibility to have a multi-faceted agreement which encourages participation and inclusion without losing sight of technical expertise and scientific rigor (*ibid*.). RC essentially is able to promote local democracy from a perspective of local participation.

In the Locride area, the public entities have already recognized that RC represents an extraordinary opportunity to forge integrated, inter-municipality strategies to overcome the state of hydrogeological abandonment that the area is facing. This is especially the case in its hinterland which is prone to calamities due to both natural and man-induced hydrogeological risks (Fig. 39). Currently, the hinterland, although rich in ecological, landscape and cultural resources, is not well integrated or coordinated in various territorial and local plans. At present, an RC in the form of an ecological network that incorporates all the municipalities (Bianco, Caraffa, Casignana, Sant'Agata del Bianco, Caraffa del Bianco, Samo and Africo) along the drainage basin of the Vallata "La Verde" is under institution. This network is aimed at promoting at a territorial scale and in an integrated way the landscapes and sustainable development within the "La Verde" valley (Fig. 40). In the framework, RC is expected to play an important role in coordinating public interventions at several institutional levels, rationalizing and integrating public resources, and stimulating and boosting private investments. The second point is of particular significance, given that most of these municipalities are small-sized with fiscal constraints and limited capacity. By pooling the dispersed public resources and human capital, it will be possible to share costs, avoid overlaps in actions, and have a greater capacity and territorial impact.

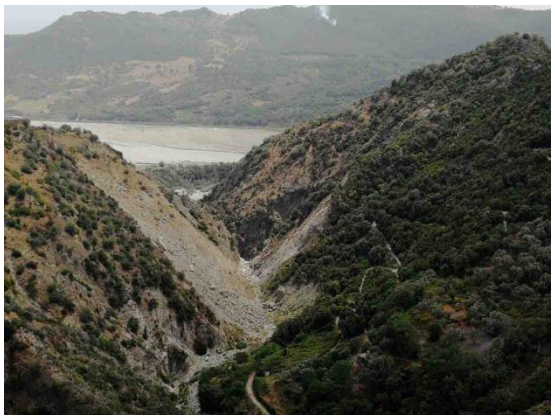

Figure 39. Land slides and fire in the Vallata "La Verde" near Samo. © Y. OU (2018)

Figure 40. Panorama of the Vallata "La Verde" and the *Verde Fiumara* from Precacore. © Y. OU (2018)

River management in China used to rely on public offices of water resource, environmental protection and urban planning. As these offices were not well coordinated among them and there were often overlapping duties and lacked a sound accountability mechanism, their performance showed rather limited efficiency and effectiveness. Many rivers and lakes had problems such as dried or shrinking watercourse and deteriorating water ecology. River problems are

manifested in the water, but actually rooted in activities on the river banks. An effective solution requires interventions aiming at both the water itself and river banks. Therefore, an integrated approach is needed to coordinate the section under question, upstream and downstream, and left and right banks, and create partnerships between local government, related governmental departments, the private sector and civil society. In this partnership, local government, as the leader, assumes the principal responsibility, while all functional departments, well coordinated, form a synergy among them. The need for such an integrated approach led to the "River Chief System" which came into being in 2016. Within the framework of the existing laws and regulations, this approach marks an institutional innovation that ensures the principal responsibility of local party committees and government leaders while creating multistakeholder partnerships in the management of rivers and lakes. It is aimed to enhance water resources protection, shoreline management and protection, prevention of water pollution, water environment management, water ecological restoration and law enforcement and supervision. The system is organized vertically at four levels, provincial, city, county and township, and a "river chief" is appointed at each level and for each section of the river and lake. The principal advantage of the "River Chief System" is that it makes the management of the river and lake accountable, and every section of river and lake has direct responsible persons.

5.5. Conclusions

Since the regeneration of natural landscape in the form of reforestation took place mainly in the 1950s-1970s in the Locride areas, this chapter has focused on the ongoing and accomplished regeneration interventions in Meixian County. Rural China is undergoing unprecedented transformations with deepening urbanization and industrialization. At a time when rural transformations tend to manifest as landscape mutation rather than evolution, the "Beautiful Countryside Construction" provides a precious opportunity to restore and harmonize the human-nature relationship in rural China, which is critical to moderating rural transformations. Recovering human-nature harmony can contribute to an organic evolution of natural landscape in terms of 1) helping form a benign and moderate human-nature interaction; 2) driving an ideological shift away from the conventional binarist thinking towards human-nature and tradition-modernity linkages; and 3) contributing to sustainable rural development by creating a synergy between the cultural and the natural and between the tangible physical landscape and the intangible knowledge and values.

Both the *laochi* revitalization and river restoration in Meixian County show how human-nature harmony can be recovered by regenerating the natural landscape with a place-based, integrated approach. In this regeneration process, locally embedded traditional knowledge and values, properly revitalized and

reinterpreted based on contemporary needs, have played a significant role. The process has also combined ecological needs and sociocultural ones, and thereby transformed the regenerated natural landscape into a multifunctional space that generates not only ecological benefits, but sociocultural and even economic ones. Consequently, the territorial characteristics and culture have been carried on in contemporary form and content, and local people's living environment has been largely improved.

Natural landscape regeneration lays the foundation for rural landscape regeneration. It is the first step of enhancing the resiliency of the overall rural landscapes and optimizing their quality. Considering that resiliency can be maximized through the spatial configuration of rural landscapes in an integrated ecological-genetic-economic way (Schippers *et al.* 2015), natural landscape regeneration shall not seen as an end itself, but rather a platform for the interpretation of sociocultural landscape and creation of new economic forms. It therefore needs to interconnect with sociocultural and economic aspects of rural landscapes, so as to enhance their resiliency and quality, which relies largely on three different classes of components, namely physical-naturalistic, historical-cultural and social-symbolic (Vizzari 2011).

The national policy of "Beautiful Countryside Construction" has far-reaching influence and implication. Affected by the existing sociopolitical institution at the macro level and the local specific condition at the micro level, its conceptualization and practice still need improving. In response to the major problems concerning decision-making, participation, benefit distribution and supervision exposed in its implementation, Ye and Wang (2016) argue that a successful and sustainable "Beautiful Countryside Construction" has to rely on an endogenous model led by multistakeholder synergy rather than the well-established government-led and exogenous pathway. Through this conceptual and associated institutional shift, rural localities can activate the participation of the rural population, strengthen organizational construction, and improve project supervision mechanisms.

Chapter 6 Built and Agricultural Landscape Regeneration

6.1. Reclaiming Agricultural Landscape

6.1.1. Reclamation of Abandoned Rice Paddies

Meixian County boasts rich water resources, like in Dongshilin and Xishilin villages, where at the foot of loess plateaus there are many springs. The rich water resource, fertile paddy soil plus the mild climate make this area very favorable to rice cultivation, which has been a century-old tradition. However, rice paddies have been abandoned for more than one decade (Fig. 41), as rice cultivating was rather laborious (little mechanized) and unprofitable, and on local market it was easier to find rice from other provinces with better quality at reasonable prices. This is also because that local people were migrating to cities for better job opportunities, and the remaining farmers were more willing to cultivate more profitable crops like kiwifruits.

Figure 41. Abandoned rice paddies in Sanzhongyuan Villagers Group of Hongaitou Village. © Y. OU (2018)

Figure 42. Regenerated agricultural ecology in Dongshilin Village. © Y. OU (2018)

In 2017, the Villagers' Committee of Dongshilin Village, through land operation right transfer and crowdfunding, reclaimed 20 ha of abandoned rice paddies. To better organize the cultivation and management, it established a Rice Professional Cooperative, within which 26 households are in economic difficulty. Besides the land subcontract fees they receive from the Villagers' Committee, they are also offered with priority job opportunities. In order to improve the rice quality, the cooperative has introduced a high quality rice cultivar instead of the endemic one. Considering cultivation techniques as equally important to improve the quality, it has both turned to villagers who were experienced rice cultivators and studied their knowledge and techniques, but also received technique guidance from the Agricultural Technology Center of Meixian County and also experts in water conservation. In addition, the cooperative has

improved the agricultural ecology by reasonably planting bulrushes and introducing aquaculture like crayfish and mitten crabs. While bulrushes help purify water, the waste from the aquatic animals serve as organic fertilizer for the rice. The rice paddies, as agricultural wetlands, are also home to wild birds like egrets, pheasants and mallards, which have been seldom seen in the past years and now are coming back as the agricultural ecology has been considerably improved (Fig. 42). The Water Resources Bureau of Meixian County has also regenerated about 23.3 ha of abandoned rice paddies on the dried river bed of Weihe River close to Changxing Township, as an experiment of river management by means of agricultural wetlands (Fig. 43).

6.1.2. Reclamation of Abandoned Vineyards in Sant'Ilario

The Locride is well known for its long history of viticulture and olive growing. However, as the territory has seen strong outmigration over the past decades, many historical vineyards and olive groves became abandoned. This has brought about multiple consequences, often negative, such as hydrogeological calamities (fire, landslides, soil erosion, etc.), landscape mutation and loss of traditional knowledge (such as techniques related to the construction of dry stone terraces) (Fig. 44). Maremonte, as part of a property originally consisting of over 160 ha, was one of those abandoned lands. It remained completely abandoned for years until purchased by a Canadian entrepreneur, who then established the winery and agritourism company "Casale li Monaci". The property has much historical significance, as it was one of the first of the early Condojanni and Sant'Ilario vineyards, olive groves and sheep farming areas. The company is named "li Monaci" in memory of its history as the property used to be the site of the Franciscan Monastery under the same name.

Since the opening of the company, the vineyards and olive groves at Maremonte, about 10 ha, have been completely regenerated (Figg. 45-46). To preserve the historical significance that the land embodies, mainly endemic vine varieties were planted, such as Gaglioppo, Greco Nero, Magliocco and Calabrese, though foreign varieties like Cabernet and Sauvignon Blanc were also introduced. During the regeneration process, remains of historic constructions were preserved. In terms of landscaping, new constructions have respected the overall landscape, thus helping preserve the spectacular, unobstructed views of the Jonian Sea and surrounding hillsides. The regenerated vineyard landscape has also maintained the traditional *casale* (a type of farmhouse typical to Calabria), a key element in traditional agricultural landscape in Calabria. As the company also deals with agritourism, the regenerated landscape, with its rich cultural and landscape values and modern amenities, is fundamental to offering a unique, characteristic winery and agritourism experience.

"Casale li Monaci" adds value to its products and the regenerated agricultural landscape by extending its industrial chain. Currently, its operation covers all the three industrial sectors, from cultivation and livestock farming to processing

such as wine and cheese making, and finally agritourism which uses its own produces (own fresh organically grown and seasonal produce, and own raised pork, chicken, lamb and beef) and products. It also offers diversified tourism products and therefore satisfies different touristic needs.

Figure 43. Regenerated rice paddies in the Weihe River riparian areas by the Water Resources Bureau near Changxing Township. © Y. OU (2018)

Figure 44. Abandoned olive groves in dry-stone terraces near Portigliola. © Y. OU (2018)

Figure 45. Regenerated vineyards landscape facing the Ionian Sea in Maremonte by the agritourism company "Casale li Monaci". © Y. OU (2018)

Figure 46. Regenerated citrus orchard landscape in Maremonte by the agritourism company "Casale li Monaci". © Y. OU (2018)

6.1.3. Reclamation of the Abandoned Confiscated Arable Lands

Arable land abandonment in Calabria is not only due to depopulation or the tertiarization of rural areas, but also the post-confiscation abandonment, an aftermath of the mafia culture. The social cooperative "Valle del Marro – Libera Terra" tells a difficult yet successful story of how the latter situation can be overcome.

The cooperative, based in Polistena and founded in 2005, has reclaimed and currently cultivates about 100 ha of arable lands confiscated from the mafia, assigned by municipalities for social purposes to the cooperative through free loan. The cultivated lands are located in flat and hilly areas particularly suitable

for agriculture in Gioia Tauro, Oppido Mamertina, San Procopio and Taurianova. Before the passing of the Law 109/1996, arable lands confiscated from mafia were legalized as properties of the municipality. Due to the absence of supportive legislation and policies, most of the confiscated lands in Calabria were left in a sheer state of abandonment. The scenario of extended abandoned lands for years as a striking visual stimulus, a "rural blight", has made local people lose hope for a positive change. This indirectly contributed to the persistence of the mafia culture and power: the abandonment as a visible warning of potential mafia intimidation, due to which local people continued to "respect" the mafia power rather than challenging it. A real change came with the passing of the Law 109/1996, a fruit of a nationwide petition initiated by the Italian non-governmental association Libera that collected one million signatures. This law allows reusing of the properties confiscated from crime organizations. Together with the Law 381/1991 on "Discipline of Social Cooperatives", this Law has created a crucial framework for enabling reusing of abandoned properties. It is right under the support of this law that the cooperative "Valle del Marro" was able to be created[65].

Indeed, it is nothing easy to regenerate the agricultural landscape on the lands confiscated from mafia. The early years of the operation were especially difficult for the cooperative, as the mafia culture had long affected local people's way of thinking and behavior in daily life. A major difficulty in regenerating the agricultural landscape is due to mafia forces. The cooperative has perpetually suffered from the mafia's intimidation, to which it has always resisted. For example, in 2017, an arson, the sixth intimidation act of the year, destroyed a century-old olive grove in San Procopio, which had been abandoned and was reclaimed by the cooperative in 2009[66].

Another major difficulty was finding farmers who were willing, or more precisely "daring", to cultivate the reclaimed lands. Truly, sociocultural change would never occur overnight. To make a breakthrough, besides strong and decisive institutional intervention, local people's clear choices of refusal to the mafia culture, especially in the exercise of economic activities, are critical to disintegrating mafia's dominance on the territory[67] (Fazzari 2018). In response to this "civic inaction and unconscious accomplice", the cooperative adopted an incrementalist approach: starting with regenerating a small parcel of the degraded agricultural landscape to generate perceivable changes to help foster the very tendrils of trust and cooperation between the cooperative and local people. With time, positive landscape changes, from abandonment to

[65] The cooperative was created also under the initiative of Libera and the Diocese of Oppido-Palmi, and with the support of the Policoro della Cei project.

[66] See Mira, A.M. (2017). "Intimidazioni alla cooperativa Valle del Marro: a fuoco l'uliveto". Retrieved from <https://www.avvenire.it/multimedia/pagine/video-valle-del-marro-sesta-intimidazione-cooperativa-anti mafia>, accessed on July 30, 2018.

[67] Serve un intervento forte e risolutivo da parte delle Istituzioni in tutte le sue articolazioni, ma servono anche scelte nette di rifiuti della cultura mafiosa da parte dei cittadini, in particolare nell'esercizio dell'attività economica.

recultivation, occurred, making local people start to understand the cooperative's work and become supportive for it. Its product and work ethics distinct from the mafia one have also played a significant role in gaining local people's trust and cooperation.

6.1.4. Urban Park Project

Agricultural landscapes, as a living system, have to be regenerated, as the olive grove landscapes in the plain of Gioia Tauro and Rosarno demonstrate. This landscape is in crisis because above all its core components, century-old olive trees, are aging just like the local rural population, not to mention about the socioeconomic restructuring that has drastically changed the agricultural production. In the regeneration of agricultural landscapes, an integrated approach that highlights territoriality, homogeneity (in the Italian context "homogeneity" refers to landscape continuity and overall harmony) and rural-urban linkages has been adopted. This can be well illustrated in the Urban Park project (progetto del Parco Urbano). As a project within the Integrated Plans for Rural Areas (PIAR, Italian abbreviation for *Piani Integrati per le Aree Rurali*), this project has integrated the principal landscape elements present in the entire area of the PIAR and well defined interventions at the territorial level:

- the creation of urban parks capable of interacting with the territory and guaranteeing its identity and quality;
- the restructuring of rural buildings and villages, connected to a system of the agricultural process, aimed at didactic tourism;
- an urban and public space able to create, within the territorial peculiarities, a unitary image system of the district landscape (Morabito *et al.* 2008).

With this territorial perspective, the Urban Park project has turned out to be the most suitable instrument for the enhancement of the rural peculiarities of the entire area of the Integrated Projects for Rural Areas (PIAR) (Morabito *et al.* 2008). Through the design of diverse thematic itineraries, the project has created a network of parks with various themes related with agricultural/rural landscapes and of different sizes according to necessity and feasibility. Incorporating the agricultural tradition and territorial context, typical themes include olive groves, citrus, rural culture, nature museum, didactic landscape and sea. The network has also included existing cultural institutes. In so doing, these parks have helped manage landscape change, preserve traditional knowledge and values and demonstrate territorial identity, while giving new functions to the landscape. This is particularly important for traditional agricultural landscapes like the century-old olive groves, whose productivity (and quality of the produce) is nowadays largely diminished. Their regeneration in the form of networked urban parks with diverse themes and functions have paved the way for innovative and diversified economies. As they are not only home to the century-old artificial landscapes, but also the provider of essential

materials for livestock, agriculture and local handicrafts and other economic activities. This is crucial for the maintenance of the agricultural landscapes on the one hand, and meanwhile for local economic development on the other. As a result, it has been possible to gain a vital balance between landscape preservation and economic development.

6.2. Revitalizing Cultural Heritage

Cultural heritage, both material and immaterial, tends to be abandoned or damaged due to changing life and production patterns and alienated new construction in the process of rural development. The loss of cultural heritage engenders not only rural landscape fragmentation and mutation, but also undermines territorial culture and identity. Therefore, in the regeneration process of the built landscape, it is necessary to revitalize cultural heritage so as to preserve local characteristics and recover a sense of continuity amidst socioeconomic transformations. In Meixian County, as mentioned above, immaterial cultural heritage like traditional knowledge and values have been revitalized in the implementation of the Beautiful Countryside Construction policy. As for material cultural heritage, it has played a significant role in regenerating the built landscape, often in the form of historical constructionism. This proves to be a major difference in the motivation of built landscape regeneration between the Chinese context and the Italian one: while the former is largely interventional (constructive), the latter is mainly preventive (preservative). For this reason, reuse and repurposing are the most popular tools for built landscape regeneration in rural Italy, though they have also started to be experimented in rural China.

6.2.1. Historical Constructionism

Practically speaking, it is nothing new that in rural China, heritage preservation and display are popularly viewed by many as powerful tools of modernization and development (Oakes 2012). Yet, displaying culture and heritage as a visual representation of the quality of rural modernization and development has long proved to be problematic. A common phenomenon is that, while genuine cultural heritage remains neglected and lacks effective protection and value-adding (Fig. 47), major efforts are made to construct new “historical” buildings (Fig. 48), as can be seen in the ongoing implementation of the New Rural Construction policy in Meixian County. This phenomenon can be termed as “historical constructionism”, which refers to the construction of buildings or architectural elements, with modern techniques and materials, in a certain historical style that shows no territorial characteristic or belongs to no specific dynasty. What the constructed “historical” building concerns is nothing but an imagery, rather than the continuity of territorial characteristics.

Figure 47. Abandoned and degraded historic commercial buildings in Changxing Village. © Y. OU (2018)

Figure 48. Modern archway in unreadable historical style at the entrance of Xiaoligou Village. © Y. OU (2018)

Regeneration is a vital tool to maintain rural built environment, traditional style and territorial characteristics (Liu 2010; Lin and Cai 2012). At present, "historical" construction is the major "regenerative" tool for cultural heritage revitalization in Meixian County. Undeniably, the introduction of "historical" buildings and architectural elements in villages seems to be necessary to help them regain a sense of history as most of them have lost their historical landscape following rapid rural economic development. "Historical" construction, especially that of ornamental architectural elements in classical style like landscaping walls, does have embellished the built landscape (Fig. 49). According to the questionnaire survey on local people's perception of the "Beautiful Countryside Construction" in their villages that the author undertook in 22 villages in Meixian County, 67.09% of the 237 respondents asserted that they perceived the village where they dwelled as "beautiful".

However, "historical" construction as a "regenerative" tool is controversial. The design of the "historical" buildings and architectural elements is largely out of context and based on a stereotyped, generic understanding or imagination of traditional architecture rather than on the vernacular architecture peculiar to the territory. The landscaping walls, for example, which are iconic in classical Chinese gardens or wealthy residences and used to be uncommon in rural areas in Meixian County, have been widely constructed. Indeed, the only objective of "historical" construction is to regenerate a historical-looking, beautiful built landscape that is standardized and rationalized, rather than vernacular and diverse. As a result, "historical" construction sees only a process of mimicry rather than creative recreation that integrates local traditional knowledge, techniques and characteristics. The lack of creative recreation accounts for why the constructed "historical" elements in different villages tend to be homogeneous all over the county. A worst situation is, just to achieve an overall historical landscape effect *visually* that is "beautiful", an architectural style typical to other regions, often partially, is introduced (Fig. 50). Such a landscape

regeneration method ignorant of local characteristics and cultural identity essentially does not regenerate the *genius loci* of the built landscape, but just transplant a beautiful yet alien physical appearance. Besides, , in the name of heritage revitalization, such a method actually does not contribute to cultural promotion, but only leads to a "cultural illusion" which misleads both local people's and visitors' understanding of the territorial identity. Therefore, a situation of fallacy occurs: while genuine cultural heritage continues to vanishing at a fast pace, the fake one thrives.

Figure 49. Landscaping walls in Hedi Village. © Y. OU (2018)

Figure 50. Historical reconstructionism in non-local style in Zengjiazhai Village. © Y. OU (2018)

6.2.2. Repurposing-based Reuse

The reuse of historical or abandoned buildings in the Locride and Grecanic areas concerns in most cases abandoned private buildings of public ownership. The reuse is mainly based on repurposing, namely, reuse while preserving the authenticity and integrity of a historical building for a different purpose or purposes, on a long-term basis, either without alteration or with reasonable interior alteration to make it more suitable for the new need. Those buildings are often reused for tourism or sociocultural purposes. As a regeneration tool, repurposing is characteristic of functional adaptation and diversification.

In Pentedattilo which became completely uninhabited in the mid-1960s, a long course of preventative and interventional preservation since the 1980s initiated by young people and associations has prevented the village from continuing degrading. Today, tourism plays a pivotal role in the revitalization of the "ghost village", adding value to its regenerated physical fabric. Serving the need of tourism development, the repurposing of its regenerated built heritage is mainly aimed at promoting the artisan products of the Grecanic area. This not only helps maintain the integrity of its built environment, but also creates a synergy between the economy and the culture, and between the material and the immaterial of the territorial identity. Many of its abandoned houses were

restored and repurposed as artisan laboratories and shops, most of which are operated by grassroots associations. All handicrafts bear strong territorial identity. There is a laboratory dedicated to artisan products, both traditional and innovative, based on bergamot orange[68]. Another laboratory of wooden handicrafts proves to be highly innovative, in that it serves as a multifunctional space: artistic and pedagogic laboratory, ethnographic museum and tourism information. In addition to reuse and repurpose, cultural activities also help revitalize the village. The two most influential ones are the *Palearíza* Festival every summer and the Pentedattilo Film Festival, an international short film festival between August and September.

Another good example of the repurposing-based reuse is the "*Borgo dei Mestieri* (Village of Crafts)" project executed in Bova. Proposed by the Municipality of Bova and financed by the Calabria Region under the measure 3.2.3 "protection and redevelopment of the rural heritage" in the framework of the axis 3 multi-measure announcement of the RDP 2007-2013, the project has pronounced sociocultural purposes, though it also has a positive impact on tourism. This project was aimed to redevelop a part of the historic center of great value yet heavily degraded. Therefore, an experiential didactic path was created, which is composed of three artisan workshops aimed at recovering ancient crafts, including wood and weaving, glass and ceramics and bread making, and handing them down to local young people. Major work undertaken included restoration, structural upgrading and repurposing of a building in abandonment owned by the municipality, and creation of special training courses. The three workshops are not only places to experience and learn traditional handicrafts, but also an "empathetic space" that enables visitors to retrace rural life in its centenary evolution through images and objects. Three museums have been established, the Museum of Greek-Calabrian Language (*Museo della Lingua Greco-Calabra*) "Gerhard Rohlfs", the Museum of Paleontology (*Museo di Paleontologia*) and the Costume Museum of Magna Graecia (*Museo del Costume della Magna Graecia*). The former Hospital of the Poor (*Ospedaletto dei Poveri*) was repurposed as an emergency medical service center (*polo di continuità assistenziale*) and social and health services for the Grecanic area.

Besides sociocultural and tourism needs, the reuse also has been driven over the past decade by the immigrant and refugee issue in the Locride area. A typical example is Riace, which has been a center of immigration policy from 2004 until today. Since the refugee crisis in Europe, it has gradually earned an international fame because of its innovative approach to dealing with this challenge. In 2016 only, more than 800 immigrants were hosted by the local community, which helped revitalize the town itself, which, like many other MHCs, had suffered from continuous abandonment due to aging population and depopulation since the 1980s. To accommodate the immigrants, Riace developed a project of

[68] Bergamot orange is a cultural symbol of Reggio Calabria. Its production mostly is limited to the Ionian Sea coastal areas of Reggio Calabria.

hospitality called Global Village (*Villaggio Globale*). Through the project, now completed, more than 20 abandoned houses were reclaimed, providing a total of more than 100 beds. Through this project, the need of social integration and urban regeneration has been integrated. It is worth noting that the Global Village is a very innovative project, in that it is not only aimed at creating housing for immigrants, but also generating new jobs. A typical design based on mixed use, Global Village, besides housing, also repurposed some of the ground-floor rooms as bars, taverns, shops and artisan laboratories (Fig. 51). The shops, which sell different kinds of handicrafts, have contributed to revitalize the historic centre of Riace, stimulate local economic activities and allow immigrants to learn local skills necessary for making a living. This needless to say is critical to the integration of immigrants at social and economic levels[69].

Figure 51. Mural painting and "Global Village", entrance arch to the shops. © A. Errigo (2017)

Figure 52. Exterior of the Village History Museum of Hedi Village and the square. © Y. OU (2018)

In Meixian County, reuse is an emerging approach to regenerate abandoned buildings in rural areas, mostly public ones built in the 1960s-1970s. These buildings nevertheless have important historical significance as they were all witness of political movements of far-reaching influence and rural transformations. The reuse of the remaining historical buildings, i.e. built before the founding of the P.R.C. in 1949, is seldom practiced, which mostly are in a state of abandonment and poor conservation. The reused buildings are generally repurposed according to sociocultural and economic needs. Some good examples include the Village History Museum, the Nursing Home and the E-commerce Center of Hedi Village (Figg. 52-54), which are all the result of regenerating and reusing abandoned public buildings.

The building that hosts the museum, built in the traditional brick and wood structure in the 1960s, was used successively as office of the Villagers' Committee, shop and then the village clinic, and became abandoned in the 2000s. Considering it as a "place of memory", the Villagers' Committee decided to

[69] This paragraph has referred, with necessary adjustments, to the Author's article coauthored with A. Errigo (2017) "On Emerging Civic Spaces' Role in Innovative Local Socio-Economic Development, Riace as a Case", presented at the 13th International Postgraduate Research Conference, Salford, UK.

change it into a history museum and therefore implemented restoration, which was more costly than building a new building. The building's exterior style and the overall structure were preserved while the interior space restructured. The E-commerce center is housed in the old theater just next to the museum. The theatre was built during the "Cultural Revolution" and became abandoned in the 1990s just like so many similar theaters all over Meixian County. The restoration of the theater itself has followed the same approach as that of the museum, while its annexe space has been transformed into warehouse and refrigeration storage rooms. The repurposing of the theater as an e-commerce center, besides making use of its vacant space, is very beneficial to local economic growth by curtailing the supply chain which enables local people to obtain a higher price with the P2C (producer to consumer) selling mode.

As for the Nursing Home (in Chinese, *xinfu yuan*, literally the "courtyard of happiness"), open to elder people of Hedi Village living alone or whose children are working in cities, it has reused the building of the Primary School of Hedi Village behind the museum. Different from the museum, the facade of the original two-storey building, built in brick-concrete structure in the 1970s, was moderately embellished with traditional Chinese ornamental elements. The interior decorations have reproduced the old vernacular style popular in Meixian County and the facilities like bed have maintained traditional style and functions taking into full consideration of elder people's living habits. The ground in front of the main building has been transformed into a garden with landscaping interventions that integrated the original vegetation and recreational facilities.

Figure 53. Abandoned primary school repurposed as Nursing Home of Hedi Village. © Y. OU (2018)

Figure 54. Theater repurposed as E-commerce Center of Hedi Village. © Y. OU (2018)

Some other good examples are the reuse of the theater of Hengqu Village, which has been repurposed as a *jiafeng guan*, a hall dedicated to the demonstration of traditional and contemporary family ethos (Fig. 55), the reuse of the theater of Xizhai Village as a ceremony hall (wedding for example), the reuse of the old Villagers' Committee office building of Dali Village as a tourism facility integral

to the retreat Gutai Manor (Fig. 56), the reuse of the Sent-down Youth[70] Residence in Wanxia Village as residential building for the relocated population (Fig. 57), etc.

Figure 55. Repurpose of the theater of Hengqu Village as the Hall of Family Ethos. © Y. OU (2018)

Figure 56. Repurpose of the old Villagers' Committee office building of Dali Village as a tourism facility. © Y. OU (2018)

Figure 57. Reuse of the Sent-down Youth Residence in Wanxia Village as residential building for the relocated population. © Y. OU (2018)

Figure 58. Mural painting conveying the culture of filial piety in Hedi Village. © Y. OU (2018)

6.3. Regenerating Living Environment

6.3.1. GEOCI Movement in Meixian County

Meixian County is one of the five pilot counties defined by the Provincial Government for the implementation of Beautiful Countryside Construction. Since 2011, the municipality of Meixian County has implemented the GEOCI movement, a strategy to improve the living environment in rural areas and more importantly, coordinate urban and rural development. The movement, intervening mainly at the landscape level, undertakes five major actions, namely,

[70] The sent-down youth (also called *zhiqing* in Chinese) were the young people who—beginning in the 1950s until the end of the "Cultural Revolution", willingly or under coercion—left cities to live and work in rural areas as part of the "Up to the Mountains and Down to the Countryside Movement 上山下乡运动".

Greening, Embellishing, Optimizing, Cleaning and Illuminating. Greening is aimed at greening both the public spaces in the village and the flanks of inter-village roads. Embellishing is aimed at beautifying the built landscape with major interventions like mural paintings, traditional landscaping, etc. (Fig. 58). Mural paintings are also used in the Locride area to embellish the living environment (Fig. 59). Optimizing concerns the upgrading of the amenities and services that the rural space offers, like playground, recreational areas, social care, etc. Cleaning regards disposal of domestic sewage and garbage, clearance of huddles of firewood, and popularization of the use of alternative energy like clean energy (natural gas) and renewable energy (biogas and solar energy). As for illuminating, it deals with the public lighting.

The implementation of the GEOCI movement has been largely top-down, not only in terms of the master plan making, but also the hierarchical accountability at the municipality level. County-level leaders have been directly responsible for 8 townships and key villages, all government departments for all the 123 villages, and 551 deputy-level and above civil servants for all the 881 villagers' groups. Local villagers' committees have implemented the GEOCI based on its own conditions. There are both pros and cons regarding the GEOCI movement. Positively, it has greatly improved over a short period of time local people's living conditions, by offering better living environment and beautifying the overall built landscape (Fig. 60). Besides, it proves to be quite efficient in action, driven by the hierarchical accountability at the municipality level.

However, just like a double-edged blade, in pursuit of efficiency for immediate perceivable outcomes, some of the interventions were hasty and lacked well-thoughtfulness, ignoring the fact that regeneration is desirably a long-term, incrementalist process. Also, due to a value orientation towards the urban both in terms of facilities and landscape, the GEOCI has standardized rural landscapes which by nature are rustic and spontaneous. A typical manifestation of this rationalization is, most of the greening practices, while making the villages greener and cleaner, have merely pursued a "beauty of order" rather than reinterpreting the "beauty of irregularity" typical to traditional rural landscapes. This explains why uniform, standardized, ordered landscape trees and trimmed bushes prevail in the regenerated built landscape, instead of a randomly composed *natural* vegetation (Fig. 61-62). Due to an obsession with rationalized visual beauty, greening practices have ignored daily functionality that connects the form and content of a certain beauty. For example, shady trees, which could help cool down the temperature in very dry, hot summer weather common in Meixian County, were hardly planted within the village. This marks an utter breakaway from the tradition, as shady trees used to be seen in front of the house of each household and offer public spaces for daily gathering up. In addition, the participation of local people was limited in the implementation phase, while in most cases excluded from the planning and decision-making processes. This more often than not increases the risk of creating a mismatch

between the realized project and the actual needs of local people. Such a mismatch tends to not only refrain them from appreciating the project, but more importantly makes them reluctant to make best use of it and contribute to its management. Fundamentally, the above-mentioned limitation of the GEOCI movement suggests a lack of capacity and related knowledge at the grassroots level, and insufficient attention and investment (both financial and human capital) at the municipality and higher levels.

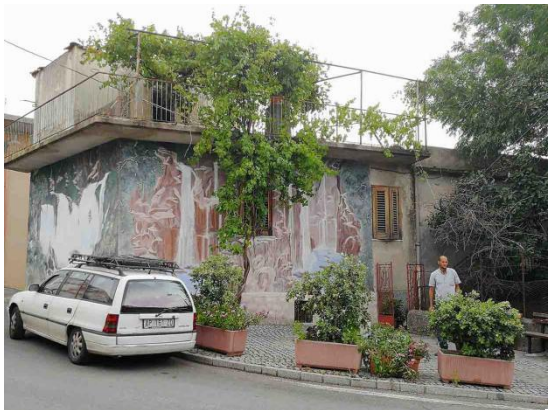

Figure 59. Little square and mural paintings in Samo. © Y. OU (2018)

Figure 60. Improved living environment in Hedi Village. © Y. OU (2018)

Figure 61. Urbanized hedges and vegetation in Quliubu Village. © Y. OU (2018)

Figure 62. Standardized greening in Huaixi Village. © Y. OU (2018)

Taking Hedi Village as an example, it is the cleaning which has been the most challenging task to fulfill. This is because it has directly touched the deep-rooted traditional way of life of local people, which often means major obstacles to efforts aimed at changing it. Before the cleaning action, the Villagers' Committee defined two things unfavorable to the "visual beauty" of the village: first, every household deposited, by custom and for their own convenience, firewood and various crop straws outside of their front courtyard walls facing the principle road. Second, most of the households had their toilet (a sort of squat toilet without flush) outside of the gate. The two not only undermined the "visual

beauty", but also provoked hygiene and public security issues. For example, the firewood huddles were prone to catch on fire. To clear them, the Villagers' Committee formulated two key principles: collective interests are higher than personal ones, and serving the collective with whole heart and equity. Then, it convened an assembly to promote the action and mobilize all villagers, whose feedback were seriously taken into account. Next, a working group composed of all grassroots leaders and party members was set up, which determined spots for depositing firewood and formulated the toilet demolition and modernization plan. The new toilets were located in the backyard and constructed with flush and waste disposal facilities like anaerobic biogas tank. This not only improved the hygienic conditions, but generated both clean, renewable energy for domestic use and organic manure compost for kiwifruit cultivation. Besides, the cleared space was later used for the greening of public spaces. While trees, bushes and flowers were planted, creating a small garden for each household, some households also used the space as a vegetable garden. Most of the funding for implementing the GEOCI, to part of which the secretary advanced his own money, was collectively raised by the Villagers' Committee. According to the secretary, whom the author interviewed, at the grassroots level, three factors are decisive to achieve an effective action with success, namely, support from the collective, funding, and concentric and cohesive leadership.

6.3.2. Public Space Regeneration

The quality of the built environment in general has multidimensional impacts on the rural society, influencing local people's social identification process, well-being and economic growth. Public space, as shared social, economic and cultural habitat for communities and a key component and determinant of the quality of the built environment, now draws increasing academic attention in urban studies. Public space is widely considered as an indicator to measure the quality of physical transformations (Bevilacqua *et al.*, 2013). It is also recognized that public space has a significant impact on the community, as its quality determines the state of culture. This is because the physical representation of "culture" is often automatically reflected in the environment and properties that surround the cultural facility or public space (URBACT 2006). Therefore, the new urban planning is focused on priorities such as creation and regeneration of public space, as specific areas of identity, social exchanges and life (Baycan *et al.* 2012).

Public space is as important for rural areas as for urban areas, although currently related studies on a rural setting still need furthering. With socioeconomic transformations, new public spaces need to be created and the existing ones need to be regenerated to satisfy people's changing sociocultural needs, which tend to be more diverse than before. However, creating a lively public space is nothing easy, as place-making is not a natural result after its creation. It is not uncommon that the newly created public space is merely a public open space rather that a living space that generates *publicness* fundamental to the

socialization and interaction among people as well as the co-creation of values and knowledge.

According to the questionnaire (Appendix 2), 44.4% of the respondents from the Locride area claimed that public space is one of the public amenities they needed the most. In Riace, to make sure that different ethnic groups can interact and socialize with each other, public space has been a focus in the regeneration of the historical center. Besides the construction of new public spaces, such as an open-air arena where performances and citizen meetings take place (Fig. 63), major efforts were made to regenerate some of the existing squares, which were rehabilitated with considerations of social integration promotion (Fig. 64). In Bova where abandonment poses a major threat to the socioeconomic fabric and meanwhile immigrants are coming to occupy abandoned houses, a public space was created by repurposing the ground floor of the building reclaimed through the *Borgo dei Mestieri* project into a public oven (*forno comunitario*). The original objective was simple: to promote interaction and socialization among all local residents. However, this innovative public space inspired by local traditions has generated multiple benefits including historical center revitalization, social integration promotion and also immaterial heritage revitalization given bread-making is a renowned tradition in Bova. The uniqueness of break-making is, it has preserved Orthodox tradition of marking the loaf with the cross before baking and also family bread-making related to Greek rituals.

Figure 63. Theatre of Riace for social integration promotion. © A. ERRIGO (2017)

Figure 64. A small square in the historic center of Riace transformed into a stage decorated with multi-ethnic paintings. © A. ERRIGO (2017)

Facing rapid socioeconomic transformations, rural areas in China generally have an urgent need for contemporary public space. According to the questionnaire (Appendix 1), 55.7% of the respondents claimed that public space is one of the public amenities they need the most. “Public space” used to have quite different morphology in traditional rural China from the ones common in Italy (Fig. 65). A major distinction is, “square” as a result of rationalized planning and center of

community life was absent in rural China. Instead, traditional public spaces include temples, open-air mill with stone grounder, public well, river banks where women do the laundry, the space under century-old trees, etc. These public spaces, most of which related to production activities and daily life, are often a result of spontaneous, random formation: any space in the immediate environment can be a public space. Over the past few decades, these public spaces have been either disappearing or degrading. For example, most of the century-old trees have been cut down for various reasons while few villages have maintained the traditional habit of planting trees in front of the house. Public well and open-air mill no longer exist or in use. Therefore, the creation and regeneration of public spaces is one of the major interventions in the Beautiful Countryside Construction.

Figure 65. A typical public square in Candojanni. © Y. OU (2018)

Figure 66. Public garden in Doujiabu Village. © Y. OU (2018)

Figure 67. Central square in Dawan Village. © Y. OU (2018)

Figure 68. Public garden in traditional style in Xishilin Village. © Y. OU (2018)

According to the author's site visits, most of the public spaces are newly created in the form of little squares and public gardens with the major function of

recreation and cultural display (Figg. 66-68). Their design, due to a centralized planning, is similar one to another and shows clear influence of urban public space. This explains partially why some newly created public spaces are not appreciated by local people, which suggests that on the one hand, a people-centered approach is needed to enable full local participation in the planning and decision-making. On the other hand, more attention needs to be paid and more efforts be made to integrate local characteristics into public space creation. On this regard, *laochi* revitalization proves to be a good example. *Laochi* revitalization contributes not only to the regeneration of natural landscape by improving rural environment and restoring rural hydro-ecological system, but also creates a new public space. As an organic landscaping component, *laochi* is well integrated into the rural fabric and located in immediate proximity to local community (therefore in the center of rural life) (Figg. 69-70). The natural landscape of *laochi* serves as an empathetic space for the presentation and interpretation of folkloric culture and local identity, transforming it into a cultural landscape. This cultural landscape results from a harmonious blending of the natural and the cultural. Through the provision of various amenities necessary for cultural and social activities, *laochi* becomes a livable public space that is relevant to the rural community's actual social and cultural needs. In order to beautify villages and improve living environment and quality of life, cultural pathways, cultural squares, fitness space and artistic works are added in the surrounding areas. This makes *laochi* a vital public space where villagers are willing to socialize and relate to each other, and carry out outdoor recreational and fitness activities.

Figure 69. *Laochi* as a new public space in Tongzhai Village, Qishan County. © Y. OU (2017)

Figure 70. *Laochi* as a new public space in Changxing Village. © Y. OU (2018)

6.4. Conclusions

Agricultural landscapes face the risk of degradation due to abandonment in both Meixian County and the Locride area, although it is a more common phenomenon in the latter. Their regeneration has been aimed at different goals and driven by different forces, and by means of the reclamation of abandoned lands and new cultivation techniques. In Meixian County, the regeneration,

largely a public initiative or private behavior (e.g. land operation right transferred to cooperatives), is meant to either gain economic benefits with more efficient land use or recover traditional agricultural landscape and thereby preserve the characteristics of local landscape. At the meantime, the ecology is expected to be restored and improved. By contrast, degraded agricultural landscape is regenerated mainly by private and civil forces in the the Locride and Tyrrhenian areas. The major goals are to gain economic benefits and promote social services and community building, as the case of "Valle di Marro" shows. In Reggio Calabria, there has been an emerging innovative approach that, as the Urban Park Project demonstrates, regenerates the agricultural landscape by creating linkages between the rural areas and the adjacent urban districts.

The revitalization of cultural heritage is critical for regenerating the built landscape while preserving local characteristics and the linkage between tradition and modernity. The reuse of historical or abandoned buildings in the Locride and Grecanic areas concerns in most cases abandoned buildings of public ownership. The reuse is mainly based on repurposing, which as a regeneration tool, is characterized by functional adaptation and diversification and serves mainly sociocultural and tourism needs, as well as the emerging need of the socioeconomic integration of immigrants and refugees. In Meixian County, at present, "historical" construction is the major "regenerative" tool for cultural heritage revitalization. Undeniably, the introduction of "historical" buildings and architectural elements in villages seems to be necessary to make them more "beautiful" and help them regain a sense of history as they have lost their historical built landscape following rapid rural economic development. However, "historical" construction at present sees only a process of mimicry rather than creative recreation that integrates local traditional knowledge, techniques and characteristics. It therefore fails to regenerate the *genius loci* of the built landscape. This reflects the lack of capacity and related knowledge at the grassroots level, and insufficient attention and investment at the institutional level. After all, regeneration is desirably a long-term, incremental process, which has however become more or less efficiency-oriented for immediate perceivable outcomes during the built landscape regeneration in Meixian County.

Reuse is an emerging approach to regenerate abandoned buildings in both case study areas. Sociocultural needs are the principal reasons defining the repurposing of these buildings. However, due to institutional constraint, municipalities are not able to reclaim abandoned buildings of private ownership. This suggests that the existing property law needs to be reformed to create more favorable, flexible conditions for reclaiming abandoned buildings of private ownership for sociocultural needs.

Another important aspect of the built landscape regeneration concerns the regeneration of living environment. This is especially significant in rural China where there is an urgent need to improve the quality of life of the rural population so as to curtail urban-rural disparities. Within the framework of the

New Rural Construction policy, the GEOCI (Greening, Embellishing, Optimizing, Cleaning, Illuminating) Movement in Meixian County, by integrating interventions in the environmental and landscape aspects, has greatly improved the living environment in rural areas. It shows the importance of the grassroots leadership and cohesion among the collective. However, due to a centralized planning and lack of capacity at the grassroots level, the regeneration has been focused on the "physical beauty" instead of local characteristics and *genius loci*, which has led to a rationalization and urbanization of the rural landscapes (e.g. trimmed landscape trees and bushes).

Public space is integral to the living environment and determines its quality and livability. Its regeneration, in Meixian County's case the creation, plays an important role in meeting changing sociocultural and even economic needs. The regeneration of public space in the Locride is mainly a result of redevelopment of the existing public spaces (e.g. rehabilitated squares in Riace, or of a creative reuse of abandoned buildings (e.g. Public Oven in Bova). Regeneration in both cases was a public initiative with the collaboration of social organizations and aimed at responding to new sociocultural needs like community culture building and social integration of immigrants. In Meixian County, new forms of public spaces inspired by urban ones, like squares, have been created and replaced traditional public spaces which were mostly spontaneous. This in some cases have resulted in the reproduction of formal public spaces that are ignorant of local people's living habits. As a result, such spaces in most cases fail to function as living spaces for socialization and interaction among people, which explains why they are public but generate no *publicness* and consequently not popularly accepted and used. This suggests a mismatch between the newly created public space and the sociocultural services it is expected to generate, a major defect of the ongoing New Rural Construction (Lin and Cai 2012). How to make sure the new public spaces can form a link between the physical space and the local people's daily life is therefore crucial for their functionality and utilization.

The ongoing New Rural Construction in China should serve as an opportunity for upgrading the built landscape, improving living environment, revitalizing heritage, fostering social innovation, and achieving a vital balance between material affluence and immaterial cultural-ethical progress and between form and content. This balance is crucial for shifting away from the predominant focus on "digital growth" and physical improvement, so as to help foster the "cultural and ethical progress" (Zhang 2006). To translate this concept into reality, the Beautiful Countryside Construction must differentiate itself from previous cultural display practices in the form of heritage protection and revitalization in rural areas. Therefore, it must, in the first place, avoid brutally complying with the far-reaching ideology of "Discard the Old and Cultivate the New 破旧立新" (*ibid*.). Second, it should recognize that construction of a beautiful countryside is not synonymous with "historical" construction to regain

the lost cultural heritage. Rather, it is aimed to revitalize the remaining one and reinterpret and pass on the value kernel that the local heritage embodies under modern forms, namely, to contemporize it. Third, it needs to integrate, with critical inheritance, the multidimensional agricultural heritage and Confucian and contemporary values into heritage revitalization. In other words, only by being rooted in local heritage and critically transmitting and discarding it based on contemporary needs will historical constructionism and heritage revitalization gain a meaning.

Chapter 7 Sociocultural Landscape Regeneration

7.1. From Alienation to Cultural Resilience

The regeneration of the sociocultural landscape poses such an essential question: how to reshape rural communities in a viable modern form? Rural areas, especially remote ones, often show distinct local identity and territoriality. As rural landscapes are essentially sociocultural formations, their changes at the morphological level always implicate simultaneous changes in the sociocultural landscape of the rural society. Often, changes in the demographic and sociocultural landscapes have accompanied economic transformations (Richard *et al.* 2011). Along the process of rural development, rural areas tend to experience inevitable erosion of their sociocultural fabrics rooted in the traditional agriculture, a shock due to the introduction of modern production and way of life. This is what Pretty (1998) calls "social costs of rural modernization". As a result, there may be gradual disintegration and ultimately disappearance of the traditional rural sociocultural landscape based on the traditional farming culture (Che 2010; Pretty 1998). In this regard, it needs to be recognized that on the one hand, rural development does not connote the replacement of traditional sociocultural fabrics by modern ones; and on the other hand, preserving the former does not mean excluding the latter. What is really important is to promote the integration of the two so that the traditional sociocultural landscape can evolve and be contemporized.

Rural landscapes, socially and culturally constructed, have been inextricably linked and reciprocally related to the biophysical environment (Richard *et al.* 2011); however, alienation largely undermines this linkage and relationship. The changing physical landscape and sociocultural landscape jointly encourage alienation. Indeed, the alienation of the transforming rural is visually spatial (Lin and Cai), but what is hidden behind is a process of social alienation. Socially, alienation at the individual level means that the sociocultural identity of the rural population tends to be lost or change into a new one when the characteristics and coherence of landscape is changed (Antrop 2004a; Palang 2006). At the community level, it refers to an adverse evolution of community culture, from one of close community bond and tight interpersonal relationships (high cohesiveness, trust, collaboration) to one of loose organization and decohesion (high fragmentedness, mistrust, self-interestedness) (Figg. 71-72). Spatially, alienation results from a significant loss or mutation of landscape elements that carry the traditional landscape identity due to socioeconomic transformations and environmental problems. As a consequence, people are not concerned with their immediate environment, and they do not identify themselves with the too-rapidly-changing post-modern landscapes (Palang 2006). A common phenomenon is, people see the landscape only visually but not *mentally*, and lives in the physical landscape without interacting or

experiencing with it.

The impacts of alienation, mostly negative, are multiple. First, alienation often leads to a loss of traditional knowledge and values as the linkage between people and the environment is cut off. Second, alienation lessens the chance of success of community-led economic development initiatives, due to a lack of social capital. Third, it affects people's wellbeing and social security, given a positive correlation between alienation and risk behaviors and a negative one between alienation and wellbeing and quality of life (Tomé *et al.* 2016). Last but not the least, alienation makes landscape management a more challenging task. This is because the endogenous mechanism grounded in traditional social norms and contracts which contribute to form a consensus on a collaborative management of natural resources and environment has given the way to exogenous forces such as political intervention and technical assistance. The agency of local population, as a collective, and their active participation therefore are more often than not scarce.

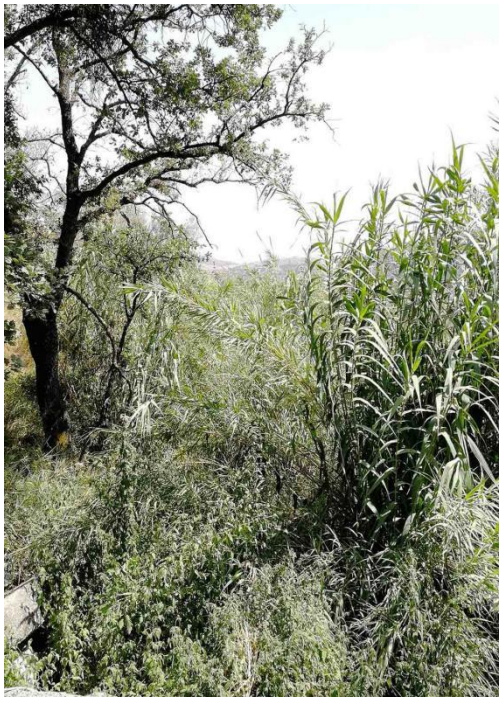

Figure 71. Poorly managed drainage ditch shared by several olive grove owners near Sant'Agata. © Y. OU (2018)

Figure 72. Residents located upstream of the ditch tend to heighten the foundation for better drainage and flood prevention to the detriment of their neighbors (Xiguan Village). © Y. OU (2018)

A typical consequence of alienation is diminishing social capital, which may lead to social problems. Social capital is not only important for the maintenance of the sociocultural landscape, but also for socioeconomic development. Social capital, as a special communal property including social norms and rules, value orientation, civic engagement, associational membership, high trust, reliability and reciprocity in social networks (Cooke and Wills 1999; Zheng 2011), is a

prerequisite for social innovation. This is because it is believed to be supportive for collective learning, cooperation, absorptive capacity and competitive advantage (Chuang *et al.* 2016). According to Zheng (2011), the loss or lack of traditional social capital accounts for the various social problems that have emerged in rural China today. The loss of traditional social capital and the accompanying unstoppable disintegration of traditional society will be bound to accelerate following continuous socioeconomic transformations driven by the deepening globalization and the further development of the commodity economy in rural areas. High levels of social capital within a community enable local people to coordinate their activities with the aim of achieving mutual benefits, increasing social cohesion and mitigating opportunistic behaviors. Given this, understanding and strengthening the relationships that local people have with each other and the place where they live as well as their perception of it prove to be of fundamental importance for the definition of effective strategies towards collective outcomes and common goals (Gobattoni *et al.* 2015). To this end, what is important is to form a collective vision among local people, to which the relationship-based social capital is indispensable.

Truly, the protection and management of rural areas against the negative externalities resulting from the urbanization process is crucial for achieving positive socioeconomic outcomes during the same process. However, this is only sustainable if rural people identify themselves with their rurality and share a collective vision that is rural-based (Chigbu 2012). Only through the development of a collective vision based on a genuine consensus of the local population on common objectives can a fragmented, multi-polar society evolve into an integrated rural network (Guarino *et al.* 2017).

Facing alienation's negative impacts on the sociocultural landscape and landscape management, reinforcing rural communities' cultural resilience appears to be a viable means to mitigate them. Cultural resilience, borrowed from the concept of "(socio)ecological resilience", describes "how cultural background (i.e. culture, cultural values, language, customs, and norms) helps individuals and communities overcome adversity" (Clauss-Ehlers 2010). Folke (2009) differentiates between "reactive and proactive resilience" of community. Reactive resilience enables a community to recover from certain socioeconomic or sociocultural adversities to its original state; while proactive resilience refers to the development of a portfolio of capital or assets to create opportunities for systemic change. Fusco Girard (2012) regards cultural resilience as "foundation of continuity" and "the internal energy, the inner force (or vitality) that allows the city to react to external forces, adapt to them, and conserve its specific identity in the long run, in spite of turbulent transformation processes…". A diversity of ecological and social interactions are critical for the resilience of people, communities, or regions to shock and ongoing socioenvironmental changes as they provide sources for adaptation and transformation (Biggs *et al.* 2015), particularly in agroecological systems (Holt-Giménez 2002).

The sociocultural landscape, as a linkage between the human society and physical environment, can be regenerated to build up the cultural resilience and thereby mitigate alienation. To regenerate the sociocultural landscape, it is necessary to revitalize, in case of loss, positive traditional culture and values, or foster, in case of absence, new community culture of collaboration, so as to tighten the relationships among people as well as between people and rural landscapes.

7.2. Grassroots Organizations and Sociocultural Landscape Regeneration

The involvement of rural communities in the governance of public affairs has always been challenging, due to the specific spatial features, the paucity of human capital and a much lower resource level than in urban communities in rural areas (Osborne *et al.* 2004), as well as alienation mentioned above. Another factor that may impede local participation is the so-called "social rigidity", which means that a society, being a dynamic and complex structure, tends to strongly resist paradigm shifts (Gobattoni *et al.* 2015), like one from government to governance. Meanwhile, it is popularly recognized that local participation has a significant role to play in the protection and maintenance of biological and environmental resources and historical values embedded in rural landscapes (Gullino *et al.* 2018). The tension between the theoretical desirability and practical insufficiency of local participation can only be addressed effectively in rural areas by building up a strong local voluntary and community sector infrastructure to support community involvement in rural regeneration partnerships (Osborne *et al.* 2004). Effective participation, supported by an empowerment mechanism, should be aimed at helping local communities to "self-organize and reconnect with nature in new ways, thereby assisting an active process of (community-led) social transformation" (Fischer *et al.* 2012, 171). In this sense, grassroots social organizations are critical to such a process of community-led social transformation. Generally, they play a significant role in promoting the empowerment and participation of local communities and the regeneration of their local identity, which are critical to the maintenance and regeneration of rural landscapes that are multifunctional and multidimensional (García-Llorente *et al.* 2012).

In the Locride area, grassroots organizations play a major role in regenerating the sociocultural landscape of rural localities while fostering new community culture.

A good example is the Samo-based agricultural cooperative "Aspromonte" whose activities transcend the agricultural sector. Besides cultivation and marketing activities, it provides social services like environmental protection and maintenance and transmission of immaterial cultural heritage. In so doing, it has generated both economic benefits and social impact. This social impact is critical for regenerating local sociocultural landscape, which is fostered by

undertaking various cultural activities at community level. Besides agritourism, the AC Aspromonte organizes various off-farm activities, including cultural events like meetings, arts workshops, immaterial cultural heritage promotion (like traditional weaving workshops organized at local primary schools), natural protection like land cleaning and fire prevention. This has not only helped transmit the cultural heritage to young generations, but also promoted the concepts of environmental protection and risk preparedness among local people. In addition, these cultural activities have also helped build up local social capital by enhancing the trust between the cooperative and the local community. What results from this regeneration process of local sociocultural landscape is a typical reciprocal situation, in which the cooperative itself has become a beneficiary. By relying on the improved social capital and community ties, the cooperative has been able to gain more access to lands, and local people who had abandoned lands have entrusted them free of charge to the cooperative. The case of the social cooperative "Valle del Marro – Libera Terra" discussed in Section 6.1.3. also demonstrates the effectiveness of grassroots organizations in regenerating local sociocultural landscape by building up social capital with an incremental approach.

Another good example is the private agency *Parco Culturale della Calabria Greca* (PCCG, in English: Cultural Park of the Greek Calabria), dedicated to the promotion of sustainable tourism in Greek Calabria. Currently, the PCCG is carrying out a quite ambitious collaborative project called the "*Hub Culturale della Calabria Greca*" (Cultural Hub of the Greek Calabria) that is rooted in the *Palearíza* festival (see Section 9.1.3. for details of this festival). This cultural hub, grounded in the territoriality of the Greek Calabria, operating in networks and learning from national and international experience, is expected to build up a community of cultural citizens to foster cultural citizenship while helping bring about, through arts of all kinds and creativity, positive changes in the territory and communities. To this end, it tries to create five spaces: 1) co-working spaces to be used as laboratories and artist residencies; 2) co-living spaces for a genuine touristic experience, training and participatory planning; 3) exhibition and performing art spaces; 4) an incubator of ideas and cultural/creative projects; and 5) a collaborative platform to support community activities and promote the hub itself.

7.3. Revitalization of Traditional Culture and Values

Rural landscapes are typical cultural landscapes resulting from harmonious interactions human society and environment over time. As a result, rural landscapes are "imbued with value systems, traditional knowledge systems and abstract frameworks" (Taylor 2009, 7), which altogether form their sociocultural landscape. These values and knowledge are the cornerstone of community cohesion and source of positive social ethos and sense of belonging, and provide

a potentiality and basis for long-term local social and economic development. The sustainable management of this potentiality is conducive to landscape optimization (Sobala and Myga-Piątek 2016). However, in China, rural modernization has long neglected the interconnectedness between tradition and modernity and between the material and the immaterial. This has led to the degrading of the sociocultural landscape embedded in rural landscapes, which has brought about various social problems mentioned above.

In recent years, especially since the implementation of the Beautiful Countryside Construction, various actions have been undertaken to revitalize the traditional culture and values in Meixian County. These include mainly cultural display in the form of mural paintings, the construction of social service facilities like grassroots nursing homes called "*xingfuyuan*" and cultural service facilities like village history museums, and the establishment of grassroots associations for social and cultural issues. In terms of cultural display, the Beautiful Countryside Construction in Meixian County has visually reinterpreted traditional values in the form of mural paintings in all villages. These mural paintings basically illustrate traditional values such as filial piety, diligence, thrift, mutual respect and moderation. Meanwhile, they have also integrated core contemporary socialist values[71]. These traditional and contemporary values jointly can help contemporize the value system by reestablishing positive social ethos and ethics in rural communities. Such a value system is of high impact on patterns of production and ways of life and therefore fundamental for recovering and fostering harmony at three levels, namely, interpersonal, people and society, and human society and environment.

Regarding the construction of social and cultural facilities and the creation of grassroots associations, which have practically been popularized in all villages, it is Doujiabu Village which proves to be a representative example. During rapid socioeconomic transformations, the village, like numerous others in Meixian County, has encountered major social problems including maltreatment or neglect of aged parents and tension of inter-neighborhood relationships due to a loss of traditional culture and values like filial piety and reciprocity, risk behaviors such as alcoholism and gabbling, diminishing spirit of social contract, unsustainable use of natural resources, etc. This has caused negative impacts on its socioeconomic development in the long run. To address these social problem, in recent years, the Villagers' Committee has attached great importance to the revitalization of traditional culture and values, with a focus on the culture of "filial piety".

In the Confucianism, filial piety 孝 is a fundamental virtue, and it mainly

[71] The core socialist values consist of 12 values at national, social and individual levels. The national values are prosperity, democracy, civility, and harmony 富强、民主、文明、和谐; the social values are freedom, equality, justice, and the rule of law 自由、平等、公正、法治; and the individual values are patriotism, dedication, integrity and friendship 爱国、敬业、诚信、友善.

requires respect for one's parents, elders and ancestors[72]. Central to the Confucianist role ethics, namely ethics based on one's family roles, filial piety determines the "moral worth" of an individual in a community and serves as a form of social capital in all Confucianist societies (Ikels 2004). Under the influence of this role ethics and the ideal of family members living together in intergenerational households, the family is considered, especially in rural China, to be the culturally and morally appropriate place of care for the old people (Miller 2004). Given the patrilineal nature of filial piety, aging parents in most cases will live with sons to obtain their physical, financial and emotional support. Needless to say, filial piety across the Chinese history has played a crucial role in maintaining the stability and order in rural societies by functioning as fundamental collective norms that regulate individually people's socialization process and collectively social organization. Besides, as a social capital, it also acts as a binding force among all community members, determining therefore the formation of a collective opinion that favors and more precisely uniforms conducts in line with filial ideals, or otherwise pressures any community members in case of misconducts. In this sense, filial piety is also an informal social supervision system.

Over the past decades, due to the diminishing social capital and traditional values, the role of filial piety of collective norm setting and social supervision has been significantly weakened. This, together with the insufficient rural pension system at the state level, increasing aging population and continuous outmigration of young people to work and live in cities, has made the old-age issue a major social issue in rural areas. In Doujiabu Village, there are 710 households with 2,908 residents, 16.2% of whom are over 60 years old, and this percentage continues to grow year by year. Before the revitalization of the filial piety culture, there were some elderly people living alone with difficulties and lacking care, or others whose children were not filial. Considering that in rural areas, family-based pension is still the mainstream, Doujiabu Village has addressed the old-age issue by revitalizing the filial piety culture. In all its actions, the filial piety culture has always been employed as an important link to maintain the harmony both within rural families and among the neighborhoods.

In 2016, the Villagers' Committee led the planning, in which retired cadres from the village were involved as advisors. Then in 2017, five actions were carried out, the funding for which has seen an emerging public-private partnerships in rural development in Meixian County. Part of the construction fund came from the financial support of authorities from the higher level and the Villagers' Committee's own fund, while the rest was raised from entrepreneurs from the

[72] Detailedly speaking, filial piety requires to: respect (not rebellious) and take care of parents; show love, kindness, respect, courtesy and support to all family members; conduct good behaviors both towards parents at home and outside to bring a good fame to parents and ancestors; perform well the duties of job to obtain the material means and success to support and honor parents, and carry out sacrifices to the ancestors; ensure male heirs; conform to fraternity among brothers; wisely advice parents; display sorrow for parents' sickness and death; carry out sacrifices after their death; and so on.

village. The actions include, to begin with, the construction of the "Street of Good Family Ethos and Disciplines" and the "Street of Filial Piety Culture", so as to enable good traditional culture and values like filial piety and neighborhood harmony to educate, cultivate and motivate local people. In these two streets, the different family ethos and virtues of each household studied and summed up during the planning process have been concretized into red lacquered wooden antithetical couplets, which, as typical traditional ornament, were distributed to the villagers free of charge. Second, mural paintings depicting traditional culture and values were realized along all principle roads and alleys in the village. Third, honorary titles like "Good Daughters-in-Law" and "Good Sons and Daughters" are selected and awarded, and all villagers are encouraged to learn from these good examples. Fourth, an "Elderly People's Association" was established under the leadership of retired cadres from the village. In this association, members receive peer support ranging from knowledge, experience to emotional, social or practical help from each other. Its leaders are also in charge of ethical guidance and the mediation of family and neighborhood conflicts, as well as the organization of cultural activities like lectures, traditional opera performance, etc. Fifth, a nursing home was improved (built in 2015), which is a day-care place for dining, recreation and other services open to all elderly people from Doujiabu Village who live alone or are in difficulties.

It is estimated that by 2020, the number of elderly people in China will increase to 255 million, which accounts for about 17.8% of the total population. This implicates increasing old-age pressure on public expenditures. On this regard, the grassroots nursing homes, as a social service entity, will have a crucial role to play to foster an integrated pension system which combines public social welfare, family-based filial support, and community-based day-care services.

To bolster the revitalization of the traditional culture and value of filial piety and family ethos, as well as making sustainable the functionality of the social and cultural facilities, Doujiabu Village has on the one hand simultaneously committed to economic development and industrial restructuring as well as environmental protection and improvement. This integrated approach has helped consolidate the "material basis" of the revitalization. In 2017, the per capita disposable income of farmers reached 16,045 yuan. On the other hand, it has strengthened the transparency of village affairs and the supervision of village cadres so as to make the governance system more effective and accountable and gain local people's understanding and support. By promoting the culture of filial piety and other traditional values, alcoholism and gabbling have decreased, while mutual help and harmonious neighborhood relationship increased, and the quality of life of the elderly people improved.

Still another good practice in the revitalization of traditional culture and values is the voluntary compilation of chronicles in some villages. Such a project is often initiated by cadres who have returned to their home village after retirement. With a genuine sentiment towards their hometown, they sponsored

themselves for the compilation. Due to a lack of written historical data, the chronicles were written mainly in the form of oral history, and focused on elements of the contemporary history, namely, society, events and people since the 1900s. For the ancient part, anecdotes, legends and memories were collected.

7.4. Conclusions

Along the process of rural development, rural areas tend to experience inevitable erosion of their sociocultural landscape rooted in the traditional agriculture, a shock due to the introduction of modern production and way of life. Rapidly changing sociocultural landscape has encouraged alienation, which undermines the linkage and relationship among people (social alienation) and between the people and their immediate environment (spatial alienation). Alienation often leads to a loss of traditional knowledge and values and social capital. This means a harm to people's wellbeing and social security and a difficulty in mobilizing the agency of local people to participate in the management of landscapes. To address these problems, it is necessary to reinforce rural communities' cultural resilience. Sociocultural landscape, as a linkage between the human society and physical environment, can be regenerated to foster the cultural resilience and thereby mitigate alienation.

To build up cultural resilience and social capital of rural communities, both Meixian County and the Locride area have taken measures to regenerate their sociocultural landscapes. But the two have distinct regeneration pathways in terms of player and strategies. First, while in the latter, grassroots social organizations have played a major role in the regeneration process, leading a community-led social transformation, in the former it is mainly the public actors that lead the regeneration process. Second, in the former, the revitalization of traditional culture and values has served as an important tool to build up social capital and cultural resilience. In this process, economic development and environmental improvement have been aimed to consolidate the "material basis" of the revitalization of traditional culture and values. In the latter, by contrast, major efforts have been made to foster the spirit of collaborative work and thereby build up social capital. To achieve this goal, community-led economic development (organic farming, cultural tourism) and environmental protection have been two strategies. The two case study areas demonstrate that, the regeneration of the sociocultural landscape not only generates sociocultural benefits, but also brings about positive externalities in the economic and environmental spheres.

In Meixian County, since the implementation of the Beautiful Countryside Construction, various actions have been undertaken to revitalize the traditional culture and values. These include mainly cultural display in the form of mural paintings, the construction of social service facilities like grassroots nursing homes called "*xingfuyuan*" and cultural service facilities like village history

museums, and the establishment of grassroots associations for social and cultural issues. The benefits generated by revitalizing traditional culture and values are mainly intangible and hence cannot be monetized. They are closely related to local people's wellbeing, and therefore it takes time until subjective benefits can be "felt" and self-reported. This suggests the need of a continuous regeneration process, which requires continuous investment of capital and time. For this reason, there needs to be a sound "material basis" that buttresses the revitalization process, especially a community-based one that allows local people to gain autonomy and control over capital given that public funding is always limited while private capital tends to be exploitative. To maintain and build up this "material basis", it is critical to spur economic development and industrial restructuring by means of innovation economies, which is to be discussed in the following chapter. In addition, it is necessary to adopt an integrated approach that is able to coordinate the revitalization of traditional culture and values, economic development and industrial restructuring, as well as environmental protection and improvement. Only in so doing can a synergy be formed between the economic, sociocultural and environmental forces, therefore contributing to foster the cultural resilience of local communities in the long-run.

To answer the question of how to reshape rural communities in a viable modern form, the regeneration of the sociocultural landscape proves to be a road that rural communities have to follow. It needs to be recognized that on the one hand, rural development does not connote the replacement of the traditional sociocultural landscape by a modern one; and on the other hand, preserving the former does not mean excluding the latter. What is really important is first and foremost to promote the integration of the two so that the traditional sociocultural landscape can evolve and be contemporized. Second, it is indispensable to adopt a holistic and systemic approach that integrates the sociocultural, economic and environmental dynamics. Third, the central place of people, especially those vulnerable or disadvantaged, and the relationship between human society and environment must be highlighted in the regeneration process. Only in this way can contemporary rural communities that are culturally resilient, socially cohesive, environmentally sound and economically collaborative be created, the ultimate goal of rural landscape regeneration.

Part 4 Linking Landscape and Market: Innovation Economies

Chapter 8 Innovation Economies

8.1. Preconditions: Innovation, Place and Network

8.1.1. Innovation as the Fuel of Development

"Innovation" originates from the Latin word *innovationem*, the noun form of the verb *innovare*, which itself stems from *innovatus*, the past participle of *innovare*. This verb means "to renew or change" as is composed of two parts, namely, *in-* means "into", and *novus* "new". Innovation can therefore be seen as the process that renews something that exists and not necessarily, as is commonly perceived, the creation or invention of something new. In this sense, the repurposing-based reuse of abandoned buildings is a typical example of innovation. According to Mulgan (2007), innovation shows three characteristics, namely, reorganization, interdisciplinarity and interrelationship. First, innovations are usually new combinations or hybrids of existing elements, rather than completely new. Second, innovations involve cutting across organizational or disciplinary boundaries. Third, innovations leave behind compelling new relationships between previously separate individuals and groups. Consequently, what is indispensable to innovation are the right combination of local knowledge (often tacit and implicit) with expert knowledge (often more explicit and formalized), and the support of extensive networks (Esparcia 2014).

Innovation should be considered, in a broad sense, as the development of new economic activities to recognize the role not only of technological but also of non-technological innovations (Ocampo 2007). This broadening demands an integrated theory of innovation that encompasses not only technology, but also marketing, logistics, management and organization (Dahlman 2007). In this socio-technological innovation theory, social innovation and technological innovation are closely interconnected and intertwined, and both are prerequisites or components of social change (Howaldt and Schwarz 2010). The two spheres of innovation are mutually complementing, in that innovation concerns not only a technical process that centers on R&D and the generation of knowledge, but also a social process that facilitates the acquisition, adaptation, dissemination, and use of new technologies and knowledge in diversified local settings (Baycan *et al.* 2017; Dahlman 2007). Just as Howaldt and Schwarz (2010) put it, innovation is embedded in society, effecting its development, and in need of scientific support. The social embeddedness of innovation on the one hand requires that besides traditional aspects linked to innovation such as technology, applied sciences, modern business organizations, etc., local experiences, social relations and knowledge need to be integrated into innovation processes (CELAC 2017). On the other hand, it serves as an opportunity to trigger social innovation, which can be defined as the development, adaptation and application of new ideas concerning products, processes, services, organization

and models to meet social needs rather than only individual needs (Howaldt and Schwarz 2010). Rather than a linear process arising from formal knowledge, social innovation marks a social process involving a multitude of actors and their formal and informal relationships (Camagni 1991 cit in Esparcia 2014), in which the role played by each of them depends on social, institutional and even personal variables.

In practice, different sectors and contexts may put a stress on different dimensions of innovation. In the business world, for example, innovation tends to be understood as the application of better solutions that meet new requirements, unarticulated needs, or existing market needs by providing more effective products, processes, services, technologies, or business models (Maranville 1992). Here, innovation does not necessarily mean that all businesses have to keep abreast of the technological frontier. Rather, they all need to be at least fast imitators and adopt, use and improve new technologies and knowledge. Moreover, innovation is not just a matter of new products or new processes and ways to produce them, but also better organization and management techniques, and better business models (Palmisano 2006). According to the OECD (2005), an innovation is the implementation of a new or significantly improved product (goods or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. This definition suggests that innovations can be categorized into four types, namely, product innovation, process innovation, market innovation and organization innovation (CELAC 2017; Edison *et al.* 2013). Based on this definition, this dissertation adopts the definition made by Crossan and Apaydin (2010): Innovation, both a process and an outcome, refers to the production or adoption, assimilation, and exploitation of a value-adding novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. Such a definition highlights the social process of innovation, which is also the focus of this dissertation.

Indeed, innovation fundamentally concerns a social process: innovations come from the entrepreneurs who make them happen and ultimately depend on a society's receptiveness (World Bank 2010). This means that innovation at best should be understood as the application, adaptation and dissemination of something new in a given context of the social or economic sphere, not as something new in absolute terms. This means that what is not disseminated and used is not an innovation (*ibid.*). Actually, in most cases, the key challenge for innovation seems to be less about the creation and acquisition of new technologies and knowledge than the translation process, as technologies and knowledge have to undergo adaptation to be applicable in specific local conditions, especially in the agricultural sector (Dahlman 2007).

Creativity and innovation in general and social innovation in particular are essential factors for fostering sustainable growth, securing jobs and increasing

competitive abilities (Barroso 2009 cit in Howaldt and Schwarz 2010). The relevance of innovation to development lies in that innovation is critical to competitiveness, and the intrinsically linked regeneration (Baycan *et al.* 2017; Jarvis *et al.* 2009). Competitiveness used to be mainly based on static comparative advantage in terms of the cost of factors of production or the specific technological advantage. Today, apart from these traditional elements, competitiveness increasingly depends on continuous innovation, high level skills and learning, an efficient communication and transport infrastructure, and a supportive enabling environment (Dahlman 2007).

Rural areas in most cases face more limited private funding and public support compared to their urban counterparts, and therefore, innovation plays a significant role in their socioeconomic development (Rover *et al.* 2017), both in terms of diversification and increased competitiveness, also related to new structures of governance (Esparcia 2014). Local knowledge, social relations and experience needs to be considered as a central driver of innovation in rural areas, given that local knowledge has a great innovative potential (CELAC 2017). Therefore, innovation in rural areas must incorporate the dynamics of local knowledge and the ways in which non-local knowledge is transferred to and internalized in local systems (Esparcia 2014). The relevance of local knowledge and experience to innovation requires that the latter adopt a place-based approach, so as to take into account the socioeconomic characteristics and knowledge and value system of rural localities. This is important because such an approach is able to help mitigate the homogenizing effect of industrial agriculture on production processes, food products and forms of organization (CELAC 2017). For instance, to regenerate agricultural ecology and local economies, it is very important to develop and adapt resource-conserving techniques for local use based on a combination and modern and traditional knowledge and techniques, such as hedgerows on contours, buffer strips, new crop rotation, integrated pest management, crop diversification, livestock integration, etc. Such a place-based innovation is a major way to stimulate local people's agency and enhance their collective capacity to innovate while avoiding the paternalism of technocrats (Pretty 1998). Besides the importance of local knowledge, for rural areas, especially those in developing countries, dissemination proves to be of particular importance. This is because that rural areas more often than not face disadvantaged conditions to work at the frontier of technological innovation due to their unfavorable overall conditions in the economy, governance, education, and infrastructure (World Bank 2010). Consequently, as long as the *diffusion* rather than the creation of new or upgraded technologies, processes, services, organization and patterns in the economic or social sphere occurs in rural areas, so does innovation.

8.1.2. Place as the Context

Financial subsidies, trade protection and investment in infrastructure have been conventional tools used to address rural socioeconomic problems in all over the

world. These tools generally comply with an "exogenous model" of rural development, with the main forces for change originating from outside the rural areas (Whittaker 2002). However, in most cases, the exogenous model proves to offer the "fish" (diminishing) rather than the "fishing" (regenerative). This often leaves rural communities unable to maintain its subjectivity at the shock from external forces. Indeed, it is not uncommon that rural localities, facing deepening structural changes in the local economy, find themselves in situations wherein micro-scale place-based factors are subordinate to, or even overwhelmed by the macro-scale structures coming from the national or international political economy. It is therefore necessary to match macro-scale factors with localized conditions in rural areas (Cloke 1985). Such a need has led to an emerging discourse of the "endogenous model". Pretty (1998) suggests that rural development in Europe has to be endogenous in the form of the local population's effective participation. Often, endogenous processes determine how local communities, especially farmers, respond to the exogenous processes by modifying their decision-making (van den Bor *et al.* 1997 cit in Valbuena *et al.* 2010). Rural communities themselves should reflect on what kind of resources they have, and how to put them to a more productive use without causing damage to natural and social capital. However, endogenous approach does not deny the importance of exogenous forces. Rather, it acknowledges that the future of many rural regions depends on the dynamics of exogenous processes (Valbuena *et al.* 2010). This means that endogenous processes are in essence a localization process that is much concerned with local responses to global or extra-local phenomena and influences. What is actually highlighted in the endogenous model is the "place", the context where all endogenous processes take place and are closely nested.

The concept of "place" in relation to growth, development and innovation (Barca *et al.* 2012; Nicolosi *et al.* 2018; Pinoncely 2016; Tomaney 2010) is gaining increasing academic and political attention. It is recognized that the spatial context is of considerable significance to the rural entrepreneurial process (Müller and Korsgaard 2018; Sohns and Revilla Diez 2018). This is because that in the rural entrepreneurship, growth and innovation alike are not space neutral; instead, they are shaped and influenced by a wide range of spatial synergetic forces embedded in the place (Baycan *et al.* 2017; Capello 2017). "Place" is not only where specific economic behavior and interpersonal relationships are shaped (Johnson 2007) and the "knowledge ecosystem" indispensable to entrepreneurship (Cabrita *et al.* 2015) is embedded, but also "systemic solutions to systemic problems" (Alperovitz *et al.* 2015) like rural economic development can be found. Indeed, rural economic development involves complex socioeconomic problems that cannot be solved with the social model-based approach. This is because that such a conventional approach tends to give way to development initiatives aiming more directly at economic development while isolating the areas under intervention from their adjacent economy and social contexts (Porter 1995). In this sense, there needs to be a spatial dimension for

innovation to nurture competitive advantages from within, if it is to promote local economic development on a contextualized basis.

Indeed, spatial dynamics are nowadays an intrinsic feature of a knowledge-based and innovation-oriented economy (Baycan *et al.* 2017). Rural strategies which are place-based and both environmentally and socioeconomically viable through the market are very likely to act as a trigger to rural development (Banks and Marsden 2000). Several reasons justify the argument for a place-based approach to innovation. To begin with, it is believed that place, as a spatial aggregation of all socioeconomic and environmental elements, is capable of growing in an organic way by capitalizing on their embedded assets, especially their social and human capital and innovative capacities (Tomaney 2010). The perception of the place by rural communities is the initial and fundamental step for identifying the territorial potential of rural areas. On this basis, the most effective actions for maintaining their natural resources and sociocultural capitals can be defined, while promoting social innovation, for example, by changing unsustainable behaviors and removing structural constraints (Gobattoni *et al.* 2015).

Second, regions of different socioeconomic and political backgrounds have different pathways towards innovation and modernization according to local specificities (Capello 2017). Therefore, innovation must be place-based as well, so as to connect its economic impact with the spatial dimension of economic activities (Hübner 2005) to help capture the value locally. Place also provides a political economic context for innovation, which according to Küpper (2018), comprises both novelty and practicability. Third, place has a direct impact on human development, as it can shape the potentials both for territorial development and individual development within it through positive externalities (Barca *et al.* 2012).

Fourth, knowledge, as a key element in innovation process, is considered to be an economic driver (Cortrightss 2001; Foray and Lundvall 1996; Hana 2013; Hidalgo and Albors 2008; Sorenson *et al.* 2006). Place can serve as a conceptual framework for the emerging knowledge economy, wherein local development is driven by the interplay between the use and generation of knowledge, networked cooperation and mediating socioeconomic institutions (Raco 1999). This holds true for rural localities as well, for those places tend to have traditional knowledge of production which are readily adaptable to couple with modern techniques. Fifth, place, with its embedded relationships and networks, can create an optimal social environment for innovation. Thereby, it can create opportunities for translating new ideas into marketable solutions (Gretzinger *et al.* 2018) and co-creating shared social values, which are able to reinforce competitive advantages (Baltazar Herrera 2015).

Sixth, place, as the component of the territoriality, can be used as a tool to defend quality and safety in the reconstruction of the supply chain of modern agriculture (Saija 2009). Seventh, given that rural places are “destined” to shrink

due to unstoppable outmigration and aging population, place is critical to the making of adaptation strategies or shrinkage management which need to help maintain the quality of life for the remaining residents rather than trying to attract new ones (Küpper 2018). This means that a place-based approach is conducive for planning "smart shrinkage", given that existing planning tools are feasible for growth but not shrinkage (Wiechmann 2008 cit in Küpper 2018). With such an approach, it is very like to produce, especially when a participatory mechanism is in place, localized projects able to enhance and mobilize place-based assets and therefore contribute to sustainable adaptation to rural shrinkage (Tietjen and Jørgensen 2016). Last but not the least, a place-based approach is able to foster self-governance by providing alternatives to competition for external capital which is more often than not off-limits, fair-weather investments yet without social concern (Madeley 2003). This is especially true in rural areas, whose development is largely dependent on private investments which deprive local communities of the decision-making process and an equitable value distribution. As a result, rural localities are seldom capable of internalizing potential external profits (Du 2003).

8.1.3. Network as the Organization

In a social term, network is referred to as an interconnected or interrelated chain, group, or system, or as a usually informally interconnected group or association of persons (such as friends or professional colleagues)[73]. This suggests that interrelationship and interconnectedness are the principal attributes of network. It seems that networking has never been as a heated topic as in the Information Age. Undeniably, it is gaining increasing importance in the development process in response to the fundamental changes in the world economy, including the increasing importance of knowledge and the global scale of capital as well as knowledge exchange (van Aalst 2003). In the business field, business network is believed to generate various benefits as is identified in the literature, including risk sharing; obtaining access to new markets and technologies; speeding products to market; pooling complementary skills; safeguarding property rights when complete or contingent contracts are not possible; and acting as a key vehicle for obtaining access to external knowledge (Pittaway *et al.* 2004). According to van Aalst (2003), networks commonly show seven major characteristics:

- links are established not only with producers but increasingly with customers;
- links are interactive;
- networks enjoy a degree of self-management;
- the participants, as nodes in networks, share a common purpose;
- networks are dynamic structures and change in terms of type and number of participants, roles of participants, etc.;

[73] See the definition of Merriam-Webster at <https://www.merriam-webster.com/dictionary/network>.

- electronic means underpin and enhance networking, but networks are human;
- large networks tend to be effective when they create and maintain a sense of belonging, cohesion and reinforcement of values.

To these characteristics, one more characteristic should be added, that is, network is increasingly transboundary and interdisciplinary facilitated by information and communications technologies (ICTs). This means that, today, network can be both space-bound and virtual without a defined geographical boundary. Virtual networks are becoming more and more diffused with the development and popularization of ICTs and the associated web-based social media which have greatly promoted the development of online virtual communities and social networks, leading to a growth in a ubiquitous networked society (Houghton and Joinson 2010). These virtual social networks are increasingly mediating the generation and sharing of ideas, information and knowledge (Kietzmann *et al.* 2011), therefore have the potential to fundamentally influence the social, political and economic processes (Harris and McCabe 2017; Perron *et al.* 2010). Yet, a most direct impact of social networks is the resulting change in the pattern of socialization, both in interpersonal and community terms (Brignall and van Valey 2005; Harris and McCabe 2017).

Network plays an important role in spurring socioeconomic development regarding five aspects. First, network is indispensable to innovation (Harrisson *et al.* 2009; Mulgan 2007; Pittaway *et al.* 2004), which is conceptualized as a contextualized interactive learning process (Chuang *et al.* 2016; MacKinnon *et al.* 2002). Knowledge and skills from a diversity of people connected in a network can fuel the process of innovation (Harrisson *et al.* 2009). Innovation increasingly takes place in networking as opposed to hierarchies and markets, and most innovations involve a diversity of entities (Lundvall and Borrás 1997). Network can not only contribute to the innovation process itself, but also the diffusion and embedding of the innovation across and within sectors (Pittaway *et al.* 2004) while fueling a cumulative dynamic whereby each innovation opens up the possibility of further innovations (Mulgan 2007). Network is therefore a tool to make the social process of innovation sustainable.

Second, the competitiveness of a region could be directly influenced by the local people's ability to generate, access, understand and transform knowledge and information based on collective and interactive learning. This involves internal as well as external social networks (Eaparcia 2014). Third, network is a necessary precondition for effective governance at the local level (Putnam *et al.* 1994). For example, networks of local actors tend to lead to a more equitable allocation of resources (both endogenous and exogenous) through a participatory mechanism for the development and implementation of innovation projects in rural areas (Esparcia 2014). Fourth, network is conducive for fostering synergy between different stakeholders in the rural development process and different activities.

"Synergy"[74] is central to rural development, because it is critical for creating cohesion between activities (van der Ploeg and Roep 2003). Also, the interaction between different stakeholders in network allows constructing alternative visions of rural development and new possible scenarios.

Fifth, network lays the foundation for partnerships and collaboration between academia, private and public sectors, and civil society, which are now seen as a prerequisite for the knowledge flow and exchange (Trencher 2013). This owes to network's function in building up social capital, which is essentially social relationships between people in families, communities, teams, organizations, and other collectives (Scott and Hofmeyer 2007). Extra-local collaboration and information-seeking not only help businesses gain access to more varied information and knowledge, but also enable them to mitigate the negative lock-in effects and diminishing creativity that can result from over-reliance on local networks (Boschma 2005).

However, it is worth noting that network does not directly leads to successful partnerships. The success of genuine partnerships largely depends on whether a shared vision is reached among all stakeholders (Chigbu 2012), and also concerns the issue of social equity and inclusiveness as partnerships tend to reinforce existing relations of domination and control and legitimize a particular representation of reality (Atkinson 1999). In this regard, the transparency of the decisional process to make partnerships equitable and inclusive by increasing the level of trust among stakeholders and accountability of the partnerships, is critical for motivating all stakeholders to participate in the implementation phase (Marcianò and Romeo 2019).

At present, network is particularly stressed in the European discourses of partnership and territorial approach in relation to regional development. On the one hand, the territorial approach to rural development highlights the role of local actors, networks, culture, nature and landscape amenities and emphasizes diversified rural land use (Johansen and Nielsen 2012). On the other hand, over the recent decades, notions of partnership and empowerment have become ubiquitous in development programs in western Europe and the US, especially those deploy the tool of regeneration (Atkinson 1999; Ward 2002). Within the academia, networking is indispensable for fostering partnerships, which is increasingly emphasized in the EU research and innovation policies. As can be seen in several European research calls, including those by Horizon 2020, Heritage Plus, and in Italy, the National Operative Program, the need to strengthen the link between research and enterprises is reaffirmed (Marcianò and Romeo 2019).

[74] Concerning "synergy", it is necessary to assess how, why, to what extent and under what conditions can the combination of activities within a rural enterprise positively affect costs, benefits, risks and prospects?

8.2. Rural Economies: From Disadvantages to Advantages

8.2.1. Innovation-based Competitiveness

Nature and economies are often unable to cope with the fast pace of socioeconomic restructuring in rural areas (Schippers *et al.* 2015). Consequently, worldwide they are prone to a declining economic landscape due to their competitive disadvantages facing deepening globalization, urbanization and economic restructuring. In developed countries, disadvantages are mainly due to the structural changes in the shift towards a knowledge economy, the current austerity regimes and liberalized regulations which impede rural development through endogenous development approaches (Küpper 2018). They also tend to have pre-existing inequalities in their economic structure, which can undermine the achievement of sustainable development in environmental, economic and social terms (Sonnino 2004). Both individual well-being and community capacity are likely to suffer in areas confronted by extremely limited and deteriorating economic landscape (Richard *et al.* 2011).

It is believed that the capacity of localities to support processes of learning and innovation is a key contributing factor to building up competitive advantages (MacKinnon *et al.* 2002). However, due to their limited innovative capacities and job opportunities, rural areas, especially those far away from urban centers, are in a disadvantageous position inherent to the structural changes in the shift towards a knowledge economy. The lack of innovative capacities results from varied social and political economic factors, such as limited access to financial capital and information, lack of human capital, poor organization, weak negotiating power, lack of favorable policies, etc. In the new knowledge-based industries, rural localities are most likely to fail to support entrepreneurship and new business formation due to their scarcity of innovative capacities, seeing therefore diminishing comparative advantages (Varis *et al.* 2014). They tend to be even more vulnerable when a country is hit by economic and financial crises (Anthopoulou *et al.* 2017).

Holmes (2008) perceives contemporary rural transformations as a process of "multifunctional transition", wherein multiple values are emerging related to the function of rural space, leading to its greater functional complexity and heterogeneity at all scales. Indeed, multifunctionality is a necessary component for rural transformation and development (Almstedt *et al.* 2014). The resulting rural policies take a shift away from "mainstream commodity productivist models of development towards high value-added and innovation in the rural economy" (Macken-Walsh 2009, 22). Today, innovation is critical to rural China's future, and currently the government's top priority is to increase the agricultural sector's competitiveness by promoting supply-side reforms aimed at modernizing the agricultural sector and improving the well-being of the rural population. The fundamental reason for such a concern is, emerging economies like China are very likely to see growing demand for agricultural products (Sayer

and Cassman 2013), which will make it more challenging to balance agricultural development and environmental protection. Another reason is, China's high-speed economic growth over the last three decades has been sustained by its "demographic dividend", which is now declining due to its demographic restructuring in recent years (Ning *et al.* 2017). Innovation is therefore seen as a critical means to make up for this diminishing advantage.

In Europe, innovation in rural areas is considered as a key to increased value added for rural regions and sought predominantly by developing knowledge-based bio-economy (Wiggering *et al.* 2010). The importance of innovation in agriculture and rural development has been recognized by the European Union over successive reforms of the CAP, but agricultural knowledge and innovation systems need to be updated (ENRD 2013). The author maintains that by spurring innovation, adopting a place-based approach that capitalizes on locally embedded assets and highlighting networking, rural communities can enhance their competitive advantages and thereby promote local economic development. Such an argument on the one hand stems from the view that innovation is critical to rural revitalization as a major contributing factor to the increase of competitive advantages (Chuang *et al.* 2016; Hana 2013). On the other hand, it recognizes that in order to protect ecosystems and economic systems from deterioration, not only directly reducing the impact of shocks is important, but mitigating the change in system conditions (Schippers *et al.* 2015), wherein place-based innovation has a significant role to play. Innovation has to be place-based because increased importance has been attached to regions and localities as the primary sources of comparative advantage in the new knowledge economy. Hence, although globalization remains a dominating force in contemporary economy, what are emerging at the meantime are the "dynamic knowledge-based regional economies" (Varis *et al.* 2014, 102).

In view of an innovation-based approach to gain competitive advantages in rural areas, five framework elements appear to be of great importance for relevant strategies and policies. First, the macro-context where innovation occurs is featured by deepening globalization and advancement in telecommunications. The two trends are paramount forces behind the observable and ongoing transformation towards a new innovation-driven knowledge economy. Undeniably, in today's world where knowledge and information, as the key elements of modern socioeconomic development, are increasingly becoming the source of economic growth and competitiveness, information infrastructure development is particularly important for rural socioeconomic development. Rural and agricultural informatization will help: 1) improve the cultural and scientific quality of rural population and cultivate professional farmers; 2) improve the level of rural marketization and restructure rural economy; 3) transform traditional agriculture and its growth pattern; 4) popularize modern scientific and technological achievements in rural areas; and 5) coordinate rural-urban development and promote the overall development of rural

economy and society (Nie *et al.* 2007).

Second, as an aggregation of locally embedded asset, rural landscapes, on the natural, built and agricultural, and sociocultural levels, are sources of innovation and favorable to innovative economic activities which can contribute to their enhancement, protection, restoration, planning, development and management. Concerning the evolution pathway of rural landscapes, two international policy agendas are of particular interest yet largely remain to be integrated: the open-market agenda and the sustainability agenda (Primdahl *et al.* 2013). While the former is a direct result of globalization and institutionalized through the World Trade Organization (WTO), the latter is actually a response to unintended consequences of the market agenda (*ibid*.). Innovation within rural landscapes can serve as an important means to integrate the two agenda, and thereby reconnect landscape structure and processes that shaped the landscape. To this end, what is needed is a "transformation strategy" that seeks to foster direct links between human society and landscapes rather than indirect links based on incentive payments for a passive preservation (Fischer *et al.* 2012). Agriculture, as an interface between human society and environment, proves to be a crux in this transformation strategy. All in all, it is still the agricultural sector which determines the management of rural landscapes (Pinto-Correia *et al.* 2010), and the main driver of rural landscape change in the coming decades is likely to be agriculture (Sayer *et al.* 2013).

Third, rural innovations in the social and economic spheres must start from agricultural innovation, which may be impeded due to existing land system and ways of agricultural production. Despite that the agricultural sector is no longer the only basis for rural development (Wiggering *et al.* 2010), it nevertheless and increasingly should be a strategic sector in efforts to invigorate these rural areas (Pallarès-Blanch *et al.* 2014). The solutions to agricultural innovation will not be narrow sectoral or technical innovations but nested sets of innovations at the scale of the plant, the agronomic system, the landscape, and the institutional environment (Sayer and Cassman 2013). Linking food and landscape quality is considered as an important issue for sustainable development in both rural and peri-urban areas. This can be achieved by connecting the concept of food-agriculture with historical, cultural, social and environmental values embedded in rural landscapes (Gullino *et al.* 2018).

Fourth, innovation should, facing the prevailing discourse of economic specialization, pay a special attention to the maintenance of the diversity of the economies, which is the key to resilience in ecological and economic systems and long-term economic sustainability (Gascoigne *et al.* 2013; Schippers *et al.* 2015). More often than not, economies made up of a variety of economic undertakings and innovative economic activities will likely be better able to deal with changes and potential shocks and are thus more resilient (Schippers *et al.* 2015). Diversification is also indispensable for mitigating the negative externalities triggered by specialization. Whereas specialization is believed to

contributing to competitiveness, regions that diversify their economies by offering a wider range of products and services may gain advantages in competition (Wiggering *et al.* 2010).

Fifth, an improved governance is needed to facilitate innovation in rural areas. However, in an increasingly dynamic and global economy, the institutional infrastructure has often times remained ineffective for moving innovation to the marketplace and society (Baycan *et al.* 2017). This can be realized through continuous institutional reform of public entities at local levels, as well as social organizations and non-governmental organizations. By means of institutional reform, better coordination is to be formed among various actors to reduce their overlapping duties, while coordinating economic, sociocultural, environmental and political issues. It is also conducive for fostering grassroots democracy and the agency of local people. Institutional reform is also critical to meeting the need for efficient markets that provide farmers with greater accessibility to domestic and international markets, and the need for effective public institutions to provide key public services (Hazell 1998).

In the following-up sections, case studies from Meixian County and the Locride area are carried out to illustrate the innovation economies in terms of agricultural innovations, farmers' professional cooperatives and rural e-commerce.

8.2.2. Land Reform

The pattern of agricultural land ownership and use is an important factor influencing the way in which agricultural economies develop and respond to a changing economic environment (Hodge 1986). With the emerging discourse of multifunctionality and the need to address the trade-off issue between development and environmental protection, agricultural land is now required to deliver multiple environmental and production services and agricultural innovation is essential to address environmental problems (Sayer and Cassman 2013). Due to social and economic restructuring, an existing land system may impede socioeconomic development in rural areas. One typical limitation is the difficulty in developing economies of scale especially when excessively fragmented property is the case. This accounts partially for the fact that in the Locride area, 54.69% of rural population practice agricultural activities only for family consumption. In fact, smallholder farming pattern exists both in rural China and Italy, which puts the economic development of rural areas in a disadvantaged situation. Rural households in China on average have an arable land area of 0.1 hectare (about 0.29 hectare in Italy). According to the survey (see Appendix 2), 18.75% rural households in the Locride area have agricultural lands smaller than one hectare. Indeed, a prerequisite for rural development is to solve the land problem (Fei 2012). Therefore, land reform proves to be necessary to adapt the land system to socioeconomic transformations and help achieve sustainable rural development.

After the "cultural revolution" (1966-1976), rural China saw the start of a series of reforms. Rural reforms began in agriculture, and agricultural reforms began with the establishment of the "household contract responsibility system (hereinafter referred to as "system")" (Ma *et al.* 2018) regarding the rights to agricultural land since the 1980s. This system, on the one hand, ensures that land is of collective ownership; on the other hand, assigns the contract and operation rights to farmers. Ever since, regulated by such legislation as the *Property Law*, *Land Administration Law* and *Rural Land Contract Law*, farmers themselves have treated contracting and operation as separate while the formal legalization of land transfer was absent (Wang 2016; Zhang 2017).

In a period of time, this system motivated farmers to cultivate and promoted the development of agriculture and rural economy. However, its limitation has become increasingly prominent over last decade. One major manifestation is, China's rural economy has been heavily dependent on small-scale family-based farming model (Chen and Li 2017; Li 2014), making it hard to develop the highly mechanized farm-style modern agriculture as in Europe and the US. Besides, the land contracting system leads to a rather influential negative externality: social de-organization among farmers. Business culture stemming from the market economy characterized by individualism and self-interestedness has become the prevailing social ideology, substantially weakening the traditional organizational bonds among farmers (Liu and Ye 2016). As a result, the alienated individual farmers are reluctant to invest in farmland infrastructure construction and other collective projects with the mentality of taking "free-rides" (Du 2003). As a result, both the development process of the rural society and rural economy have been profoundly affected. Socially, due to poor social bonds and organization, the majority of farmers remain isolated units in the conventional peasant economy yet with a quasi-modern face, while an active, participative citizen class that the rural development process is expected to foster is still far from emerging. Economically, it is difficult to form economies of scale and promote agricultural modernization in rural China while reducing production costs (Chen and Li, 2017; Zhang 2017). To make the situation even worse, with deepening urbanization and industrialization, rural outmigration proves to be a lasting trend, leaving more and more contracted lands to become idle or transferred to other families in an informal way (Wang 2016; Zhang 2017).

Besides its direct impact on socioeconomic development in rural areas, the system in the long-run has proved to become a crux to promote the integrated rural and urban development in China and thereby to realize rural-urban common prosperity. In the Chinese context, the principal goal of the integrated rural-urban development is to narrow the deep-rooted rural-urban disparities in welfare, infrastructure, economic development, land use market structure, living standards, etc. Given this, what is paramount is to allow the rational flow and equitable exchange of production factors between urban and rural areas, so as to establish an institutional mechanism for the integration of urban and rural

development (DRC 2014). In essence, this calls for an integrated rural reform to improve the rural land system so as to mobilize land, a major factor of production, into more productive and rewarding uses (Li 2017).

Indeed, to achieve an integrated rural and urban development, the land system is the crux, and the current dual rural-urban land system must be reformed (DRC 2014). This is because that, since the introduction of land use reform in the late 1980s, rural land has been excluded from the newly created market circulation system. Among the various reasons for this dual-track land use system, the primary one is to protect rural farmers' land from excessive commercial development. However, the dual-track system has strictly regulated land use and prohibited the rational flow and equitable exchange of production factors between urban and rural areas (*ibid*.). Because of this property rights distinction between urban land and rural land, the rural lands contracted by farmers cannot be changed or circulated into other more profitable uses other than agricultural use even when the latter no longer supports farmers' livelihood, or *formally* sub-contracted to other individuals or entities. Also, when a rural land is taken, the compensation is way lower than an urban land of the same scale. Such a well established dual urban-rural land tenure structure in China has led to escalating disparities between urban and rural areas in terms of income, social welfare, living standards and public services. (Li 2017).

The implementation of the national Rural Revitalization Strategy and the National New Urbanization Planning therefore must first and foremost respond to the comparative disadvantages that rural China is facing at a time when urbanization continues to be a predominant trend, and rural-urban disparities continue to increase. The existing land system is one major disadvantage under the impact of market economy, rapid industrialization and urbanization (Du 2003). In view of this, the 19th NCCPC and the "No. 1 Central Document (2018)" reaffirmed the importance of dividing the rights to contract and the rights to operate so as to enable the transfer of the latter while maintaining the long-term stability of the system. In so doing, on the one hand, land utilization efficiency can be improved through an optimized allocation of such resources as arable land, labor, technology, machinery, etc. (Han 2015; Huang 2018; Wang and Zhang 2017) and farmers' income increased (Shi *et al.* 2017). On the other hand, ways are to be paved to develop modern agriculture and revitalize rural economy by fostering professional farmers, forming new types of rural economic entities such as family farms and cooperatives and developing various forms of moderate scale operations. The ultimate goal is to improve rural competitiveness by fostering innovative and modern agricultural economy.

The rural land operation rights transfer is supportive for local economic growth by spurring innovation economies in rural areas capitalized on locally embedded assets. However, this reform has also brought about some social concerns (Du 2003; Han 2015; Wang 2016), as the innovation in the economic sphere concerns not merely economic growth but also social justice (Carrasco-Monteagudo and

Buendía-Martínez 2015). According to the 2014 reform articulated in the "Opinions on Guiding the Orderly Transfer of Rural Land Operation Rights and Development of Moderate Scale Agricultural Operations"[75] jointly released by the CPC Central Committee and the State Council, the land operation rights transfer shall not change the land use and be detrimental to the rights and interests of individual farmers, the comprehensive agricultural production capacity and agricultural ecological environment. It should also adhere to the principle of moderate scale operations, which means that the scale of land operation should be increased, but meanwhile excessive concentration of land is to be prohibited. This principle of moderate scale, also emphasized in the "No. 1 Central Document (2018)", actually requires that the traditional family-based farming model and various modern agricultural operations be developed in a coordinated way. Such a requirement is aimed to maintain the balance between efficiency and equity. To achieve such a goal, family operations, collective operations, cooperative operations and entrepreneurial operations are to be promoted in a coordinated way. Such diversified rural economic entities can serve as important platforms for the innovation in rural economies. In addition, the rural land operation rights transfer also facilitates the "capitalization of land contracting rights" (Han 2015) and therefore creates alternative financial possibilities for the rural population, which is critical to triggering innovative rural entrepreneurship (Contreras and Rupasingha 2014). According to the "No. 1 Central Document (2018)", the contracted land operation rights in rural areas can serve lawfully as financing guarantee at financial institutions. The rights can also be converted into shares to help farmers create or participate in agricultural entrepreneurial operations.

Land system is quite different in European countries from the Chinese one, where private land ownership on agricultural land is a common rule, especially when it concerns the legacies left behind from the period of feudalism and monarchies (Li 2017). Such a private land system makes it possible to have unfettered flow and equitable exchange of production factors between urban and rural areas. Land reform has remained a century-old problem especially in southern Italy. Historical attempts[76] all failed due to the strong opposition and resistance of the great landlords, unwilling to lose their privileges and allow the emancipation of the peasant class[77] (Ressa 2015). A first real land reform started in the Republican era, when the transitional Law n. 841 was passed. This reform resulted in the forced expropriation (*esproprio coatto*) of latifundium in particular of approximately 760,000 hectares of land, 60% of which were in the

[75] Retrieved from <http://www.gov.cn/xinwen/2014-11/20/content_2781544.htm>, accessed on March 28, 2018.

[76] Such as the *Pragmatica XXIV De administratione Universitatum* (1792) by Ferdinand I of the Two Sicilies which was meant to grant (in rent) a certain plot of public lands to peasants so that they could cultivate it with their own work, the *Subversive Laws of Feudalism* (1806-1808) by Giuseppe Bonaparte to abolish feudalism in the Kingdom of Naples, etc.

[77] By the time of the unification of Italy in 1860, the ownership of arable land was as follows: over 40% belonged to the clergy, over 25% baronial, less than 25% public and only a remaining 10% was divided into small properties, usually operated directly from the owner.

South, divided into lots on average equal to 6-8 hectares and assigned to 113,000 peasant families (Farolfi and Fornasari 2011). This reform marked a progress in that it helped form an autonomous peasant class which was no longer subjected to the large landowners, and remove the residues of the ancient feudal privileges. However, the reform considerably reduced the size of farms, which later became an obstacle to develop the economy of scale in rural areas, although smallholder farmers were incentivized to create first-level cooperatives and cooperative consortia. This reform, similar to previous ones in the 1940s, failed to take a holistic approach to agricultural development that would link production and market, nor did it offer regulations of social relations in rural areas (Rossi-Doria 1948). The insufficiency of this agrarian reform ended up with an increase in the phenomenon of emigration. Indeed, the small property, always oppressed by debts and taxes, could not accumulate the necessary capital to rationalize its operation (Farolfi and Fornasari 2011).

Over the past decades, facing increasing abandonment of agricultural lands due to continuous outmigration and economic restructuring, the need for a new land reform has been put on the agenda. Given the deep-rooted private ownership, the pathway to land reform in Italy is destined to be distinct from the Chinese one. There is still a long way to go to realize a thorough reform; however, both the public and social sectors have promoted the changes in the current land system. From the public sector side, taking the Calabria Region for example, in the framework of the "Rural Development Programme 2014-2020 of Calabria Region", young farmers between 18 to 40 years old who operate a farm are enabled to purchase lands with government grants through the financial tools like ESIF (European Structural and Investment Funds) and EAFRD (European Agricultural Fund for Rural Development) (see Intervention 4.1.2. under Sub Measure 4.1. under Measure 4). At the legislative level, as mentioned in Section 6.1.3., with the passing of the Law 109/1996, now it is possible to reclaim for social purposes the arable lands confiscated from mafia, which as municipal properties have often times remained abandoned as municipalities only own them but are not in a position to operate them. This can be seen as a transfer of the operation right to the social sector, similar to the land reform in China. For the social sector's part, the emerging (social) agricultural cooperatives play a major role in leading a grassroots-based land reform. Two good examples are the Sambatello-based agricultural cooperative "5 Talenti" and the Samo-based agricultural cooperative "Aspromonte". The first has been able to reclaim some uncultivated vineyards owned by the Diocesan Institute for Clergy Support of the diocese of Reggio-Bova, which has entrusted the lands free of charge to the cooperative. Currently, the cooperative, managed in a corporate form, serves as a major vehicle to engage talented young people in the entrepreneurship. The second, in contrast, has gained access to lands by relying on social capital and community ties. Community members who have abandoned lands have entrusted them free of charge to the cooperative.

8.2.3. Rural-Urban Linkages

Historical experience seems to affirm that the pursuit of industrial development will inevitably lead to rural-urban divide. For example, two decades after the Italian unification, Italy, as a predominantly agricultural country, had a liberal customs policy: exportation of agricultural products and importation of industrial ones. Such a policy implicated state fiscalism and the containment of rural consumption, which were meant to benefit the industry and the city in general. In 1887, with a shift away from liberalism towards protectionalism, a tariff reform was enforced to protect its national industry and speed up industrialization. However, the exploitation of agriculture to the benefit of industry and the city was continued. This aggravated and deepened the antagonistic relationship between the city and the countryside, and between the North and the South[78] (Romeo 1998). Such historical experience suggests that rural-urban divide is not only a political economic issue, but also a historical one.

At the geopolitical level, the political partiality for urban development has led to a deep-rooted rural-urban divide. At the academic level, the current research on urbanization has overlooked the transformation consistency between urban and rural areas (Wang *et al.* 2016). Due to the urban centrism, the rural tends to be marginalized in regional development, while the urban is forced to absorb the pressure originated from the rural. Sociologically, this urban-rural divide is built on a simple-complex or modern-traditional dichotomy, such as Ferdinand Tönnies' (1887) *Gemeinschaft-Gesellschaft*, Émile Durkheim's (1893) theory of the development of societies by either mechanical solidarity or organic solidarity, Henry Maine's (1861) perception of the movement of progressive societies using the status-contract dichotomy, Herbert Spencer's (1882) militant-industrial types of society, and Max Weber's (1922) traditional-rational dualism (Pandey 2003). Rural-urban divide manifests itself spatially in the form of increasing socioeconomic disparities between the rural and the urban. It also suggests a "passive interconnection" between the rural and the urban where the former is the subordinate of the latter. This explains the pervasive chaotic and fragmented urban expansions that have sprawled from the historic centers diachronically into suburbs, semi-rural and rural areas since the postwar period in many European cities (Bencardin and Nesticò 2017).

China has experienced almost the same trajectory as the European one. In its dual-track land use system that puts the rural at a disadvantaged situation, the process of urbanization is essentially the change of rural land ownership from collective ownership to state ownership, a process of "taking" lands away from

[78] See the original text: "... è certo che, con la tariffa del 1887, non solo venne ripreso sotto nuova forma quel processo di sfruttamento della agricoltura a vantaggio della industria e della città in genere, che nei primi decenni dell'Unità era avvenuto essenzialmente attraverso il fiscalismo statale e il contenimento dei consumi rurali; ma vennero generalmente aggravati e approfonditi i caratteri antagonistici del processo attraverso il quale si era compiuta l'unità nazionale, fra città e campagna, fra Nord e Mezzogiorno."

farmers. Without reforming this dual system, "rural-urban integration" would most likely end up with the "swallow-up" of the countryside by cities, leading to ever growing cities in contrast to declining countryside (DRC 2014). The urban-rural dual structure in essence has positioned the urban and the rural respectively as "receiver" and "giver", which legitimates the extraction of the surplus value, though limited, of agricultural production by the urban in the process of industrialization, urbanization and modernization (Ye and Wang 2016). Rural-urban divide essentially reflects a binarist thinking, due to which the urban and the rural are prone to be disconnected and segregated academically and institutionally (Lichter and Brown 2011). This is more often than not detrimental both to rural development and urban development, therefore undermines regional development, especially in a sustainable term.

Two related theories are often used to explain rural problems: while one is based on economic growth and structural adjustment, the other on the spatial relationship between rural and urban areas (Hodge 1986). In the 1960s, rural sociologists started to look at the rural in relation to its counterpart, the urban. Representative scholars like Hoffsommer (1960) and Fuguitt (1963) argue that in rural sociology, it is no longer meaningful to separate the rural and the urban which are increasingly interrelated and interacted with each other. Rural-urban interactions often take the form of mutual linkages (population, goods, capital and information), and sector linkages manifesting rural activities that take place in cities and activities that are usually classified as urban taking place in rural areas (Tacoli 1998). Since the 1960s, rural-urban linkages have started to attract increasing attention. The emerging discourse of rural-urban linkages seems to be a natural reaction to fast changing economic conditions, including waning transportation and communication costs, technological change and economic restructuring, rising real incomes and changing tastes for natural amenities, which have all led to the new form of urban-rural interdependence (Irwin *et al.* 2009). The term "rural-urban linkages" may refer to at least three different relations between rurality and urbanity (Overbeek, 2009). They are not only based on the flows between different places such as between the rural fringe or rural hinterland and the town or urban area (first), or on the different territorial bounds of the actors living inside or outside the rural area (second). The term "rural-urban relationship" also concerns the different functional relations between actors mainly living and working in rural areas and those living in the rural areas, but working in urban places (third) (*ibid*.).

To address rural and urban problems resulting from the binarist rural-urban divide, an ideological shift towards rural-urban polarism is indispensable. This is primarily because it is able to bolster rural-urban linkages that are critical to achieving sustainable regional development. In the first place, rural-urban linkages make it explicit that rural and urban areas coexist as a space-time continuum rather than as discrete geographical territories with boundaries (Rajagopalan 2006). Within this continuum, what is embedded are

interdependences and relationality that account for economic action and outcomes; therefore, there needs to be a "relational lens" that coordinates associative, cooperative and collaborative forces (Kasabov 2014). This recognition of rural-urban continuum will stimulate the academia and public institutions to interconnect and aggregate the rural and the urban both in theory and in practice. In so doing, what is most likely to happen is a revolution in regional development schemes. Second, rural-urban linkages help foster a synergy between the rural and the urban. This very synergy can pave the way for 3Cs, namely cooperation, coordination and collaboration that bridge rural development and urban development on the one hand. On the other other hand, it can generate co-benefits that are prone to be shared by the two poles given the interconnectivity between them. Already it starts to be recognized that, "Urban areas must embrace their periurban and rural surroundings for their own survival and to make cities work better, and in harmony, with nature's ecological processes (Barbut 2017, 58)." This view resonates *yin yang*, the Chinese polarist worldview by which the rural and the urban can be understood as two entities being opposite yet complementary to each other. Third, rural-urban linkages are able to mitigate negative externalities caused by rural-urban divide. By fostering rural-urban linkages, the processes of rural and urban transformations can be coordinated, and a more diversified rural economy based on healthy interactions between cities and the countryside is most likely to be developed (van Leeuwen 2010). Ultimately, it is expected that rural-urban linkages help achieve two principal goals: one is curtailing economic disparities that undermine regional stability and cohesion, and the other is reconciling the needs of development and natural preservation as is required by rural-urban sustainability in the long run. Indeed, rural-urban linkages underpinned by rural-urban polarism convey the very message that sustainable regional development is barely achievable if there is no coordinated rural and urban development. This suggests that recognizing rural-urban linkages that can strengthen the rural and urban sectors becomes a bad need both in theory and in practice (Verdini 2016; Lynch 2005; Bryant 2003)[79].

In order to foster rural-urban linkages, it is necessary to, first, study urban and rural problems and their interrelations and solve these problems in a coordinated way against the overall level of economic and social development; second, foster a synergy and a sound interaction between industry/urban areas and agriculture/rural areas; and third, situate urban and rural economic and social development in a unified regional socioeconomic system (Nie *et al.* 2007). Fourth, rural-urban linkages require a more equitable, participatory mechanism of planning and decision-making. Undeniably, balancing urban and rural expectations of rural areas has been a challenging task for policy makers and land managers (Park and Selman 2011). The reality is that, however, such a balance is mostly absent. Worldwide the planning of the land use and defining

[79] The above discussions have referred to the Author's article titled "From Binarism to Polarism: On Rural Knowledge Outflows' Role in Fostering Rural-Urban Linkages" (2018).

of the landscape values and functioning tend to be in the charge of external urban experts who in most cases represent the interest of private developers and try to meet the needs of urban inhabitants. In this sense, a participatory mechanism is the only way to guarantee sound, constructive interactions between rural and urban areas and an equitable distribution of economic benefits among all stakeholders. Fifth, rural-urban linkages should highlight the symbiotic relationship between towns and their surrounding rural areas. Towns, as an intermediate level between rural and urban areas, shall be deemed as important links in rural development, because they are locations where rural activities meet and where (often) organizational advantages are found (van Leeuwen 2010).

By fostering rural-urban linkages, innovation economies are very likely to emerge. This is because first, rural-urban linkages can promote a bi-directional knowledge flow from one sphere to the other besides capital and resource flows. In the real world, what is common is the conventional one-way knowledge flow from the urban to the rural, which tends to result in passive, unequal rural-urban relationship in the form of spatial connectedness rather than functional connectivity. A bi-directional knowledge flow instead can fuel rural development with development concepts and principles from the urban sphere. Meanwhile, the rural sphere can also benefit urban development with its innate traditional knowledge and value system. When there is a sound bi-directional knowledge flow, rural development and urban development can form a mutually reinforcing relationship. Therefore, development-related concepts and theories stemming from an urban context must be critically adapted to specific rural context and applied on a case-by-case basis for rural development. This means that external experience and lessons, both national and international as references for the practice of rural development, must be contextualized based on local realities and social and political economic conditions (Zhang 2016). Second, rural-urban linkages can make it possible to mobilize the highly potential role of rural landscapes in connecting rural and urban areas by means of new economic activities. Rural landscapes are essential resources for urban inhabitants' quality of life. Besides quality food, they can offer various services such as recreation, education, agritourism, etc., which are also important economic opportunities for a sustainable rural transformation. Cooperation between rural, peri-urban and urban inhabitants therefore should be actively encouraged and practiced, both in sharing knowledge of rural landscapes' heritage and the responsibilities for their management (ICOMOS-IFLA 2017). Third, rural-urban linkages are supportive for innovation economies by adjusting the supply chain and producer-consumer relationships. This is to be discussed in detail in sections 8.3. and 8.4.

8.2.4. Agricultural Production Innovations

Four things are central to rural development: new linkages between agriculture and society at large, new solutions to the income squeeze on agriculture as

emanating from the previous modernization period, new rural resources that secure ecological sustainability and new, robust industrial clusters (van der Ploeg and Roep 2003). What is evident in this argument is, agriculture remains to be both the crux of and solution to the issue of rural development. After all, the essence of the rural is agriculture (landscape and land use) (Pandey 2003). Given that the market is forcing structural change in agriculture and rural space in response to increasing concerns on food quality and security and the health implications of intensive agricultural practices, it is necessary to redefine the position and role of agriculture in relation to rural space (Banks and Marsden 2000). What needs to be created is a new position for agriculture as an integral part of a multidimensional rural development strategy. Under the discourse of innovation, the definition and positioning of agriculture should be in line with the requirement of sustainable development. This stipulates that sustainable agriculture, distinct from agribusiness (mono-cropping specialization emphasizing size-enlargement, capitalization and mechanization), is ideally in the form of small or medium scale, family-based farms emphasizing diversification of crops, operations, practices and bodies of knowledge (Friedland 2002).

Apart from increasing productivity, innovations in rural areas across a broader spectrum of policies and technologies are aimed at responding to a complex array of challenges at the agriculture-environment nexus (Sayer and Cassman 2013). This suggests that innovation in the agricultural sector is mainly driven by changing social needs and increasing environmental needs. At the social level, nowadays, demands for high-quality and custom-tailored agricultural products are emerging all over the world. On the one hand, this social trend results in a new type of demand for production and technologies. On the other hand, extensive and multidisciplinary knowledge is required to meet the manifold calls for a sustainable development of rural landscapes in the future so as to minimize new risks and assess consequences of use (Wiggering *et al.* 2010). At the environmental level, innovation in the agricultural sector is indispensable for effectively addressing two fundamentally different types of problems associated with agriculture: first, misuse of modern inputs (irrigation water, fertilizers and pesticides), and second, poverty and insufficient agricultural intensification (Hazell 1998).

Besides the social and environmental considerations, agricultural innovations are also an important means to overcome or mitigate the innate limitation of a certain existing agricultural pattern. In China, for instance, agriculture is still a smallholder economic one as a whole. This makes it difficult to realize the agricultural industrialization based on economy of scale compared to the large-scale farm agriculture in North America and the medium-size farm agriculture in Europe on the one hand. On the other hand, due to excessively dispersed operations, it becomes particularly difficult to control agricultural non-point source pollution through rationalized, coordinated use of agricultural

inputs. In addition, the agricultural development in China since the 1950s has been constrained by low quality of agricultural labor and poor agricultural socialized service system (Chen 2008). By contrast, in Italy, moving towards a shared and integrated strategy for a multifunctional agriculture involves a substantial revision of the general objectives of growth and development, combining conservation and innovation (Guarino *et al.* 2017) on the one hand, and an integration of agricultural production and environmental protection at a landscape scale on the other. To address the above-mentioned problems and respond to new needs, innovations in the agricultural sector in terms of production, entrepreneurship and organization are inevitable. This section is focused on production, the other two aspects are to be discussed respectively in sections 8.2.5. and 8.3.

Innovations in the production may take multiple forms, ranging from the application of new technologies, traditional and modern knowledge, environmentally friendly inputs to new production patterns. In Meixian County, besides the application of new technologies, innovations are mainly driven by the revitalization of traditional farming knowledge that highlights the symbiosis among all elements within the agricultural ecology. The county is well-known for its high quality strawberry, cherry and kiwi fruits. The growers of these fruits have integrated some traditional knowledge into modern farming techniques. Strawberry growers, for example, have resumed the traditional practice of rotating strawberry (*fragaria* × *ananassa*) and spring onion (*allium fistulosum*) to manage soil fertility and control pests. The scientific knowledge embedded in this traditional practice is, plants of the same family are genetically related, and therefore have similar characteristics in terms of appearance and demand of nutrients and susceptibilities to various pests (Tooker and Frank 2012). As a result, planting crops of the same family together or in succession, commonly practiced in modern crop production, raises the risk of pest outbreak and soil impoverishment. As strawberry and spring onion respectively belong to the *rosaceae* family and the *amaryllidaceae* family, their rotation helps avoid the buildup of shared pests and consumption of the same set of nutrients. Also, spring onion gives off phytoncides that can contribute to pest control by prevent bacteria, fungi and harmful insects. The cherry growers, instead, have resumed the traditional practice of introducing rapeseed (*brassica napus*) in cherry fields. Rapeseed, as a member of the *brassicaceae* family, is a major nectar source plant that can attract pollinating insects and thereby considerably helps increase the pollination and fruit setting rate of cherry flowers. Meanwhile, the rapeseed later serves as a high quality green manure. As for the kiwi growers, in recent years, major efforts have been done to improve the ecology of kiwi orchards and thereby to improve the fruit quality. Major practices include increasing the use of traditional manure and compost, planting hairy vetch (*vicia villosa*), a nitrogen-fixing plant also able to preserve moisture, keep competitive weeds from sprouting, and reduce orchard temperature in hot summer time.

In terms of agricultural patterns, compound farming, a common practice in Meixian County when the dominant cultivation was food crops some twenty years ago (e.g. planting soya and other legumes in corn fields), is again gaining popularity under new forms. For example, in ecologically fragile areas, such as mountainous and loess plateau areas, farmers are encouraged to return farmlands into groves that are of economic value and conducive to soil and water conservation, such as walnuts, Sichuan pepper (*zanthoxylum bungeanum*), etc., instead of continuing the cultivation of traditional food crops. At the meantime, under-grove economies are developed by means of innovative use of the vacant space under the trees, such as poultry farming, beekeeping and Chinese herbal medicine cultivation. Therefore, not only has the ecological restoration function of agricultural lands been improved, but also the economic benefits are increased. Kiwifruit growers commonly cultivate corns along the ridges in their orchards. Corn plants are not only a food crop, but more importantly prevent damages to the trees and fruits in case of strong wind or scorching weather. The aquaculture of crayfish and mitten crabs in the rice paddies as mentioned in Section 6.1.1. is also a good example of the efficient use of agricultural lands while improving the agricultural ecology.

In the Locride area, similar to in Meixian County, innovations in the agricultural production are also in the form of application of new technologies, traditional and modern knowledge and environmentally friendly inputs. Manure and compost are more commonly used in organic farming, especially at smallholder family farms than in Meixian County. Compound farming is also practiced, often in the form of mixed olive groves and citrus cultivation.

Generally speaking, however, innovations in the production process are largely limited to the application of modern technologies and knowledge. On this regard, a good example if the Azienda Agricola Tenuta Morano located in Portigliola. The farm, covering an area of 56 ha, is distinct from an industrial farm by cultivating a good variety of crops including fruits, vegetables, vines and olive trees. This diversity on the one hand extends and enriches its product portfolio; on the other hand, it also brings about difficulties in managing different parcels of land of different crops. It is not unusual that some lands are omitted due to confusion. To overcome this problem, the farm is now applying the state-of-the-art technologies like Geographic Information System (GIS) in the field management, especially in terms of irrigation and fertilization: each parcel of land is assigned with an ID and a QR code, and each activity performed is dataized and interfaced with the GIS. Over time, a database is expected to be constructed, which will contribute to more precise, efficient decision-making especially for pest control based on big data analysis. The farm has also created experiment fields to test new inputs like fertilizer and new cultivars before large-scale application and plantation. This has to a certain degree helped reduce the risk of failure due to a lack of effectiveness of the inputs or adaptability of new cultivars. For example, before the application of a new

organic fertilizer made of sea weeds, the farm has experimented it through randomized controlled trials (RCTs) on different crops. By comparing the treatment groups and the corresponding control groups, its effectiveness has been proved and then the fertilizer has applied at large scale. It is worth noting that, in the Locride area, the case of the Azienda Agricola Tenuta Morano is quite particular because its owner is a young IT scientist, who has both the essential capacities and willingness to usher in innovations driven by new technologies.

8.2.5. Agricultural Entrepreneurial Innovations

8.2.5.1. Overview of Innovations of Agricultural Economies in Meixian County and the Locride Area

The dissertation defines agricultural economies as rural-located entities in the form of family-run farms, cooperatives and joint-stock companies, whose major activities are within the agricultural sector, both in terms of production of raw materials, processing and marketing. To figure out the current innovation of agricultural economies in Meixian County and the Locride area from the perspective of local rural entrepreneurs, the author carried out semi-structured interviews of 10 leaders of different types of agricultural economies (8 agricultural cooperatives and 2 joint-stock companies) from Meixian County and 13 (3 cooperatives, 8 family-run farms and 2 sole proprietors) from the Locride area. The interviews were followed by a questionnaire (Appendices 4-5), which required the interviewees to respond to questions related to predefined impact factors of innovation, i.e. mainly their evaluation of the importance of different assets (see Table 12), cooperation and partnership, constraints, financing, social impact, land use and production (see Table 13). Both the interviews and questionnaires were designed in a way to help understand the impact factors (both negative and positive) of the innovation process.

Almost all of the interviewed agricultural economies are small-sized entities, namely, with 100 or fewer employees, and currently in good operation according to the interviewees' own assessment: respectively 66.67% and 76.92% of the interviewees from Meixian County and the Locride area indicated their assessment of their business performance as "good". The interviewees from the Locride area generally show a higher education attainment, of whom 46.15% with a university degree, 30.77% with a high school certificate and 15.38% with a vocational school certificate. In contrast, of those from Meixian County, 16.67% with a university degree, 50.00% with a vocational school certificate and 33.33% with a middle school certificate. The majority of them reported having a good knowledge of regional/national policies of support, respectively 83.33% of the interviewees from Meixian County and 92.31% from the Locride area. According to their evaluation of the importance of different assets, the majority (more than 50%) of the interviewees considered networking and interpersonal relationships, trust between partners, knowledge and technology as very important for their

operation in both of the case study areas. In the Locride area, the majority interviewees also considered partnerships and culture, tradition and local heritage as very important for their operation.

Regarding collaboration, in terms of collaboration partners, the majority of interviewees from the Locride area claimed previous or ongoing collaboration with universities/research institutes and other businesses/cooperatives of the same sector and field. In Meixian County, most of the collaborations were with public entities and universities/research institutes. In terms of collaboration content, the majority of interviewees from the Locride area stated sharing of knowledge and information and research and development of products as most commonly practiced, while sharing of knowledge and information and technical assistance were most popular in Meixian County.

Concerning the factors that were constraining the development of businesses/cooperatives, lack of networking and collaboration, lack of funds and financing tools, and lack of favorable policies were the three constraints highlighted by the majority of the interviewees from the Locride area. In contrast, in Meixian County, the majority of the interviewees stressed lack of funds and financing tools, lack of talents, and outdated techniques and production process. The most common financial tools used by entrepreneurs are identical in both the Locride areas and Meixian County are own funds, financial mortgage and public subsidies and funds. Regarding their social impact, while the majority of the interviewees from both the case study areas asserted the recruitment of local residents, the majority of the interviewees from Meixian County also stated their engagement in charitable services (e.g. aid to residents in economic difficulty) and donation to projects of public interest (e.g. infrastructure, environmental protection). With respect to the land use, all the interviewees from Meixian County reported using lands with the operation rights transfer from farmers, and half of them also using lands of collective ownership. In the Locride area, instead, most of the interviewees are using private and contracted lands. As for production, the majority of the interviewees from the Locride area claimed that they followed and respected traditional techniques and knowledge, integrated modern techniques and knowledge, respected the ethics of man and animals as well as being environmentally friendly and continually innovating. In comparison, the majority of the interviewees from Meixian County stated that they integrated modern techniques and were environmentally friendly and continually innovating.

Table 12. Entrepreneurs' evaluation of the importance of different assets in Meixian County and the Locride area

Asset	Area	1	2	3	4	5
Financing	Meixian	-	-	16.67%	33.33%	50.00%
	Locride	-	-	38.46%	46.15%	46.15%

Networking	Meixian	-	-	-	33.33%	66.67%
	Locride	-	-	7.69%	38.46%	53.85%
Trust	Meixian	-	-	16.67%	16.67%	66.67%
	Locride	-	-	7.69%	7.69%	84.62%
Partnership	Meixian	16.67%	-	-	50.00%	33.33%
	Locride	7.69%	7.69%	7.69%	23.08%	53.85%
Knowledge/ Technology	Meixian	-	-	16.67%	-	83.33%
	Locride	-	-	7.69%	7.69%	84.62%
Culture/ Tradition	Meixian	-	-	16.67%	50.00%	33.33%
	Locride	7.69%	-	7.69%	15.38%	69.23%

Note: The evaluation was indicated from 1 (little important) to 5 (very important).
Source: The Author's own elaboration.

Table 13. Major impact factors of the innovation of agricultural economies in Meixian County and the Locride area

	Meixian County	Locride Area
Collaboration partners	- public entities (83.33%); - universities/research institutes (66.67%)	- universities/research institutes (61.54%); - other businesses or cooperatives of the same sector and field (53.85%)
Collaboration content	- sharing of knowledge and information (66.67%); - technical assistance (66.67%); - social services (50.00%) - training (50.00%); - joint innovation (50.00%)	- sharing of knowledge and information (53.85%); - research and development of products (61.54%); - training (46.15%); - technical assistance (38.46%);
Constraints	- lack of funds and financing tools (83.33%); - lack of talents (83.33%); - outdated techniques and production process (66.67)	- lack of networking and collaboration (69.23%); - lack of funds and financing tools (61.54%); - lack of favorable policies (61.54%)
Financing tools	- own funds (83.33%); - financial mortgage (50.00%); - public subsidies and funds (66.67%)	- own funds (92.31%); - financial mortgage (23.08%); - public subsidies and funds (38.46%)
Social impact	- local hiring (66.67%); - charitable services (66.67%); - donation to public projects (66.67%)	- local hiring (69.23%); - charitable services (23.08%); - donation to public projects (15.38%)
Land use	- lands with transferred operation rights (100%); - lands of collective ownership (50.00%)	- private lands (76.92%); - contracted lands (61.54%)
Production	- integrate modern techniques (66.67%); - environmentally friendly (83.33%); - continually innovating (66.67%)	- follow and respect traditional techniques and knowledge (76.92%); - integrate modern techniques and knowledge (84.62%); - respect the ethics of man and animals (84.62%);

	- environmentally friendly (92.31%); - continually innovating (53.85%)

Note: The percentage indicates the ratio between the interviewees who chose a certain option and the total number of interviewees.
Source: The Author's own elaboration.

8.2.5.2. Circular Economy

Agricultural innovations, when unable to understand the cause and effect from a systems viewpoint, tend to fail to provide sustainable solutions to agricultural challenges as they ignore the context of the relationships in which the problems are embedded (Banson *et al.* 2018). By systems thinking, agricultural innovations transcend the narrow sectoral or technical innovations and form nested sets of innovations at the scale of the plant, the agronomic system, the landscape, and the institutional environment (Sayer and Cassman 2013). This new way of thinking moves beyond the traditional, linear approach to solving problems towards a holistic, systemic approach that focuses on the root causes and interconnectedness between various components of the agricultural sector (Banson *et al.* 2018).

"Systems thinking" is integral to the concept of "circular economy" (Ellen MacArthur Foundation 2013). Theoretically rooted in ecological economics, circular economy can be understood as a restorative and regenerative response to multiple pressures on economic development, such as diminishing natural resources, environmental pollution, climate change, etc. Circular economy should be ideally developed as a solution of "systems integration" so as to coordinate all the new interactions, important causal and feedback loop mechanisms, and social, economic, and environmental implications (Laurenti *et al.* 2018). Based on an analysis of more than 100 definitions, Kirchherr and others (2017) offer a comprehensive definition of circular economy, perceiving it as,

> … an economic system that replaces the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes. It operates at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, thus simultaneously creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations. It is enabled by novel business models and responsible consumers. (p. 229)

Indeed, to help achieve sustainable development, it is critical for circular economy to integrate material and social (physical resource) systems as well as the internalization of environmental and social externalities into the formal economy (Laurenti *et al.* 2018). Currently, circular economy is widely associated

with sustainable development, and therefore central to numerous national and regional policies and strategies all over the world. The EU currently considers the transition to a more circular economy as critical for developing a sustainable, low carbon, resource efficient and competitive economy. Distinct from the conventional one-way economy that follows the conventional take-make-dump extractive industrial model (Pitt and Heinemeyer 2015), it is mainly aimed to maintain the value of products, materials and resources in the economy for as long as possible, while minimizing the generation of waste (EC 2015).

China also sees the development of circular economy as a major strategy and measure to promote the construction of ecological civilization as was required by the 18th National Congress of the CPC. According to the national "Circular Economy Development Strategy and Immediate Action Plan" (2013), the first of its kind in the world, circular economy is indispensable to accelerating the transformation of economic development mode, building a resource-saving and environment-friendly society, and achieving sustainable development. In the agricultural sector, circular economy, by using innovative technologies and profitable business practices, is an effective tool to address the utilization of agricultural wastes, by-products and co-products (Toop *et al.* 2017). In the following section, the case study of the Fattoria della Piana is carried out to demonstrate how circular economy actually takes place in rural areas.

The Fattoria della Piana is a cooperative company located in Candidoni Comune, about 60 km northeast of Reggio Calabria. Originally founded in 1936 as a dairy cooperative and then a family farm till 2006, the company today covers all the activities of the agri-food chain, ranging from forage cultivation, livestock farming, agricultural products like oil, citrus fruits, cheese making to harmless treatment of agricultural wastes and renewable energy generation. In this agri-food chain, the entire production process (cultivation, livestock farming, processing and distribution) and waste treatment and energy (thermal and electricity) are closely interacting and interconnected in positive feedback loops and therefore central in the "Fattoria della Piana ecosystem" (Fig. 73).

By forming a circular ecosystem, the Fattoria della Piana has created a typical pattern of circular agricultural economy capable of linking agri-food production with the associated waste treatment through renewable energy generation and natural wastewater purification. In so doing, positive feedback loops are created, wherein the economically "burdensome" and environmentally harmful wastes stemming from one production process are transformed into eco-friendly resources, like thermal energy and electricity, digestate and purified water that can all enter a new production process. Needless to say, energy is a crux to make the "Fattoria della Piana ecosystem" a circular one, which is resolved by three facilities, namely, the biogas plant[80] (Figg. 74-75), the roof-top photovoltaic

[80] The biogas plant, with an electrical output of 998 kW, is the largest agri-energy power plant in central and southern Italy. It is critical to the Fattoria della Piana's self-sufficient ecosystem, capable of producing energy from the wastes emanating from the agri-food production and livestock farming. Manure and

system[81], and the phytodepuration plant[82]. These facilities all generate outputs which are also inputs for other activities. The thermal energy and electricity generated in the biogas plant and the roof-top photovoltaic system are used for the heating of the dairy factory during the processing process, offices and agritouristic restaurant. The digestate, residue from the biogas plant, serves as organic fertilizer for the cultivation of citrus fruits and olive groves, which later provide pomace for the biogas plant. The wastewater, made up of discharges coming from the company's dairy plant, milking parlor, agritouristic restaurant, guesthouse and offices, is purified naturally in the phytodepuration plant and then reused as irrigation water. At the same time, the common reeds growing in the phytodepuration plant later serve as additional biomass for the biogas plant.

Indeed, circular economy is essentially about how to convert problems like waste into benefits, and how positive feedback loops are formed. It is also able to transform a waste into multiple resources. For instance, in the biogas plant, the wastes are transformed into thermal energy, electricity and organic fertilizer, making a comprehensive reuse of the wastes possible. Altogether the three facilities make the company self-sufficient at energy and agricultural input levels, generating multiple social, economic and environmental benefits both to the company itself and the surrounding rural areas (Table 14). The biogas plant is especially of high economic and environmental impacts. The wastes it treats, including manure, sewage, whey, citrus fruit and olive pomace, discarded vegetable, not only emanate from the company's own activities, but are collected from other producers (mainly citrus and olive groves) of the surrounding territories. This proves to be an added value for these producers, as waste disposal used to engender high costs and therefore a huge economic burden for them.

Not only is the energy consumption for production self-sufficient, but also for the logistics and transportation of products. Following a fleet (refrigerated trucks) upgrading program in 2013, the company changed the previous diesel oil-fueled fleet to a methane-fueled one. The greener fleet now is powered by the methane generated in the biogas plant. In so ding, the company has been able to free itself from the dependence on fossil fuel while taking advantage of renewable and non-polluting energy produced by itself, which leads to an almost

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sewage, plus the whey from the dairy processing, are collected in two fermenters, inside which an anaerobic fermentation process takes place. This process generates biogas, a biological gas that contains about 55% of methane, which is then burned in a cogenerator, a motor that produces electricity and thermal energy. The electricity produced is able to satisfy the needs of 2,680 families, and the thermal energy is used for the production processes of the dairy, allowing to save fossil fuels.

[81] The 198 kW photovoltaic system, totally integrated on the roof of the stalls, inclined at 14° and oriented to the South, covers an area of 1,080 m². The 660 modules of high-efficiency monocrystalline silicon annually produce about 300 MWh of electricity, and directly power the company's electrical utilities, allowing to reduce energy costs and, in particular, electricity consumption related to the refrigeration of dairy products.

[82] The 2,200 m² phytodepuration plant is a system of natural purification of wastewater. This plant simulates the principle of self-purification typical of aquatic environments and wetlands. In this wet ecosystem, the various components (plants like common reeds, animals, microorganisms, silt and solar radiation) contribute to the sedimentation, absorption and degradation of pollutants.

total reduction of fuel costs related to logistics and transportation.

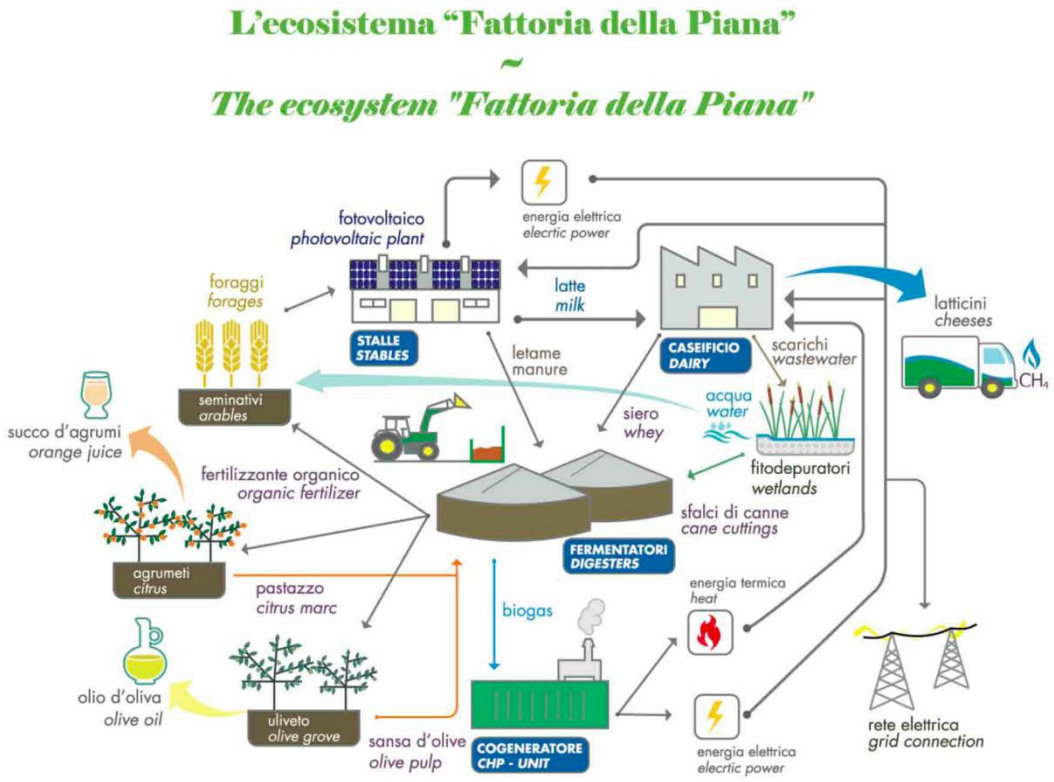

Figure 73. Circular agricultural economy in the "Fattoria della Piana ecosystem".
Source: Fattoria della Piana.

Figure 74. Fermenters of the biogas plant of Fattoria della Piana. © Y. OU (2018)

Figure 75. Cogenerator of the biogas plant of the Fattoria della Piana. © Y. OU (2018)

Table 14. Agricultural waste treatment and renewable energy generation in the Fattoria della Piana

Energy	Problems	Advantages
Biogas Plant	• By-products derived from its	• Significant reduction of

	own agricultural processing and from the neighboring businesses • Wastewater from neighboring farms • Livestock waste from farms of its members • High odorigenic charge in by-products and wastewater	company disposal costs • Disposal of by-products for neighboring farms • Cogeneration of both thermal energy and electricity for energy self-sufficiency • Additional income by selling electricity to the national grid • Reduction of the odorigenic threshold in the output product, the digestate
Photovoltaic System	• High energy costs • Use of electricity produced with nonrenewable sources	• Significant reduction of company energy costs • Additional income by selling electricity to the national grid • Less dependence on nonrenewable energy sources
Phytodepura-tion Plant	• Energy costs for the treatment and purification of company waste water • Management and maintenance costs of traditional sewage systems • Low capacity of traditional systems to absorb COD peaks (Chemical Oxygen Demand)	• Reduction of management and maintenance costs • Possibility of reuse of outgoing water for irrigation of land • Creation of additional biomass for use in anaerobic digestion (biogas)

Source: The Author's own elaboration based on the interview and the company's website <http://fattoriadellapiana.it/en/la-filiera/>, accessed on September 25, 2018.

In Meixian County, circular economy is an emerging entrepreneurial form in rural areas. A good example is the Hengshengxin Poultry Farming Professional Cooperative, located in Heping Village. Established in 2011, the cooperative has made its production process circular by combing poultry farming, fodder crop cultivation and waste treatment. It created in 2016 an organic fertilizer manufacturing plant, where the manure is fermented and transformed into organic fertilizer. The fertilizer is used for cultivating fodder crops like wheat and corn for the poultry and sold to local kiwi fruit growers at cost price. This proves to be quite beneficial for local farmers, because on the one hand, it has helped them reduce their inputs costs and thereby increase their income. On the other hand, it has also contributed to the improvement of the fruit quality by regenerating the soil and reducing the application of chemical fertilizers.

8.2.5.3. Entrepreneurship in Networks: Contratto di Rete di Imprese

Following globalization and economic integration, big corporate companies have become major competitors and winners on both national and international markets. Facing the resulting intensified market competition and concentration, small and medium-sized enterprises (SMEs)[83] often find themselves in a

[83] The European Commission defines SMEs as firms that have fewer than 250 employees or generate up to 50 million euros in annual turnover (EC 2017a).

disadvantageous situation both in terms of resources at their disposal and production and transaction costs to compete with bigger ones or multinationals. This is mainly due to their innate difficulty in harnessing the benefits of the economies of scale and scope and lack of the resources and capabilities to develop their own markets (Lee *et al.* 1999). Besides, they also lack networks critical to the access to information and knowledge and capabilities for R&D expenditure and innovation (product, process and organization) indispensable for competitiveness (Harvie 2015). Nevertheless, what remains undeniable is, SMEs play a significant socioeconomic role in terms of job creation, economic development and distribution of wealth (Harvie 2015; Hassan and Mohamed 2015; Herr and Nettekoven 2017; Karadag 2016). Therefore, both developing and developed countries need to support SMEs as an important part of their development strategy (Herr and Nettekoven 2017). This essentially requires that the growth and innovation potential of SMEs, considered by the EU as the backbone of its economy, be harnessed so as to achieve greater regional growth and create new and better employment (Pilati 2015). Herr and Nettekoven (2017) maintain that access to finance, skill-level of the labour force, clustering, reciprocity network (social capital), and favorable public policies are critical to the development of SMEs. Considering their innate disadvantages and the polarizing power of the market, building up networks among SMEs is a crucial means to help strengthen their linkages and thereby reinforce their capabilities to be more competitive on the market (Lee *et al.* 1999). Indeed, linkages among SMEs are critical to "systemic competitiveness", i.e. competitiveness that goes beyond the individual firm to become a feature of certain sectors in specific regions or of entire regions and countries (Ocampo 2007).

In Italy, the *contratto di rete di imprese* (CRI, literally "network contract of enterprises") is an important tool to build up networks among SMEs. The institution of the CRI was first introduced into the Legislative Decree No. 5 of 10 February 2009 and later converted into Law No. 33 of 9 April 2009. According to this law, the CRI is an instrument to help "more entrepreneurs pursue the goal of increasing, individually and collectively, their innovation capacity and competitiveness on the market. To this end, they are obliged, on the basis of a common network program, to collaborate in predetermined forms and areas related to the operation of their own firms, or to exchange information or services of an industrial, commercial, technical or technological nature, or to jointly exercise one or more activities falling within the scope of their business[84]". This juridical definition means that the fundamental objective of creating a CRI is to help increase the innovation capability and competitiveness of SMEs.

[84] See the original text: "Con il contratto di rete più imprenditori perseguono lo scopo di accrescere, individualmente e collettivamente, la propria capacità innovativa e la propria competitività sul mercato e a tal fine si obbligano, sulla base di un programma comune di rete, a collaborare in forme e in ambiti predeterminati attinenti all'esercizio delle proprie imprese ovvero a scambiarsi informazioni o prestazioni di natura industriale, commerciale, tecnica o tecnologica ovvero ancora ad esercitare in comune una o più attività rientranti nell'oggetto della propria impresa."

From an entrepreneurial point of view, the CRI is distinguished from other forms of collaboration, as it focuses on the pursuit of common strategic growth objectives, rather than on the sharing of returns (RetImpresa 2011). This means that the major role it plays is one of coordination and interaction between the participants, while the strategic decision-making remains with individual companies. In this sense, as a contractual coordination, the CRI itself marks an institutional innovation, in that it makes it possible to combine entrepreneurial autonomy with the ability to access to a critical mass of financial, technical, physical and human resources, or know-how, therefore allowing the achievement of strategic objectives, otherwise out scope for a single firm (Brancatisano 2017). Under this condition, all members within the CRI collaborate in the form of three activities:

- *activities of coordination* to obtain better conditions in external relations (e.g. coordination of the process of quality control of goods along the supply chain, definition of a price policy according to the antitrust rules) or to reach a final unit result (such as the production of a final good);
- *instrumental activities* to achieve better management results (e.g. services of common interest, logistics management, warehouse, telematic platforms, promotion of goods and branding, realization of common laboratory or common research center);
- *complementary activities* to do what individual companies would be unable to do (e.g. participation in tenders or competitions) (RetImpresa 2011).

According to the author's questionnaire survey (Appendix 2), most of the family farms are small and medium-sized in the Locride area, of which 22% cover an area between 5 and 10 ha, 18% between 1-2 ha and 15% between 10-20. Family-run firms are also mostly small-sized, namely, with fewer than 100 employees. To strengthen their innovation capabilities and competitiveness, in 2017, eight local family-run small producers of *Greco di Bianco* (recognized as "DOC", i.e. denomination of controlled origin) and *Mantonico* (recognized as "IGT", i.e. typical geographical indication), well-renowned wines endemic to Bianco Comune, have established a CRI called "*Le Vigne del Greco di Bianco*" (hereinafter referred to as CRI-VGB). Currently, there are 11 participants. The CRI-VGB is committed to the following activities:

- develop collaboratively new skills or new products;
- pursue processes of specialization or diversification;
- share risks;
- reduce transaction costs;
- create incentives for learning and dissemination of information;
- rationalize common activities;
- make use of a greater variety of resources, skills and information;
- obtain greater impulses to product and process innovation through exploration economies and externalities of innovation;
- improve the rating of participating firms;

- benefit from tax breaks on profits from the network.

The CRI-VGB is aimed at achieving, through the definition and implementation of a common program of development based on shared strategic objectives that allows the partners of the network to grow together. It is especially beneficial for these small firms, as they more often than not lack financial resources and capacities to individually carry out activities related to innovations. Through the CRI-VGB, they are able to jointly develop, finance and implement projects of common interest by pooling financial, physical, social and human capital. Within the CRI-VGB, they are expected to benefit from multiple advantages, including flexible collaborative and simplified institutional forms, cost-reduction by collective purchasing and marketing, greater external negotiation power, cost-sharing investments, adaptability and mobility of the use of human resources as well as tax breaks and incentives.

The CRI-VGB helps the participating firms to reduce their production and operation costs in five ways mainly by means of collective purchase and cost sharing. First, common labor is used in different work related to the cultivation process, including pruning, soil breaking, binding, grape harvest, etc. Second, the CRI-VGB helps reduce costs both related to cultivation and wine production through collective purchasing of inputs. These inputs are mainly products related to phytosanitary treatments (inputs like pesticides, fertilizers, etc.) and bottling (bottles, labels, cartons, caps, etc.). When purchased collectively through the network, it is possible to benefit from special discounts since collective purchase means a greater quantity than purchased by an individual firm that otherwise would not benefit from the same discounts based on quantity. Besides discounts, the CRI-VGB also enjoys a reduced value-added tax. Third, costs are reduced also during the marketing process through collective promotion at trade fairs, where a joint stand is created showing the samples of all participants of the CRI-VGB. This helps not only reduce costs related to promotional activities, but also increasing the visibility of the territorial brand. Fourth, firms are able to reduce logistic costs by sharing cellars where necessary. Fifth, the new electronic cellar register system requires constant work and so much bureaucracy, which means a major difficulty for the individual firm to handle it alone online. Through cost-sharing investment like collective purchase of the software for the new electronic cellar register system, the CRI-VGB has managed to not only make savings of 25% of the costs, but also deal with technical and bureaucratic issues more efficiently. In terms of external negotiation power, the CRI-VGB has gained a greater negotiation power at the administrative level. As the collective legal “person” of the territorial brands *Greco di Bianco* DOC and *Mantonico* IGT, it has selected its representative at the Board of Directors of the Provincial Consortium dedicated to the regulation of the DOC and IGT (each DOC and IGT are allowed to have a representative at the the Board of Directors), which was established by the Chamber of Commerce of Reggio Calabria.

In terms of collaboration, the CRI-VGB has promoted the sharing of information related to marketing (like business information) and cultivation (like pest or disease outbreak and the associated control) among member firms. There have also been more exchanges of cultivation techniques among firms. Currently, the vinification phase sees no collaboration. The CRI-VGB may well take a step further towards the sharing of oenologists. In addition, the CRI-VGB is able to foster a territorial impact critical for addressing territorial needs by initiating collaborative projects to participate in public tenders. The principal advantage of collaborative projects is, it is possible to pool human capital to form collective capacities while reducing the potential costs related to the application. Previously, each individual firm participated alone in tenders, which means not only an isolated, singular impact related to the firm's own interests, but also a slimmer chance of winning due to its limited capacities in preparing the application and dealing with the bureaucracy. Last but not the least, the CRI-VGB has created a collective fund constituted of the annual membership fees of € 100, which are used to cover expenses related to local events like promotions, meetings, etc.

The agricultural sector sees still another innovative economic form based on agricultural multifunctionality. A common strategy is the combination of agriculture and tourism, which is to be discussed in Chapter 9.

8.3. Agricultural Cooperatives

8.3.1. Definition

Cooperatives, by improving the farmers' organization, have played an important role in rural development (Bijman *et al.* 2012; Bingen *et al.* 2003; Hu 2013; Kumar *et al.* 2015; Liu and Pang 2013; Martin and Stiefelmeyer 2001; Mohammed and Lee 2014; Ortmann and King 2007), especially in developing countries where the agricultural sector is driven by smallholder farmers. Market failures (e.g. oligopsony, i.e. few buyers and many sellers), antitrust defense, special knowledge of clientele, subsidies or regulatory exemptions, absence of a service provider, and social needs all justify the need for cooperatives to economic development in rural areas (Centner 1988). It is recognized worldwide that cooperatives follow such principles[85] as voluntary and open membership; democratic member control; member economic participation; autonomy and independence; provision of education, training and information; cooperation among cooperatives; and concern for the community (FAO 1998; Ortmann and King 2007). However, not all of these principles are "strictly" respected in the real world (Wang 2013).

The definition of "cooperative" tends to be diverse under different geopolitical and economic context. A cooperative is defined by the International

[85] The seven principles were adopted by the ICA at its congress in Manchester in 1995.

Co-operative Alliance (ICA) as "people-centred enterprises owned and run by and for their members to realise their common dreams". As businesses driven by values not just profit, cooperatives either reinvest the profits gained in the enterprise or return to their members. They therefore should stick to such values as self-help, self-responsibility, democracy, equality, equity and solidarity. The fact that cooperatives are locally controlled, people-centered and self-investing makes them ideal organizations to experiment place-based innovations. According to the *Italian Civil Code*, a cooperative is "a type of company that is set up to jointly manage an enterprise that aims to provide the same members (mutual purpose [*scopo mutualistico*]) with the goods or services for the achievement of which the cooperative has arisen" (art. 2511)[86]. The main purpose of the cooperative therefore is the consistent mutual purpose (*fine mutualistico*) of providing goods or services or work opportunities directly to its members on more advantageous terms than those that would be obtained from the market (Frascarelli 2006).

An agricultural cooperative (AC), instead, is made up of farmers and carry out both direct agricultural activities and marketing and processing of agricultural products conferred by the members (Fibo 2005). In China, the term "farmers' professional cooperative (FPC)" is commonly used. An FPC is referred to as "… voluntarily associated and democratically managed economic organizations of mutual aid which are established, on the basis of contracted operations of rural households, by the producers of agricultural products, or the providers and users of agricultural production and management services" (Art. 2) in the Farmers' Professional Cooperatives Law of the P.R.C. The stress on "professional" suggests that cooperatives in China are organized according to the producers of the same agricultural products (Yang 2013) for the purpose of specialization. Regarding the typology of ACs, generally there are three types:

- cooperatives of agricultural services, which provide various services to their individually farming members (which may distribute farm supplies and inputs purchased in volume, such as seed, fertilizer, feed, chemicals, etc., offer farm equipment, technical assistance and hardware, etc.);
- cooperatives of agricultural production, where production resources (land, machinery) are pooled and members farm jointly;
- cooperatives of marketing (which may bargain for better prices, handle, process or manufacture, and sell farm products) (Cropp and Ingalsbe 1989; Dang 2015).

Such a categorization is only on a generic term. In practice, there often exists overlaps among the three types of cooperatives, as one cooperative may deal with more than one type of activities.

[86] See the original text: "È un tipo di società che viene costituita per gestire in comune un'impresa che si prefigge lo scopo di fornire innanzitutto agli stessi soci (scopo mutualistico) quei beni o servizi per il conseguimento dei quali la cooperativa è sorta."

According to Wang (2009), there are two different modes of thinking concerning the definition of agricultural cooperatives: the "fundamentalist model" and "revisionist model". The former, as a classical model, conforms to such principles advocated by the ICA as democratic decision-making system of "one member, one vote", dividend distribution system, profit distribution system according to the transaction amount, provision of services and membership equality, etc. However, with the development of the world economy, the socioeconomic and institutional contexts in terms of economic social class systems, market competition patterns, and external environment of all countries have undergone fundamental changes in all countries. Under this circumstance, the definition of cooperatives must be contextualized, and critically adjust and localize the classic principles according to the new changes in social structure, economic form and market structure so as to adapt its organization and operation to the competitive market economy. This justifies the legitimacy of the revisionist model.

For the purpose of this dissertation, the term "agricultural cooperative (AC)" is used, so as to better describe the organizational diversity of cooperatives, which are often constituted of both farmers and farmer entrepreneurs. Indeed, it is difficult to have a uniform definition of ACs considering their varied development stages and types in different regions as well as different conceptualizations. This suggests the need of a localization process of ACs based on contextualized experimentation and critical adjustment rather than dogmatic application of classical principles. Especially for ACs dedicated to strengthening their market position and bargaining power, their legal form and organizational development should be based on practical rather than ideological arguments, as well as on the institutional context, including legal, social and cultural aspects (Bijman *et al.* 2012). Indeed, it is the capability of solving specific practical problems in rural areas and farmers' actual acceptability that justify the legal form and organizational development of ACs rather than generic international standards (Zhao 2005 cit in Wang 2013). Nevertheless, in this localization and adjustment process, some universal principles must be respected, including popular voluntary participation, equal say in the organization, effective fair share of profits, etc. (Wang 2013). This requires that no matter what form ACs may take, whether association, shareholding system, or a "farmer + company form", they should not be geared solely to profit maximization.

Based on the above discussions, the author defines ACs as voluntary, democratic social and economic organizations dedicated to production, service provision and/or marketing related to the agri-food sector where, replying on popular effective participation and cooperative self-help of members, locally embedded resources such as financial, physical, human and social capitals are pooled and mobilized in a way to maximize the benefits for all their members.

8.3.2. Significance

In most cases, the farmers from the case study areas have small-sized farmlands,

and their productive activities are still more or less constrained by "the great fragmentation of the various lands, from the persistence of traditional agricultural practices, with little use of fixed capital, very little technological equipment and almost exclusive use of labor capital" (Massullo 2001, 179). As a result, the agricultural sector faces a diminishing competitive advantages, especially with the deepening urbanization and globalization. Often, accountability and transactions costs discourage rural traders, input suppliers, and output marketing companies from doing business with farmers, which is worsened by the bargaining imbalances between farmers and their upstream and downstream partners along the agri-food supply chains (Bingen *et al.* 2003). Traditionally, financial subsidies, trade protection and investment in infrastructure have been popular tools to improve the competitiveness of the agricultural sector and thereby address rural socioeconomic problems. This conforms to an "exogenous model" of agricultural development, with the main forces for change originating from outside the rural areas (Whittaker 2002). How to make these external forces become internalized or sustainable remains a largely unsolved issue. Subsidies, for examples, often in the form of financial incentives, prove to provide no inherent incentives (Fischer *et al.* 2012). In this regard, as a complement to the exogenous model, small agricultural businesses in rural areas can gain competitive advantages by adopting an endogenous approach. The precondition to this is, there needs to be the associationism among them, which is critical for forming a major force to compete with large food businesses (Saija 2009).

ACs prove to be effective social and economic organizations with far-reaching social, economic and environmental implications. They are believed to be able to first, build up social capital and promote social organization, equality and poverty reduction; second, promote agricultural restructuring and specialization; third, increase competitiveness by reducing market risks and transaction costs, providing access to resources, spurring process and product innovation and improving marketing and financing system; fourth, foster and empower high-skilled farmers; and fifth, improving environmental sustainability while guaranteeing food quality and safety (Bijman *et al.* 2012; Bingen *et al.* 2003; Kumar *et al.* 2015; Mohammed and Lee 2014; Yang 2013).

Currently in the EU, ACs are employed as an important tool to promote and facilitate the restructuring and consolidation of the agricultural sector so as to enhance the competitiveness of the food supply chain (Bijman *et al.* 2012). Based on the evidence from all EU member states, ACs play an important role in helping farmers, by strengthening their bargaining power, to capture a higher share of the value added in the food supply chain (*ibid.*). In China, ACs are expected to:

- complement the smallholder farming based on the existing land contract system;
- help achieve agricultural modernization;

- increase farmers' income;
- optimize the ecological environment;
- strengthen the position of farmers on the market;
- reduce the transaction costs and risks of farmers participating in market competition while enhancing their competitiveness;
- provide integrated services before, during and after the production activities for members;
- promote agricultural specialization and restructuring in a region;
- promote modern agricultural technologies;
- cultivate modern, professional farmers;
- promote comprehensive rural reform (agricultural investment, development of medium-sized agricultural business forms, and rural grassroots organizations) (Liu and Pang 2013; Yang 2013).

Regarding social capital, ACs prove to be critical for recovering the social bonds among farmers and reorganizing them in a way to effectively counter the destructive forces triggered by the social ideology prevailing in rural areas stemming from the market economy characterized by individualism and self-interestedness. In view of the changing nature of world agriculture and food markets and the resulting need for vertical coordination along the agri-food supply chains, especially in developing countries, ACs promote contract farming that overcomes input market failures (e.g. underinvestment in land productivity) and asymmetric information problems (e.g. oligopsony) in the output market, and thereby ensure the reinforced participation of smallholder producers in the markets with high-value, customized products (Kirsten and Sartorius 2002).

In the age of knowledge economy, ACs are especially becoming effective platforms for rural localities to gain competitive advantages. This is because, on the one hand, in the knowledge economy, local development is driven mainly by depending on the interplay between the use and generation of knowledge, networked cooperation and mediating socioeconomic institutions (Raco 1999). On the other hand, social innovation is most likely to thrive when ACs meditate the possible tension between the public/private and the rural populations by forming heterarchical relationships and networks supportive for trust, mutual learning, localized sharing, knowledge generation and shared vision (Cooke, 1998; Sorenson *et al.* 2006; Weaver 2017).

8.3.3. *Status Quo* of Development

At present, in rural China, most of the ACs belong to the revisionist model, and hence have deviated from the basic international principles in terms of one-person-one-vote democratic management and dividend and return of profits (Wang 2013). Like in most of the developing countries, they are often established with a top-down approach and direct public interventions; however, with the increasing specialization and marketization of the agricultural sector, there are also more and more bottom-up cooperatives (Dang 2015). Regarding

the typology, ACs are composed in several forms, such as "company/large family farming businesses + farmers", "professional cooperative + farmers", "professional association + farmers", "leading enterprise + production base + association + farmers", etc. (Wang 2013). According to their activities and degree of organization, they can be further classified into three categories:

- cooperatives with relatively well-developed organizational structure that directly sign sales contracts with members and practice unified supply of production inputs, technical services, acquisition and billing;
- cooperatives that combine cooperative and shareholding systems, usually established by agricultural enterprises, farmer entrepreneurs, grassroots technical service offices and pre-existing supply and marketing cooperatives[87];
- cooperatives showing features of relatively loose professional associations, whose activities include providing technical, information and consulting services (Liu 2013).

According to the "Report on the Development of Farmers' Professional Cooperatives in Meixian County" (Lu 2018), up to 2017, there are 326 registered cooperatives in Meixian County, of which 253 are specialized in crop and fruit farming, and 54 in livestock and aquaculture. 293 cooperatives have fewer than 100 members, and 167 cooperatives have a registered capital of less than one million yuan. It thus can be seen that the majority cooperatives are small-sized ones for agricultural production purpose. Most of the effective cooperatives are company-led. According to Wang (2009), this phenomenon is closely related to China's existing socioeconomic foundation and context. First of all, the civil society is still weak in rural areas, due to which there is a general lack of citizen base, self-awareness, and sense of democracy and cooperation. As a result, it is difficult to achieve common goals through democratic management and decision-making in an organization while protecting their own interests through democratic procedures and bargaining. Second, China's rural market at present is not fully developed and farmers have weak market awareness. Third, the competitive environment is changing fast to the disfavor of smallholder farmers and small independent cooperatives. With the advancement of agricultural industrialization, the penetration and control of capital into the agricultural industry has gradually deepened, which has led to the deterioration of the competitive environment in rural areas. The cooperatives formed by farmers alone are in a disadvantaged situation to compete with large capital in terms of the scale of capital, scale of production, level of technology and attractiveness to talents.

To gain a sound understanding of the effectiveness of the ACs in Meixian County,

[87] Supply and marketing cooperatives are grassroots economic organizations in rural China aimed to construct and improve the agricultural product market system and carry out various forms of production and marketing docking by reinforcing the networking and linkages between wholesale market of agricultural products, supermarket chains and farmers' professional cooperatives.

the author administered a questionnaire (Appendix 3) to farmers who were members of company-led ACs with activities ranging from production, service provision and marketing. A total of 100 questionnaires were delivered and 72 properly responded, the results of which are summarized below (Table 15). The overall evaluation of these ACs was positive, as 74.07% of the respondents affirmed their overall satisfaction with the cooperative they were in. This seems to be correlated with the presence of cohesion and strong leadership in the ACs according to the feedback of the majority (i.e. more than 50%) of the respondents. In terms of the ACs' role in the production process, the majority of the respondents gave a positive evaluation. This is evidenced by farmers' improved farming skills, improved quality of agricultural products and modernized farming concepts. The ACs have also contributed to the building/recovering of the cooperative culture of self-help among member farmers, by promoting the sharing and exchange of experience and information. Regarding the marketing process, the absolute majority (81.48%) affirmed that the ACs have helped them sell their agricultural products and increase their income. Indeed, through innovation, the ACs have improved the competitive advantages of their products, as is reflected by the advantageous prices due to their fortified bargaining power of market pricing. Members of the Qinwang Guoyou Kiwifruit Professional Cooperative and Jinse Qinchuan Kiwifruit Professional Cooperative sold their kiwifruits at an average price of 8.4 yuan per kilo in 2017, which was about twice more than those non-members who sold to intermediaries. As many as 81.48% of the respondents joined the ACs only as independent producers, while the shareholding system was not popular, as only 7.41% asserted that they had joined by investing financial capital and holding shares, and 14.81% joined using their contracted land as shares (Fig. 76).

Table 15. Member farmers' perception of the effectiveness of agricultural cooperatives in Meixian County

Questions	Positive Answer
Are you satisfied with the cooperative you are in?	74.07%
Has the cooperative helped you increase your income?	81.48%
Has the cooperative made you change the traditional farming concepts?	100.00%
Has the cooperative helped you improve your farming skills?	92.59%
Has the cooperative helped you improve the quality of the agricultural products you produced?	92.59%
Has the cooperative promoted the sharing and exchange of experience and information among you and other members?	81.48%
Is cohesion present within the cooperative?	62.96%
Is there a strong leadership in the cooperative?	77.78%
Has the cooperative helped you sell the agricultural products you produced?	81.48%

Source: The Author's own elaboration.

The questionnaire also posed some questions concerning the services that the ACs offered. Generally, the ACs have offered a series of services mainly related to the production process (Fig. 77). The majority of the respondents asserted that they had received services including inputs purchase (such as fertilizer and pesticide) and distribution, agricultural skills training, exchange of experience and information, assistance in selling their agricultural products, and alert of natural disasters and post-disaster mitigation. The most fundamental service the ACs offer is unarguably inputs purchase and distribution. The need of improvements of services related to assistance in selling agricultural products, agricultural skills training, and alert of natural disasters and post-disaster mitigation were expressed by the majority of the respondents (Fig. 78). With respect to the development of the ACs, the majority of the respondents held the idea that they should make more efforts to improve team building, fairness and justice, communication, and organization and management (Fig. 79).

In Italy, generally there are four types of agricultural cooperatives according to their major activities, including cooperatives of land cultivation and forestry, cooperatives of livestock farming, cooperative of agri-food processing, and cooperatives of provision of services for members. These four types can be grouped into two major categories, namely, production cooperatives that deal with the cultivation and livestock farming, and conferment cooperatives that receive the agricultural produces conferred by the member farmers, so that they are stored, processed and sold through the collective organization, with joint management of plants, factories and warehouses. Cooperatives of the second type are also in charge of the coordination of the supply of stocks and improvement of crops quality. They are therefore one of "support" as the relationship between the cooperative and the members is based on the conferment of the products and livestock farming and related social services (Fibo 2005). The principal objective of these agricultural cooperatives is to improve agricultural production and promote economic growth in rural areas. They are therefore required to control the quality of products with a centralized control on all kinds of production activities[88].

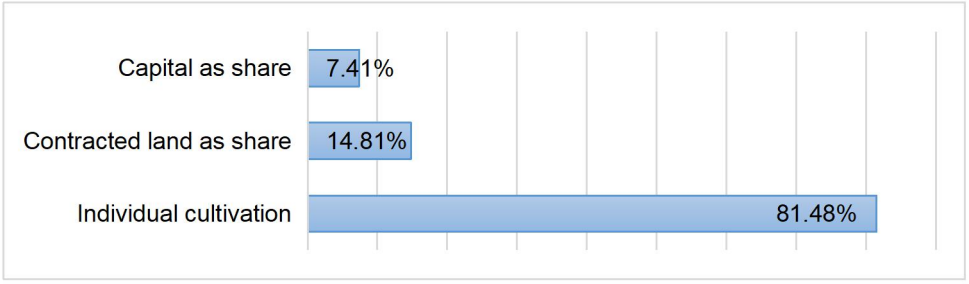

Figure 76. Forms of joining the ACs.
Source: The Author's own elaboration.

[88] This paragraph has referred to <http://www.coopitaliane.it/associazione/settori/>, accessed on September 27, 2018.

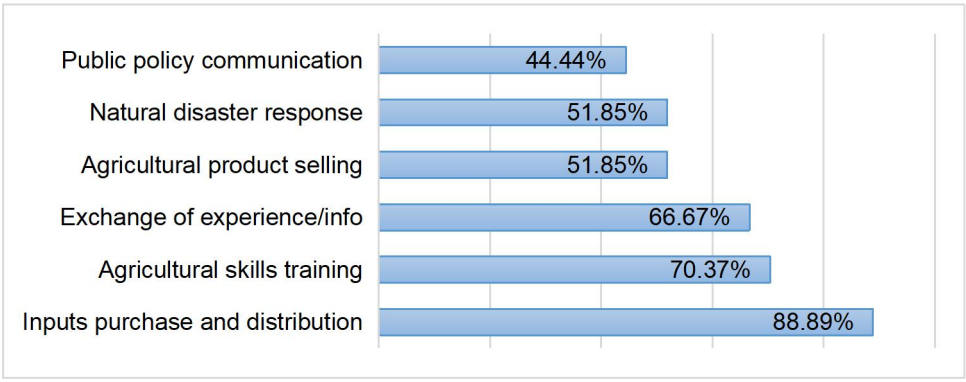

Figure 77. Services that member farmers have received from ACs.
Source: The Author's own elaboration.

As the results of the questionnaires show (Appendices 1-2), residents from the Locride area are more in need of ACs: while 32.07% of the respondents from Meixian County would like to have more ACs, 42.11% from the Locride area expressed the same wish. According to the author's site visits and interviews in the Locride and Tyrrhenian areas, the most popular forms of agri-food businesses remain to be either the conventional single family farms, sole proprietorship or corporate enterprises. Nevertheless, there exists an aggregation of small businesses of the agri-food industry into either marketing-oriented or integrated cooperatives that are similar to medium-sized businesses. Small ACs, similar to the ones in Meixian County whose main body are composed of farmers have not been found. The existing most common ACs can be grouped into two types depending on their size, activities and organization. The creation of both types has seen little public intervention, although in their development they may have received public funding. The first type is medium-sized ACs, like the Fattoria della Piana mentioned above and the OP Monte, a producers' organization (PO).

A PO is referred to as an aggregation of production family farms in the form of a cooperative or association[89] which are similar to the company-led ACs in Meixian County. The POs are considered as a strategy of the European Commission to counter the asymmetry in bargaining power within the food supply chain and stimulate effective competitiveness on the market (EC 2009). POs generally attribute their competitiveness first to their advantageous size (Fanfani *et al.* 2001); second, through the aggregation, they can concentrate the offer that allows forming a sort of "oligopolistic power" able to counter the buyers' market power; and third, they are conducive to collaboration among members and creation of a volume of business that allow investments in R&D activities, therefore internalizing the process and product innovations (Perri

[89] The producers' organizations are regulated on a European basis, as regards the fruit and vegetable sector, by the Reg. 7 (fruit and vegetable CMO) and on a national basis (legislative decrees no. 228/2001 and no. 102/2005) for all other sectors.

2016). The constitution and operation of POs have to satisfy four major requirements as follows:

- *revenue and number of members*: Most POs are in the fruit and vegetable sector in Reggio Calabria, and a minimum of 5 members are required. The annual turnover must be on average of one million euros for the fruit and vegetable sector (with exceptions of € 300,000 or 3% of the regional product). This dimensional requirement is aimed to make sure that all POs could have the minimum level of power to compete effectively on an ever globalizing market (Fanfani *et al.* 2001);
- *Statutory and democratic rules*: Composed of production family farms, POs can take one of the three legal forms, i.e. limited company, agricultural cooperatives and their consortia, and consortia with external activities constituted by agricultural entrepreneurs or their corporate forms[90] (Cuzzola and Iacazzi 2005); voluntary membership, one head one vote, certain rules for membership and its exclusion, annual assembly to approve the Operational Program);
- *direct, centralized billing*: Sales and billing are carried out directly by the POs on behalf of all its members for at least 75% of the turnover of each individual member;
- *common standards of production and marketing*: All members must comply with the well-defined production specifications; a product collection and conditioning platform is required.

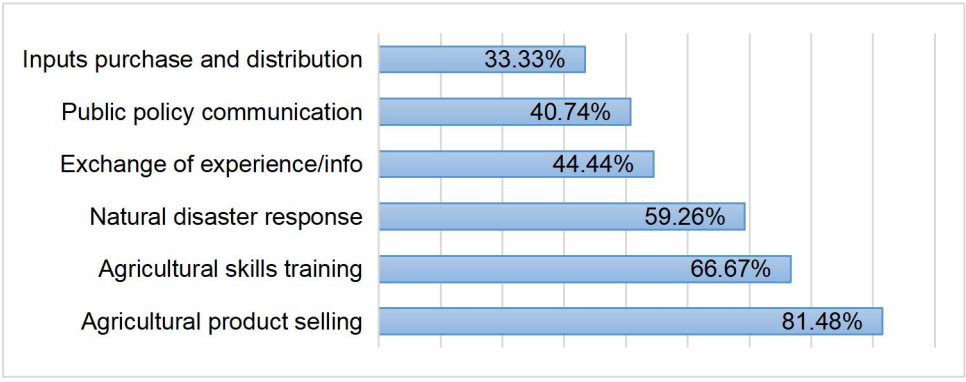

Figure 78. Services provided by the cooperative that still need improving.
Source: The Author's own elaboration.

To members, POs, as a support cooperative, provide a series of services, including technical assistance to production, collection, sorting, storage and packaging of members' products, commercial and financial management, and centralized accounting and billing system[91].

[90] See the original text: "consorzi con attività esterne di cui all'art. 2612 e seguenti del C.C. o società consortili di cui all'art. 2615-ter del C.C., costituiti da imprenditori agricoli o loro forme societarie".
[91] Discussions in this part are based on the Author's interview of the producers' organization "OP Monte" located in Polistena.

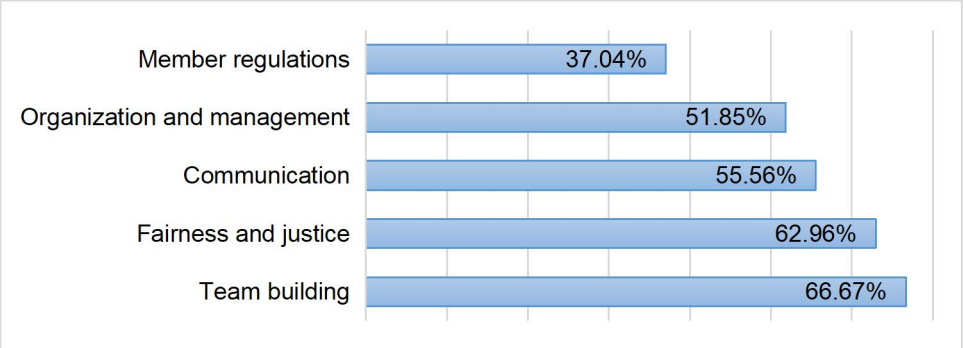

Figure 79. Aspects that the ACs still need to improve.
Source: The Author's own elaboration.

The second type is small-sized ACs whose business scope tends to transcend agricultural activities. An AC of this kind practices both cultivation and marketing activities while providing social services like environmental protection and maintenance, transmission of immaterial cultural heritage, etc. It therefore seeks both economic benefits and social impact. Its development is to be discussed in the following section.

Generally speaking, big ACs like Fattoria della Piana and OP Monte are prone to play a leading role and have a territorial impact. For example, Fattoria della Piana has its members distributed over the entire Calabria Region, and OP Monte's membership covers the entire plain of Gioia Tauro and Rosarno. In Meixian County, the ACs also play both a leading and demonstration role especially in terms of promoting agricultural modernization and professionalization. ACs like Qinwang and Qinchuan seem to have adopted a "pan-membership" strategy to enhance their territorial impact. They have also motivated and absorbed households who are not members: as long as they comply with their norms, thy can also take benefit of services like inputs supply and sales assistance.

8.3.4. Development Strategies

In the development of ACs, common problems include excessive dependence on the government intervention, inability to guarantee the democratic principles, weak spill-over effect and shortage of funds (Bijman *et al.* 2012; FAO 1998; Yang 2013). To address these problems, three factors play a crucial role, namely, economic conditions, farmer organizations and public policy (favorable climate for entrepreneurship) (Ingalsbe and Groves 1989 cit in Ortmann and King 2007; Martin and Stiefelmeyer 2001). In the following section, based on the author's interviews with four ACs in Meixian County, i.e. Qinwang Guoyou Kiwifruit Professional Cooperative, Jindi Cherry Professional Cooperative, Jinse Qinchuan Kiwifruit Professional Cooperative, Huaixiang Strawberry Professional Cooperative (hereinafter respectively referred to as Qinwang, Jindi, Qinchuan and Huaixiang), and three ACs from Reggio Calabria, i.e. Agricultural Cooperative "Aspromonte", Producers's Organization "Monte" and Fattoria della

Piana (hereinafter respectively referred to as AC Aspromonte, OP Monte and FdP), discussions are focused on how the ACs improve their economic conditions in terms of access to capital, networking and collaboration, production, management and marketing on the one hand; and on the other hand, how they build up farmer/family farm organizations regarding participation, relationship management and training.

To begin with, it is necessary to gain a general knowledge of the case-studied ACs in terms of their operation pattern, land use, membership and provision of services, as are shown in the table below. They generally follow a corporate organization and adopt the operation pattern of "company + cooperative + base + farmers" in Meixian County and that of "company + cooperative + producers" in Reggio Calabria. The major difference is, the main body of the ACs of the former is composed of individual farmers (of single households), while that of the latter are producers (of single family farms) whose lands are usually cultivated by professional farmers (*operai agricoli*). This reflects the higher professionalization level of agricultural practitioners in Italy than in China.

There are various ways to become members. In Meixian County, most farmers joined the ACs as individual cultivators, while a few of them as shareholders either by investing financial or physical capital, or using their own contracted lands as shares. The members of the ACs in Reggio Calabria instead joined either as individual producers or shareholders. In terms of land use, the ACs in Meixian County often have a production base. Built on the transferred lands, the base is cultivated by local farmers hired by the ACs. When farmers transfer the operation rights of their contracted lands, they can choose to either receive a lease (often for a period of 10-15 years) or join the ACs using their lands as shares. Besides, for members who have not transferred their operation rights, they continue to cultivate their contracted lands. In Reggio Calabria, instead, due to very distinct land system, it is common for ACs to have their own private lands, besides the members cultivate their own lands. An exception is the AC Aspromonte, which has contracted abandoned lands free of charge from local farmers.

Most of the ACs in Meixian County offer integrated services, including supply of inputs (fertilizer, pesticides) so as to meet their predetermined standards, natural disaster prevention and mitigation, introduction of new cultivar, technical training in the form of public lectures given by both internal and external experts as well as immediate voluntary technical assistance at the request of individual members, and marketing assistance. In Reggio Calabria, the ACs offer mainly technical and marketing assistance. In the AC Aspromente case, its services, oriented at local communities, are mainly off-farm activities, such as cultural events (cultural projects, meetings), agritourism, natural protection (land cleaning, fire prevention). All ACs respect the principle of voluntary membership, although membership fees may be required. For example, to join OP Monte, all members pay a fee of €25, which is refundable in

case of withdrawal from the cooperative.

Table 16. General information of the case-studied ACs in Meixian County and Reggio Calabria

AC Name	Operation Pattern	Land	Members	Services	Joining Forms
Qinwang	company + cooperative + base + farmers	members' lands + transferred lands	612 HH[1]	inputs supplies, technical training/ assistance, marketing assistance	individual cultivators, or shareholders (capital, orchards, machinery)
Jindi	company + cooperative + base + farmers	members' lands + transferred lands	226 HH	inputs supplies, technical training/ assistance, marketing assistance	individual cultivators
Qinchuan	company + cooperative + base + farmers	members' lands + transferred lands	527 HH	inputs supplies, technical training/ assistance, marketing assistance, team building	individual cultivators, or shareholders (capital, orchards)
Huaixiang	company + cooperative + base + farmers	members' lands + transferred lands	28 shareholders	inputs supplies, technical training, new cultivar introduction	shareholders (capital, lands)
AC Aspromonte	cooperative	contracted lands	4 members	off-farm activities	shareholders (capital)
OP Monte	company + cooperative + producers	members' lands	180 family farms	technical and marketing assistance	individual producers, or shareholders
FdP	company + cooperative + producers	own lands + members' lands	98 family farms	technical and marketing assistance, waste treatment	individual producers

Note: 1. Number of households till 2017 indicated by interviewers. Source: The Author's own elaboration.

The ACs have adopted various strategies to improve their economic conditions (Table 17). First, in term of access to capital, the case-studied ACs mainly use traditional financial tools, such as own funds, personal loans, guaranteed loans, mortgage loans and shareholder joint fundraising. However, it is medium-sized ACs with sound credit history that are in an advantageous position to make

loans at banks in both case study areas. Given the current project-based transfer payment system in both China and Italy, the chance for medium-sized ACs to get public funding is also higher. The ACs in Meixian County, for example, have all received public funding to develop their production base, as pilot projects of agricultural modernization. ACs with sound business credibility and networks tend to have more access to capital. Qinchuan, for instance, has managed to make loans guaranteed by its business partners. As its production is based on orders issued by its long-term partners like supermarkets and wholesaler, it also receives advance payments which are important components of the liquidity for the production and marketing processes. In addition, to reduce the problem of cash flow constraint due to high operation costs during the peak seasons of kiwifruit sales, members are encouraged to take an IOU (I Owe You) when selling their produces to the cooperatives. The IOU is to be settled once the cooperatives have sold enough portions of the inventory in the refrigeration warehouses and recouped their funds. With the IOU, the cooperatives do not have to find credits, the rates of which could be as high as 30% per year. To protect the interests of members who are willing to take IOU, an interest calculated at the actual bank interest rate is to be paid. Qinwang also set the rule that if it fails to liquidate after the acquisition by December, a 10% interests will be added to the liquidation amount. If the liquidation is effectuated by December, interests will be paid based on the actual bank interest rate for the period between the date of acquisition and that of liquidation. Similarly, OP Monte also sets the agreement with its members to liquidate the bills after the fruits are sold out.

Second, the production process is critical for gaining advantages on the market. All the case-studied ACs attach great attention to standardization, specialization and quality control. Nearly all the ACs in Meixian County have issued their own production standards, which are often higher than the national ones. During the production process, all members are required to use unified inputs supplied by the ACs. The strict control of inputs is fundamental for improving not only the product quality and security, but also the agricultural ecology through more rationalized and scientific application of more eco-friendly inputs. They have also revitalized traditional knowledge as mentioned above while applying new techniques and technologies. In addition, they offer technical training (theoretical) and *in-situ* technical assistance (practical) to members. Qinwang values especially the complement between theoretical and practical knowledge. For this reason, its expert team is composed of not only external experts from public offices and university, but also "vernacular experts", who are local farmers with rich experience. These measures have all contributed to the standardization and specialization of the fruit sector and improvement of quality. In the marketing process, some ACs like Jindi has created the "blacklist of credibility", an effective tool to regulate individual members' behaviors. It has also improved the traceability of its products with the QR code. By simply scanning the code, the consumer can get all the information related to the product, such as period

of cultivation, inputs used, location of the orchard and cultivator, which increases the accountability when claims occur. In addition to the measures related to specialization and quality improvement, the ACs also enrich the production process with off-farm activities. Such activities are increasingly important today, as the health of the farm economy has become much more dependent on the health of the off-farm economy (Gascoigne *et al.* 2013). They help add value to the production process whiling meeting the emerging needs for additional goods and services. Popular off-farm activities that the ACs provide are mainly cultural, such as agritourism. Besides agritourism, the AC Aspromonte organizes various off-farm activities, including cultural events like meeting, immaterial cultural heritage promotion, etc., natural protection like land cleaning, fire prevention, etc.

Third, all the case-studied ACs highlight networking and collaboration as a crucial means to enhance their competitiveness. Quite popularly, there is an endogenous approach to learning and knowledge generation, which often leads to a neglect of external networks and institutions (MacKinnon *et al.* 2002). Most of the ACs in both case study areas have networking and collaboration with other cooperatives of the same sector and universities. The interaction between the ACs and university appears particularly important. Jindi, for example, has a close relationship with the Northwest Agriculture and Forestry University. The cooperative serves as a base for technological transfer and training, where students can gain extra-curricular skills like e-commerce. Meanwhile, the university receives feedback of real-world problems from the cooperative, like biological pest control, then the two will collaborate to develop relevant technology which will be finally transferred to the cooperative.

Networking and collaboration are important not only for knowledge generation process, but also for reducing costs related to marketing and enriching the product portfolio. It is quite common for the ACs in Meixian County to use the marketing platform of each other. For example, a cherry cooperative may use the e-commerce platform of a kiwi fruit cooperative, while the latter may sell its products at the former's points of sale. Compared to China, Italy has a higher level of federation development in the agri-food industry. This explains why the ACs in Reggio Calabria, besides collaboration with other cooperatives and university, often have collaboration with national associations or federations. FdP, for example, collaborates with the *Confederazione Nazionale Coltivatori Diretti* (Coldiretti, National Confederation of Direct Cultivators), and OP Monte collaborates with the National Union of Producers' Organizations and the National Union of Italian Fruits and Vegetables (*Italia Ortofrutta - Unione Nazionale*).

Fourth, all the case-studied ACs are managed with a corporate system. In Meixian County, the ACs usually have four departments, namely, secretariat, production department, marketing department and agricultural technology department (or agricultural inputs service department). With the emerging

e-commerce industry in China in the past few years, cooperatives like Qinchuan and Qinwang have also created an e-commerce department. The ACs also hold training or pay visits to other cooperatives to learn their experience so as to improve their managerial skills.

Fifth, diversified marketing is essential to gain a negotiation power and reinforce competitiveness. The case-studied ACs have all expanded their activities in downstream stages of the food chain, thus strengthening their customer and consumer orientation by enhancing efforts in marketing (including branding), product innovation and customization (Bijman *et al.* 2012). Currently, the ACs in Meixian County have basically integrated online and offline marketing. For online marketing, besides using the existing e-commerce platforms like Alibaba, Jingdong and Suning, they have taken advantage of various social media platforms, like WeChat and Kuaishou (a photo and short video sharing app). These platforms are critical for forming the "producer to consumer" marketing model. It happens that some ACs use Kuaishou, for example, to broadcast the production and packaging processes, so as to assure the potential consumer of the quality.

In terms of the traditional offline marketing, the ACs have adopted a variety of marketing strategies. Their aimed customers are often high-end from socially and economically developed cities in southeastern China. There, they have opened stands at major fruit markets and retail outlets where their products are demonstrated and sold together with speciality products of other cooperatives or companies from Meixian County. In so doing, they are able to not only directly communicate with their final consumers and thereby gain an accurate knowledge of their demands, but also share the operation and costs with partners and meanwhile become more attractive to consumers by offering a wider variety of products. To be more eye-catchy and promote their brands, they have used uniformed packages with creative design. Students from Meixian County studying in those cities are invited to endorse their products. In addition, they have participated in major fairs at home and abroad to promote their products and look for potential customers.

All the case-studied ACs maintain that quality is fundamental for promising a successful marketing. With outstanding quality, the ACs have gained a greater negotiation power on the market. Often, they have become the price-setter rather than price-taker simply because their unique quality has made them incomparable to their competitors, while their customers and end users understand and appreciate the added values behind their products. The ACs in Reggio Calabria also consider the quality of their products as vital to successful marketing. They have also undertaken both online and offline marketing; however, the sales are mainly offline. To promote their products, they have all used social media platforms and participated in major fairs. FdP is also focused on high-end customers and consumers abroad, mainly in the USA and Canada, as it is located close to the Port of Gioia Tauro, the largest port in Italy for

container throughput. Similarly, OP Monte sells its products mainly in northern Italy to get a better market price. It replies on three sales channels: 1) large organized distribution (GDO, *grande distribuzione organizzata*) through a network of supermarkets and other intermediary chains of various kinds; 2) large distribution (GD, *grande distribuzione,* like COOP) that sees chains composed of various sales points (real sales branches); and 3) wholesalers. To ensure utmost quality, it has built up a modern logistic plant with the state-of-the-art technologies in terms of calibration, selection, packaging and cold chain logistics so as to shorten the time of delivery.

Table 17. Comparison of the strategies of improving economic conditions of the case-studied ACs in Meixian County and Reggio Calabria

AC Name	Finance	Production	Innovation	Off-farm Activity	Management
Qinwang	own funds, mortgage loans, public funds, IOU	standardi-zation, quality optimization , production based on order	knowledge generation, collaboration, resource integration, multichannel marketing	No	corporate system
Jindi	own funds, shareholder joint fundraising	standardi-zation, traceability, quality optimization	knowledge generation, collaboration, resource integration, multichannel marketing	agri-tourism	corporate system
Qinchuan	own funds, personal loans, guarantee loans, mortgage loans, advance payment, IOU	standardi-zation, quality optimization , production based on order	knowledge generation, collaboration, resource integration, multichannel marketing	cultural events	corporate system
Huaixiang	own funds, personal loans, public funds	standardi-zation, quality optimization	knowledge generation, collaboration, resource integration, multichannel marketing strategy	agri-tourism	corporate system
AC Aspromonte	own funds	organic farming	knowledge generation, collaboration,	cultural events, agri-	corporate system

			resource integration, multichannel marketing	tourism, natural protec-tion	
OP Monte	EU funds, bank loans, liquidation after sales	standardi-zation, quality optimization	collaboration, resource integration, multichannel marketing	No	corporate system
FdP	own funds, EU funds, bank loans	standardi-zation, quality optimization	knowledge generation, new technologies, collaboration, resource integration, multichannel marketing	agri-tourism	corporate system

Source: The Author's own elaboration.

Farmer/family farm organizations play a significant role in building up social capital within the ACs and creating trust both among members and between the ACs and members. This is critical for fostering genuine participation and cooperative self-help of members, without which ACs tend to fail due to their incapability to mobilize local resources and local knowledge for self-reliant development and achieve strength in the market place (FAO 1998). The low level of farmer organization proves to be a major barrier to cooperative development. In the era of global market economy, it is of great significance to increase the degree of organization of farmers so as to reinforce their ability to cope with the shock of marketization (Hu 2013). This is especially important for China, as its agriculture today still lacks scale, socialization, technology and mechanization, and farmers' show poor ability to withstand external risks (Li 2016).

Various strategies have been undertaken by all case-studied ACs to develop farmer/family farm organizations (Table 18). First, all the ACs highlight member participation in the implementation of their predetermined production standards. To mobilize local farmers to participate, the ACs in Meixian County supply inputs at cost price to members with home delivery, or on a "use first, pay later" basis. In Qinchuan's case, inputs like fertilizers, fruit bags and mechanized services are offered at a price of 10% lower than the market price. With an input price lower than the market price, the ACs have helped farmers reduce their expenditures on inputs and unify the utilization of inputs. Meeting farmers' real needs is another strategy to get them engaged. To help farmers solve the real-world technical problems that they may encounter during the production process, all the ACs have formed their own expert team and offer free technical assistance and training to members. The training sessions are arranged in a way to avoid time conflict (e.g. not during the period of intensive field work), and all sessions are production stage-specific, namely each session has a specific

technical content for each important production stage.

The ACs great negotiation power also stimulates farmers to participate. All farmers aspire to sell their products at a fair price (higher than when sold to intermediaries), and ACs have made this possible. Qinwang and Qinchuan, for example, sign acquisition orders with members, in which a price range is well defined. Like the above-mentioned practice of issuing IOU, this is also able to reduce members' transaction costs and potential risks while increasing their share on the value chain and protect their interests. In fact, it seems that participation has to be incremental, as most of the farmers hold the attitude of "wait and see". So the ACs grow its membership also in an incremental way over the years. OP Monte also offers free technical services and guarantees a higher acquisition price than the market price to its members, as long as their products meet their standards. Likewise, FdP pays a higher acquisition price and offers free service of waste treatment, which helps member family farms reduce their production costs.

Second, all the case-studied ACs attach great importance to the relationship management of members, mindful that the sociocultural landscape has a considerable impact on the functioning of ACs. Low trust in particular is a major obstacle to cooperative development (Bijman *et al.* 2012). Indeed, interactive relationships are the means by which competitive advantage are gained and sustained. This is because that they are conducive to strengthening and then capitalizing on social capital, and therefore help generate new knowledge through social innovation (Lavie 2006). To strengthen the relationship among members, the ACs in Meixian County generally rely on social media platforms and cultural events. It is quite common for them to create group chats on WeChat where all members can pose questions and learn about the ACs' updates, agricultural and business information, technical knowledge and daily life information. The group chats prove to be an effective tool to promote information circulation and exchange. Besides, the ACs also organize cultural events to bring together members. Qinchuan, for examples, organizes lectures on traditional Chinese culture, which is quite popular with members. In addition, as their members are diffused in extended areas, Qinchuan and Qinwang have developed a 3-level member management system consisting of president, agricultural technology manager, station heads and farmers (Fig. 80). The station heads are all local farmers so as to take advantage of their interpersonal relationships with other farmers. The members of the same village form a station, and one of them is elected as station head to coordinate the technical and marketing issues. The ACs in Reggio Calabria, instead, have their administrative department to manage the membership. The annual general assembly, especially when engaging all members like in the case of OP Monte, is another way to manage the relationship with members.

Third, training is another important way to build up farmer/family farm organizations. As already mentioned above, all the ACs in Meixian County offer

technical training to their members, so as to improve their technical skills on the one hand, and grow their professionalism on the other. In the Locride, instead, technical training is not a common service that the ACs offer to members. One possible reason is that the agriculture in Italy generally is more modernized and professionalized than in China, just as implies the term "agricultural workers" used in Italy instead of "farmers" used in China. However, they may also offer technical assistance to members. OP Monte, for example, has two internal agronomists to help solve members' practical problems during the cultivation.

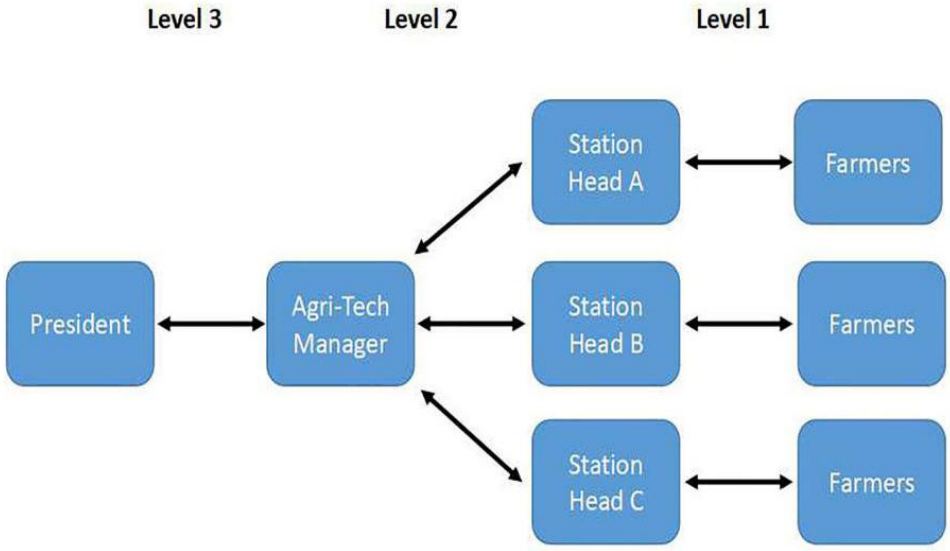

Figure 80. Members management system of Qinwang and Qinchuan.
Source: The Author's own elaboration.

Table 18. Comparison of the strategies of farmer/family farm organizations of the case-studied ACs in Meixian County and Reggio Calabria

AC Name	Participation	Relationship Management	Training
Qinwang	inputs supply at cost price, meeting farmers' real needs (solutions to technical problems and income increase), incrementalism	social media platforms, station head (focus point)	technical training
Jindi	meeting farmers' real needs (solutions to technical problems and income increase), incrementalism	social media platforms	technical training

Qinchuan	inputs supply at cost price, meeting farmers' real needs (solutions to technical problems and income increase), incrementalism	social media platforms, cultural events, station head (focus point)	technical training
Huaixiang	inputs supply at cost price, meeting farmers' real needs (solutions to technical problems and income increase), incrementalism	social media platforms	technical training
AC Aspromonte	-	general assembly	-
OP Monte	meeting family farms' real needs (solutions to technical problems and income increase), participatory decision-making	general assembly, administrative management	no
FdP	meeting family farms' real needs (income increase)	administrative management	no

Source: The Author's own elaboration.

All in all, farmer/family farm organizations are critical for fostering a genuine endogenous development of ACs by counting on the principles of participation and consultancy rather than excessive public intervention (FAO 1998). A basic utilitarian stance concerning policymaking for the development of ACs should therefore be aimed at making them as independent from the state and integrated into market mechanisms as possible (Hermans *et al.* 2009).

8.4. Rural E-commerce[92]

8.4.1. ICTs and Innovation

The rapid development of information and communication technologies (ICTs) in recent years have accelerated the change of economic and social patterns as well as lifestyles. ICTs are considered a crucial tool for both stimulating social, political and economic participation and addressing socioeconomic issues like poverty alleviation, education and well-being in developing countries (Perron *et al.* 2010). They are indispensable to the generation, circulation and exchange of knowledge, which, as a key element in innovation process, is considered to be an economic driver (Cortrightss 2001; Foray and Lundvall 1996; Hana 2013; Hidalgo and Albors 2008; Sorenson *et al.* 2006). ICTs are vital to the development of economic growth especially under the discourse of knowledge economy (Audretsch and Welfens 2002; Fagerberg and Verspagen 2002; Hübner 2005; Raco 1999), which shows three major characteristics: global, highlighting

[92] This part has partially referred to the interview with the responsible of rural e-commerce of the Industry and Commerce Bureau of Meixian County.

intangible assets and intensely interlinked (Betcherman *et al.* 1998; Kelly 1999). By facilitating and stimulating knowledge, they provide a way to transcend the dominant role of proximity in innovation processes, creating a complimentary rather than a substitution effect for more remote and peripheral places (Baycan *et al.* 2017).

The development of ICTs is fundamental to the development of e-commerce, especially in rural areas. Mindful of this, China has made continuous efforts over the past decade to improve the informatization in rural areas, which is considered as integral in rural social and economic development. Households with broadband internet access at home in urban and rural areas continued to increase fast (Fig. 81). By 2016, the increasing internet penetration rate nationwide had reached 53.2%, and 27.8% of rural households had had broadband internet access at home, while 96.7% of rural areas had been covered with broadband Internet access (Fig. 82). According to the data released by the Ministry of Industry and Information Technology of China, by the end of April 2018, the 4G network had covered 95% of the administrative villages and 99% of the population. Currently, there are about 209 million mobile Internet users in rural areas, which continues to increase fast. Undoubtedly, the Internet is helping weaken the deep-rooted urban-rural dualism, by narrowing the digital divide in the Information Age.

Together with the rapid development of ICTs, China has also seen a rapidly growing express mailing industry: from 2012 (about 5.69 billion items) to 2016 (about 31.28 billion items), the express mailing volume increased by 5.5 times (Fig. 83). The development of express mailing service has been considered as integral in the development of rural e-commerce.

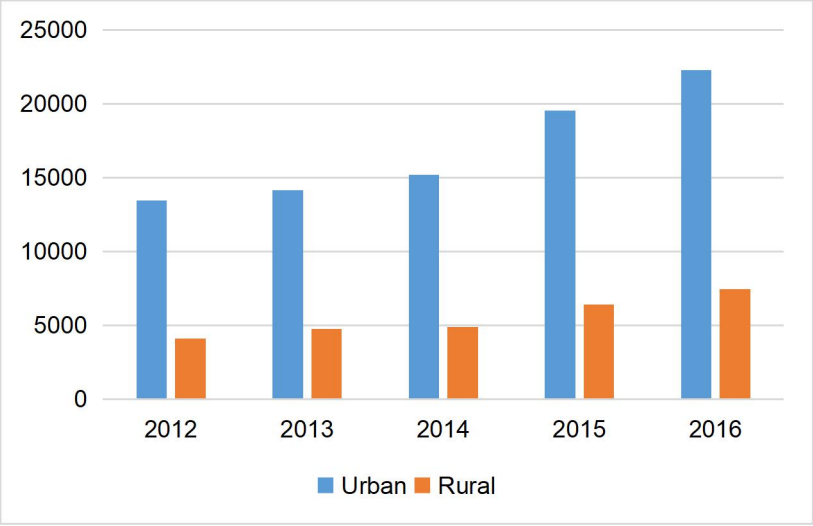

Figure 81. Households with broadband internet access at home in urban and rural areas (2012-2016) in China.
Source: The Author's elaboration based on the data of the NBS.

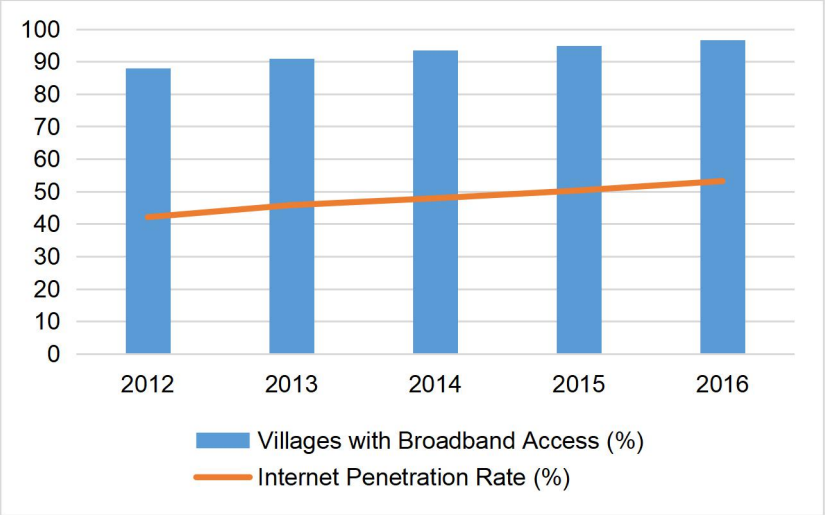

Figure 82. Percentage of administrative villages with broadband internet access and internet penetration rate (2012-2016) in China.
Source: The Author's elaboration based on the data of the NBS.

To guide the development of express mailing service, the State Post Bureau and the Ministry of Commerce jointly issued in 2015 the "Guiding Opinions on Promoting the Service Expansion Project of Express Delivery to the Western Regions", requiring to further improve the urban and rural express mailing service networks, and coordinate the development of express delivery and e-commerce in rural areas and in central and western regions so as to promote the modernization of rural logistics. To this end, this document called to take four measures, including improving the express delivery infrastructure in the Midwest and rural areas, strengthening resource integration, sharing and cooperation, improving agricultural product express mailing service, and improving the service quality in the Midwest and rural areas. The density of express mailing service points increased from 6.7 (2010) to 21.6 (2016) points per thousand square kilometers. By 2016, with the implementation of the express mailing service expansion project and the coordinated development of rural e-commerce, the coverage rate of the service points of key express delivery companies has exceeded 80% in rural areas[93].

The ICT infrastructure in Italy and Calabria is stronger than in China, especially in terms of the Internet penetration rate. According to the Istat data (2016) on Internet access and type of use (Table 19), in Calabria, 59.4% households have Internet access at home. However, a regional gap exists in this regard, as the Internet penetration rate is lower than the average national level, and that of southern and northern Italy. Compared to the national level and northern Italy, residents in Calabria are more prone to encounter problems such as lack of Internet knowledge and skill, high equipment and access costs and no

[93] Data retrieved from the State Post Bureau of the P.R.C. <http://www.spb.gov.cn/sj/zgkdfzzs/201703/t20170303_1029613.html>, accessed on August 7, 2018.

broadband coverage in the area where they dwell, which all prevent them from getting access to the Internet. In Calabria, respectively 61%, 19.1%, 19.3% and 3.2% of households stated that the reason for not having Internet access at home is lack of skill, not useful and interesting, high costs (both equipment and access), and broadband Internet not available in the areas where they dwell.

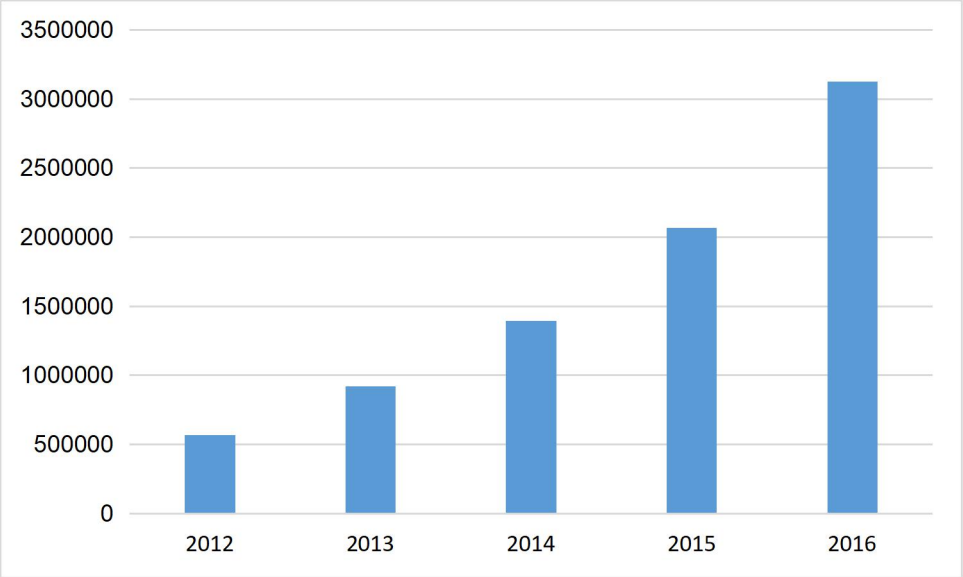

Figure 83. Express mailing volume in China (2012-2016).
Source: The Author's elaboration based on the data of the NBS.

Apart from the technological level, ICTs seem to be able to lead the innovation in rural areas at two levels, namely, market innovation and agri-food system innovation.

Table 19. Internet access and type of use in Italy and different geographic regions

Region	Households with Internet	Online Shopping (Food/ Grocery)	Reason for No Internet			
			Lack of Skill	Unuseful/un-interesting	High Costs	No Broadband
Calabria	59.4%	4.2%	61%	19.1%	19.3%	3.2%
Italy	69.2%	7.5%	56.6%	23.6%	17.3%	1.9%
South	63.5%	5%	58.5%	18.7%	22.7%	2.0%
North	72%	9.1%	57.3%	27.4%	13.8%	1.8%

Source: The Author's own elaboration based on the Istat data (2016).

At the first level, market innovation refers to the implementation of new or significantly modified marketing methods, strategies and concepts in product design or packaging, placement, promotion or pricing (Edison *et al.* 2013). The popularization of ICTs is transforming market into social products or spaces of socioeconomic coordination and cooperation, which aim not only to govern

competition or facilitate the accumulation of wealth, and reflect, among other things, power relations and cultural aspects (*ibid*.). Such a socially constructed market is able to bridge the gap between producers and consumers and thereby helps redistribute the profits of the entire agri-food chain in a way that rural localities can capture a bigger share of profits by bypassing intermediaries that otherwise would do (CELAC 2017).

Indeed, inexpensive, powerful ICTs are becoming widely available and accelerating the digitalization of marketing and business networking. Butler and others argue that this trend may mean that the traditional role of intermediaries will disappear or be transformed primarily into support for market operations (Butler *et al.* 1997). This is because that, different from the traditional business model where intermediaries are needed to reduce transaction costs resulting from temporal-spatial constraints and the small-scale, dispersed agricultural products in the traditional spot transaction (Chen *et al.* 2016), in the ICT-supported e-commerce, transaction costs are reduced through the digitalization of the business process. Meanwhile, on this market where ICTs play a major role in economic empowerment, the "agency" of consumers and producers have both been largely enhanced, and direct interactions are more likely to occur between them. At the level of the agri-food system, ICTs are transforming its organization into a decentralized social network, acting over a wide geographical area, generating favourable conditions for smallholder farmers to improve their access to the market and to receive differential treatment from public policies (e.g. the institutionalization of participatory certification schemes, structural support to organize local and network markets) (Rover *et al.* 2017). Within this new agri-food system, since the market innovation can effectively respond to the problem of information asymmetry, production is characterized by a more efficient use of natural resources, consumers can enjoy more immediate access to fresher food, while the region sees decreasing dependence on imports (CELAC 2017). Besides, a new agricultural product circulation system guided by information flows is to be formed (Chen *et al.* 2016).

8.4.2. *Status Quo* of Development

As is stated in the "Guiding Opinions on Promoting the Development of Rural E-commerce" (2015) issued by the General Office of the State Council of China, rural e-commerce, as an important means of transforming the mode of agricultural development, is able to effectively promote agricultural upgrading, rural development, and increase in farmers' income. Its development is also able to promote rural entrepreneurship, reduce rural surplus labor and help the development of *in-situ* urbanization in rural areas (Chen *et al.* 2016; Li 2017). E-commerce represents new trading models, new trading subjects, new trading concepts, and new market ecology (Yao 2016), and contributes to the efficient management of the supply chain (Bharadwaj and Soni 2007). At the county-level, government-led approach and grassroots-led approach are two pathways to

e-commerce development (Tang and Yu 2016). According to the direction of commodity flows, China's current rural e-commerce application model is composed of two sections: 1) *online procurement* (including consumption) of rural consumer goods and agricultural production materials; and 2) *online sales* (including marketing) of agricultural products, rural industrial products and rural services (Lei and Zhong 2017). Regarding the participating subjects, besides local farmers, there are also returning college students, rural entrepreneurs and urbanites.

Meixian County was listed in May 2016 as a national comprehensive demonstration of rural e-commerce development. Ever since, the county has taken various measures to popularize e-commerce in rural areas. Currently, e-commerce is quite strong both at household level and industrial level in Meixian County. At the household level, with the rapid development of ICT infrastructure in rural China, the economic activities of the rural population has also been rapidly informatized. According to the author's questionnaire survey (Appendix 1) in Meixian County, 67% of the 237 respondents from 16 villages claimed that they had sold agricultural products on the Internet, and 38% purchased industrial products on the Internet. As stated in the "Self-evaluation Report of the Performance of Meixian County Comprehensive Rural E-commerce Demonstration" (2018), in 2017, the online sales of kiwifruits accounted for 23% of the county's total kiwifruit output, that of the textile industry reached more than 30% of total sales, and the online ticket sales of the main tourist attractions accounted for 20% of the total ticket sales. Through the development of online sales, in 2017, farmers increased their income by more than 300 million yuan. In 2017, the online sales of agricultural products amounted to one billion yuan, an increase of 43% compared to 2016. At the industrial level, in 2017, the e-commerce transaction volume was 1.68 billion yuan, an increase of 40% compared to 2016. To date, there are 467 e-commerce companies of various types, and more than 4,000 e-commerce business households.

The e-commerce in Meixian County has seen remarkable development at three levels, namely, infrastructure, services and logistics, and basically an "e-commerce ecosystem" at the territorial scale has been formed (Fig. 84).

In terms of e-commerce infrastructure, there is full coverage of broadband internet access countywide. By collaborating with three leading Chinese e-commerce companies, i.e. Alibaba, Jingdong and Suning, three online platforms (the "Alibaba China Features · Meixian Hall", "Jingdong Meixian Hall", and "Suning Baoji Features Hall) have been constructed for the marketing of the featured and high quality local products. Meixian County enjoys well developed transport infrastructure, with the 310 State Road, Hanzhong-Xi'an high speed railway and Fatang and Jiangmei highways crossing it. So far, a county-level logistics and storage center (for industrial goods buy-in), a county-level agricultural materials distribution center, eight township-level agricultural

materials distribution transfer centers, and three e-commerce parks (the Core E-commerce Park located in the national-level Meixian County Kiwifruits Industrial Park, Internet Technology Industrial Park and Mingrun Agricultural Products Logistics Park) have been built.

Regarding services, the Meixian Rural E-commerce Public Service Center was established by relying on the national-level Meixian County Kiwifruits Industrial Park, Internet Technology Industrial Park (Fig. 85), and Alibaba "Rural Taobao[94]" Operation Service Center (Fig. 86). The public service center, integrating all e-commerce resources, is responsible for developing, coordinating and improving an e-commerce public service system that offers services such as e-commerce training, technical support, logistics and distribution, supply chain management, marketing planning and village-level service station development, as well as derivative value-added services such as incubating, product match-making, branding, financial credits, etc.

As for the e-commerce logistics system, with Alibaba "Rural Taobao" County-level Distribution Center, China Post Meixian Branch Office, and Meixian Supply and Marketing Group as its main body, the E-commerce Public Service Center and the Warehouse and Logistics Center have been established at county level, while eight e-commerce service centers at township level and 82 village-level logistics and distribution stations (40 China Post village service centers and 42 Alibaba Rural Taobao service centers) have also been established (Figg. 87-88). Besides logistic services, these grassroots service centers also provide various services related to production and daily life. The rapid development of the express mailing sector has largely supported the development of the e-commerce logistics system. Major private express mailing companies like Shunfeng, Yunda and Yuantong have extended their service stations from the county to towns and villages. To date, e-commerce services and logistics and distribution systems have covered all the 122 administrative villages.

Rural e-commerce has contributed to rural development in Meixian County in multiple aspects:

- First, it has greatly boosted the development of the kiwifruit industry, the pillar industry of the county. The booming e-commerce has helped the kiwifruit industry to gain a greater visibility on new domestic markets, and the sales price online of kiwifruits has risen remarkably, which is on average about four yuan higher per kilo than the average intermediary acquisition price. This has increased farmers' income, which has then made them more inclined to accept and apply eco-friendly farming methods and techniques,

[94] Launched in 2014, "Rural Taobao" is Alibaba's national program aimed to bring high-tech cloud-based logistics to the most remote areas of the countryside and connect them to its global network. "Rural Taobao" consists of a series of e-commerce service centers that have been created in towns and villages, enabling local people to purchase products online and sell their goods via the dedicated online marketplace of "Rural Taobao", while enjoying other services. To date, Alibaba "Rural Taobao" program has covered nationwide 700 counties with more than 30,000 service centers, which are expected to double the number by 2021.

and the quality of fruit has therefore been significantly improved;

- Second, it has stimulated the enthusiasm of entrepreneurship. With the development of the e-commerce training and marketing service systems, unemployed people and young people have been able to obtain entrepreneurial employment through e-commerce;
- Third, e-commerce has bridged a direct connection between the business operators and customers, which has stimulated the product innovation and customization to meet the new market demand;
- Fourth, it has changed the way how the rural population live and produce. At village-level e-commerce service stations, they can buy online high-quality and low-cost daily necessities and agricultural inputs, and receive sales assistance;
- Fifth, with the introduction of high-quality agricultural products such as kiwifruit into big cities, "Meixian Kiwifruit" is gaining increasing popularity, which in turn has helped to promote Meixian County.

In Reggio Calabria, currently there is no systemic provincial strategy for rural e-commerce. However, public financial support is available for the private sector to development e-commerce. In the "PSR Calarbia 2014-2020", for example, both interventions 4.1.1 and 4.1.2 offer subsidies to young farmers, family farms and ACs for the acquisition of necessary ICT hardware for e-commerce. At present, e-commerce is not commonly practiced in the Locride area neither at household level nor industrial level. According to the author's questionnaire survey (Appendix 2) in the Locride area, 10.53% of the 118 respondents from the rural areas of 12 comunes stated that they had sold agricultural products on the Internet. This suggests that e-commerce at household level in the agri-food system in the Locride area is much less strong than in Meixian County, which is confirmed by the fact that only 4.2% of residents in Calabria claimed that they had purchased food and groceries online (Table 19). In addition, the rural population seem to show little interest for e-commerce. While 19.3% of the respondents from the Locride area expressed their desire for (more) assistance centers of e-commerce, 36.29% from Meixian County expressed the same wish. Actually, it seems that not only in Calabria, but also in Italy, the culture of e-commerce in the agri-food system at household level is yet to be formed, as even in the economically more advanced northern Italy, only 9.1% of people claimed that they had purchased food and groceries online.

This according to De Blasio (2008) is due to three reasons: first, knowledge about the possibilities of the Internet may be lacking; second, support services may be inefficient or insufficient in terms of online payment or delivery (high-quality support services often may be more readily available in urban areas but not in rural areas); and third, the consumer psychology and habits may urge the consumers to prefer "touch and feel". After all, the propensity to shop on the Internet depends not only on cost and convenience but also on culture and infrastructure (Cairncross 1997 cit in De Blasio 2008).

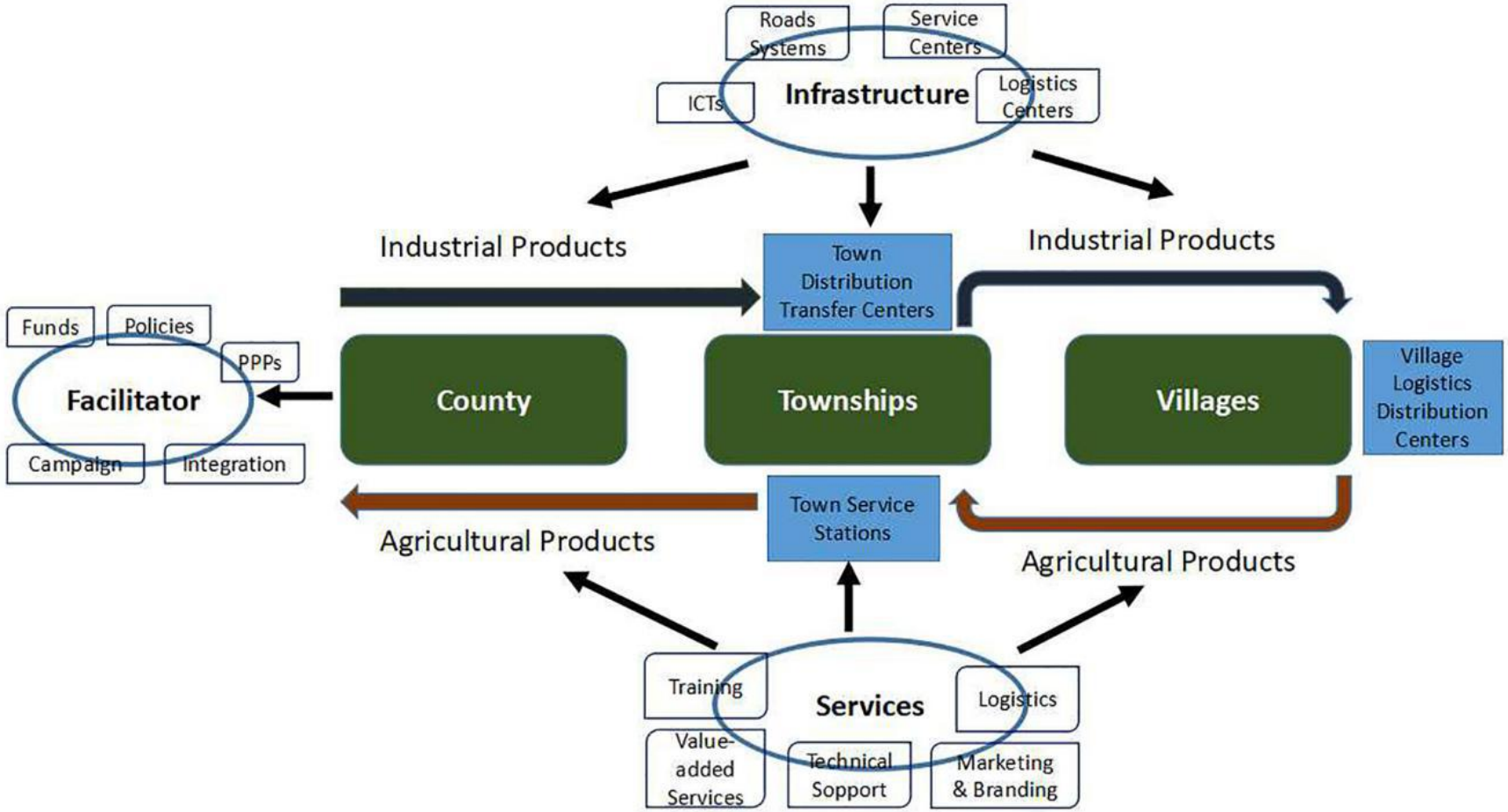

Figure 84. Conceptual map of the e-commerce ecosystem of Meixian County.
© Y. OU (2018)

Figure 85. Internet Technology Industrial Park of Meixian County. © Y. OU (2018)

Figure 86. Alibaba Rural Taobao Meixian Service Center. © Y. OU (2018)

Figure 87. Alibaba Rural Taobao Service Center of Dangjia Village. © Y. OU (2018)

Figure 88. China Post Rural E-commerce Service Center in Diwu Village. © Y. OU (2018)

At the industrial level, despite that there is no big gap in access to Internet between companies with at least 10 employees in Calabria and in the North (Fig. 89), a gap does exist between them regarding e-commerce activities. Fewer companies in Calabria purchase online than companies in the North or in Italy, but they sell their products online more than companies in the North or in Italy. Generally, purchasing online is more popular than selling online. While less than 20% of companies throughout Italy sell their products online, more than 40% of them purchase online. The author's interviews of the ACs and rural enterprises in the Locride area show that 15.38% of the ACs and rural enterprises have sold their products online. In contrast, the interviews in Meixian County show that all the ACs and enterprises have sold products and purchased agricultural and industrial materials online. Enterprises' low enthusiasm in practicing e-commerce may be due to a lack of technological and human resource infrastructure, as well as lack of knowledge of potential benefits of e-commerce applications (Bharadwaj and Soni 2007). As for the business entities that practice e-commerce in the Locride area, their behaviors are largely individual and spontaneous, and not organized within an "e-commerce

ecosystem" at the territorial scale. For this reason, the discussions on strategies related to e-commerce development in the following section will be focused on the experience of Meixian County.

Logistics is one of the major problems that the Locride area is facing to develop e-commerce. In terms of infrastructure, according to the Istat (2016), as many as 57.6% of the households in Calabria stated that the roads in areas where they inhabited were in bad conditions. Also as the results of the author's questionnaires show (Appendices 1-2), only 8.77% of the respondents from the Locride area have observed the improvement of infrastructure over the past years, and 38.60% claimed that transportation was a major problem where they inhabited. 70.18% of the respondents expressed their desire for improved infrastructure. In Meixian County, by contrast, 73.42% of the respondents have observed the improvement of infrastructure over the past years, and 19.83% of the respondents claimed that transportation was a major problem where they inhabited. 47.26% of the respondents expressed their desire for improved infrastructure. In terms of mailing services, according to the Istat (2016), 37.2% of the households in Calabria stated that they had difficulty in accessing post offices. Although all the comunes in the Locride area have a branch office of the *Poste Italiane* (Italian Post Office), in small ones like Portigliola they are not open every day on weekdays. The *Poste Italiane* has no processing and distribution center in Reggio Calabria, and the closest one is located in Lamezia Terme City in the Province of Catanzaro.

8.4.3. Development Strategies

The development strategies of e-commerce in Meixian County can be summarized in nine aspects.

First, a favorable institutional mechanism was established, together with necessary financial guarantee for e-commerce development in place. Meanwhile, a coordination and stewardship group composed of the main responsibles of all related government departments at the county and township levels was instituted. The group has relied on a joint and dispatching meeting system to make decisions and solve practical problems. In addition, the municipality issued in 2016 two policy documents to guide e-commerce development, namely the "Implementation Plan for the Development of the Comprehensive Demonstration County of Rural E-commerce" and the "Opinions on the Implementation of Meixian County on Promoting the Development of Rural E-commerce". In terms of financial guarantee, the municipality has allocated special funds of 10 million yuan each year for the development of e-commerce and construction of related service support systems.

Second, ICT infrastructure has been considered as a top priority in promoting e-commerce development. Continuous efforts have been made to improve broadband Internet access, and the construction of broadband network and

communication base stations has been integrated into the county's master plan of rural-urban development. The construction of rural e-commerce industrial parks have also played an important role in promoting industrial agglomeration and improving the efficiency of rural e-commerce industry (Wangshi 2016).

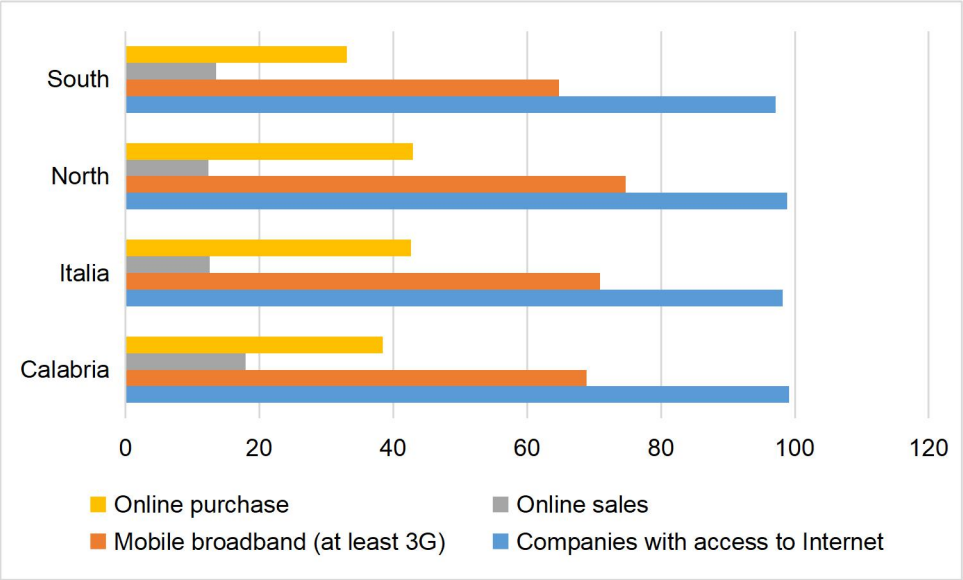

Figure 89. Percentage of companies with at least 10 employees with Internet access and e-commerce activities (2017).
Source: The Author's own elaboration based on the Istat data (2017).

Third, an integrated approach to logistics system development proves to be critical for building up a logistics system that is extended, efficient and well interwoven. Both external logistics resource like Alibaba "Rural Taobao" (county-level, regional and national networks) and internal ones like China Post branch offices (county-level, regional and national networks) and grassroots supply and marketing cooperatives (county-level networks) have been integrated. As an integral component of the logistics system, the village-level e-commerce service stations often provide comprehensive services including assistance to agricultural products sales, online purchasing and bill payment, logistics and distribution and other services. This has effectively solved the problems (like difficulty in selling their goods) and new needs of farmers (like better daily necessities) in production and daily life. The extension of express mailing services of major private express mailing companies like Shunfeng, Yunda and Yuantong into towns and villages has also helped improve both the capacity and efficiency of express logistics at grassroots level. Consequently, not only logistics distribution system, but also the e-commerce service system at grassroots level have been considerably optimized, with basically a full coverage countywide of e-commerce services and logistics and distribution to date.

Fourth, the e-commerce development in Meixian County has attached the same

importance to the development of the e-commerce supply chain of agricultural products as to that of the logistics system. On the one hand, with a focus on the supply chain within the national-level Meixian Kiwifruits Industrial Park, Internet Technology Industrial Park and Mingrun Agricultural Products Logistics Park, the storage, sorting, quality monitoring and product testing have been optimized while basic and supporting facilities improved so as to attract agricultural production and processing enterprises to locate in the parks to supply online fresh and processed agricultural products. On the other hand, major institutional and financial supports have been provided to leading agricultural enterprises and cooperatives to help them build up standardized, high-quality production bases so as to enlarge their supply capacity, register trademarks, promote brands, enlarge warehousing and standardized sorting and packaging capabilities, as well as establishing quality and security traceability systems.

Fifth, the use of diversified e-commerce marketing tools has played a major role in promoting the e-commerce development. Regarding online marketing to promote the county's featured agricultural products, individuals and public, private and social entities such as the E-commerce Public Service Center and four e-commerce associations (Meixian E-commerce Association, E-businessmen Association, Micro E-businessmen Association, and New Farmers' Federation) as well as e-commerce enterprises and micro-businesses have used a variety of marketing tools such as social media like WeChat and Weibo, mobile APPs and third-party vertical marketing platforms dedicated to agricultural products. The E-commerce Public Service Center and the four e-commerce associations have also collaboratively organized online sales festivals of special agricultural products. As for offline marketing, besides traditional print advertisements, various demonstration and experience facilities have been constructed, such as the Meixian Specialty Product Exhibition Hall, corporate flagship stores, personal store, offline experience stores and O2O experience stores. This integration of online and offline marketing proves to be an additional asset.

Sixth, a coordinated approach has been adopted to develop simultaneously e-commerce in the three major industries. So far, three major e-commerce sectors have been built, i.e. kiwifruits, textile and tourism products. This has contributed to the comprehensive development of e-commerce in Meixian County.

Seventh, based on the county's actual situation, a four-level e-commerce talents training system has been established, including strategy training for leading cadres, training for enterprise responsibles, entrepreneurship and employment training for e-commerce practitioners and start-ups, and e-commerce popularization training for the interested general public.

Eighth, creating a favorable social atmosphere has played an important role in

promoting the development of e-commerce. Regular rural e-commerce campaigns have been carried out on diversified media channels, including television, Internet, social media and outdoor advertising. E-commerce associations and e-commerce companies have organized various cultural events to sensitize the public, such as the online kiwifruit sales festival.

Ninth, the partnerships between local government, the private sector and social organizations have been still another driver of e-commerce development. The cooperation with major e-commerce companies like Alibaba and Jingdong, especially Alibaba "Rural Taobao", and express delivery companies, has greatly promoted the development and improvement of e-commerce services, logistics and distribution systems. The four professional associations, namely, Meixian E-commerce Association, E-businessmen Association, Micro E-businessmen Association and New Farmers' Federation have not only promoted the exchanges and cooperation among e-commerce companies and among practitioners, but also strengthened the bond between the government and e-commerce operation entities of all kinds.

8.5. Conclusions

In view of innovation economies in the rural development process, "innovation" should be considered in a broad sense as both the process and outcomes at social and economic levels of the development of new economic activities, which are driven by technological, organizational and product innovations. To spur innovation economies in rural areas, a place-based approach must be adopted. Innovation economies should equally reply on various types of networks to promote the innovation process and knowledge generation and diffusion process, and foster effective governance at the local level by forming a multistakeholder partnerships and collaboration among academia, private and public sectors, and civil society and creating a synergy among them.

In the era of knowledge economy and facing deepening "extractive" urbanization and globalization, rural localities are most likely to fail to support economic restructuring and form new businesses. This is mainly due to their scarcity of innovative capacities, which itself is due to, *inter alia*, their limited access to financial capital and information, lack of human capital, poor organization, weak negotiating power, lack of favorable policies, etc.

Today, both in China and the EU, innovation is considered having a crucial role to play in reinforcing the competitiveness of rural economies and driving rural development. Five framework elements appear to be of great importance to this innovation-based approach to gain competitive advantages in rural China and Europe:

- First, there needs a general recognition that the macro-context where innovation occurs in rural areas is featured by deepening urbanization,

globalization and the advancement in ICTs;

- Second, as an aggregation of locally embedded asset, rural landscapes are valuable sources of innovations and favorable to innovative economic activities which can in return contribute to their development and management. Innovations within rural landscapes can serve as an important means to integrate the open-market agenda and the sustainability agenda while facilitating sustainable rural development with a "transformation strategy" able to respond to the environment-development conflict;
- Third, rural innovations in the social and economic spheres must start from agricultural innovation, which may be impeded due to existing land system and ways of agricultural production;
- Fourth, innovations should pay a special attention to the balance between economic specialization and economic diversification;
- Fifth, an improved governance is needed to facilitate innovations in rural areas.

Land reform and rural-urban linkages are two prerequisite conditions for fostering innovation economies. On the one hand, due to social and economic restructuring, an existing land system may impede socioeconomic development in rural areas. One typical limitation is the difficulty in developing economies of scale especially when excessively fragmented agricultural lands is the case. Therefore, land reform proves to be necessary to adapt the land system to socioeconomic transformations and help achieve sustainable rural development. The current land reform in China allows the rural population, as contractors of rural lands, to divide their rights to contract and rights to operate so as to enable the transfer of the latter while maintaining the long-term stability of the existing rural land system characterized by household contract responsibility. This reform has improved land utilization efficiency and laid the foundation for developing modern agriculture and revitalizing rural economy. In Italy, facing increasing abandonment of agricultural lands due to continuous outmigration and economic restructuring, there is also an increasing need for land reform. Although currently no thorough reform is undertaken, both the public and social sectors have promoted the changes in the current land system. Young farmers are incentivized to purchase idle lands, and social and agricultural cooperatives are also encouraged to reclaim abandoned lands.

On the other hand, to address rural and urban problems resulting from the binarist rural-urban divide, an ideological shift towards rural-urban polarism is indispensable to foster rural-urban linkages. Rural-urban linkages are able to 1) promote a bi-directional knowledge flow from one sphere to the other besides capital and resource flows; 2) help mobilize the highly potential role of rural landscapes in connecting rural and urban areas by means of new economic activities; and 3) buttress innovation economies by adjusting the supply chain and producer-consumer relationships. To foster rural-urban linkages, it is necessary to:

- study urban and rural problems and their interrelations and solve these problems in a coordinated way;
- foster a synergy and a sound interaction between industry/urban areas and agriculture/rural areas;
- situate urban and rural economic and social development in a unified regional socioeconomic system;
- guarantee a more equitable, participatory mechanism of planning and decision-making to balance rural and urban needs;
- highlight the symbiotic relationship between towns and their surrounding rural areas.

Agriculture, as an interface between human society and environment, proves to be a crux in the social and economic transformations in rural areas. Under the discourse of innovation, the definition and positioning of agriculture should be in line with the requirement of sustainable development. Changing social needs and increasing environmental needs are the driving forces of innovations in the agricultural sector. In Meixian County, innovations in the agricultural production have taken multiple forms, ranging from the application of new technologies, traditional and modern knowledge, environmentally friendly inputs to new production patterns. In terms of agricultural patterns, compound farming is again gaining popularity under new forms. Similar innovations in the agricultural production process in the Locride area has been observed. Generally speaking, however, innovations in the production process are largely limited to the application of modern technologies and knowledge.

In terms of entrepreneurial innovations in the agricultural sector, according to the evaluation of the importance of related assets by the interviewed entrepreneurs from Meixian County and the Locride area, the majority (more than 50%) of them considered networking and interpersonal relationships, trust between partners, knowledge and technology as very important form their operation. The majority of the agricultural businesses in the two case studies area have/had collaborations with universities, and face the lack of funds and financing tools that constrains their development. In terms of land use, all the interviewees from Meixian County reported using lands with the operation rights transfer from farmers, while most of the interviewees are using private lands and also contracted lands in the Locride area.

Circular economy marks a major entrepreneurial innovation in the agricultural sector. As the cases of the Fattoria della Piana and Hengshengxin Poultry Farming Professional Cooperative illustrate, circular economy is an effective way to build up resource-saving and eco-friendly economies while generating socioeconomic benefits by making best use of agricultural wastes and by-products. Another major entrepreneurial innovation is the *contratto di rete di imprese* observed in Bianco Comune, an important tool to build up networks among the small family-run wine firms. This network contract of enterprises has helped the participating firms to reduce their production and operation costs.

Besides, it has also strengthened collaboration among the members and promoted the sharing of information related to marketing and cultivation.

ACs and e-commerce are two major forms of innovation economies in rural areas. The ACs in Meixian County and Reggio Calabria have experimented the cooperative economy with various practices, yet all have spurred innovation by capitalizing on local resources such as land, idle capital, social capital and traditional knowledge and highlighting knowledge generation, networking, resource integration, operation standardization, quality optimization and multichannel marketing strategy. They have also helped increase members' income by gaining a reinforced negotiation power on the market with high quality products, increased supply capacity and diversified marketing tools. The case-studied ACs have adopted various strategies to improve their economic conditions and gain a greater negotiation power on the market in term of access to capital, competitiveness building through production standardization, networking and collaboration, diversified marketing, and management with a corporate system. They have equally improved the degree of farmer/family farm organizations by highlighting member participation in the implementation of their predetermined production standards, attaching great importance to the relationship management of members, and in Meixian County's case offering various training services. Big ACs like FdP and OP Monte are prone to play a leading role and have a territorial impact.

In China, the rural land operation rights transfer is fundamental to spurring innovation economies in rural areas. This reform paves the way for new types of rural economic entities like ACs, which are grounded in local socioeconomic contexts and capitalize on local assets and therefore serve as ideal platforms for innovation. The four ACs from Meixian County studied above all adhere to the principle of moderate scale operations and prove to be good examples of place-based innovation owing to their integrated utilization of various local assets and organizational innovation. This has finally helped improve their competitive advantages and promote local economic development. In both cases, "place" (context) and socioeconomic dynamics (contributing factors) are integrated during the innovation process. Through innovation, they have improved the competitive advantages of their products, as is reflected by the advantageous prices due to their fortified bargaining power in pricing. The need for further strengthening bargaining power will most likely lead to more regional mergers among cooperatives, while such mergers are also induced by seeking economies of scope in R&D and branding. Federated cooperatives are important in sectors and regions with many small cooperatives. They can obtain economies of scale and bargaining power that local cooperatives cannot (Bijman *et al.* 2012). To support the formation of cooperative federations, legal definitions of producer organizations and support measures should not discriminate against large cooperatives (*ibid*.).

The cases above also cast light on the power of "knowledge-based agriculture". A

common phenomenon is, those who sell their produces at a more profitable price are not the most diligent, traditional farmers but those who have followed the technical guidance of agricultural experts. The three major characteristics of knowledge economy, global, highlighting intangible assets, and intensely interlinked (Betcherman 1998; Kelly 1999), are also the defining characteristics of modern agriculture facing deepening globalization. Therefore, it holds water to say that knowledge economy is an inevitable direction of modern agricultural development. With the development of the "knowledge-based agriculture", what needs to be facilitated are multistakeholder processes increasingly seen as a promising vehicle for agricultural innovation in developing countries (Bisseleua *et al.* 2018) and multisectoral collaboration capable of triggering large-scale social change (Kania and Kramer 2011). To this end, localities that adopt a place-based, endogenous approach to local economic development are strongly suggested to take advantage of both external networks and internal ones so as to strengthen their capacities of knowledge generation and innovation. Besides, continuous investment in human capacity is inevitable, which requires a long-term and focused commitment to develop human skills and social capital, including support for learning and collective self-help capacity building (Bingen *et al.* 2003).

Currently, rural e-commerce is quite strong both at household level and industrial level in Meixian County. It has seen remarkable development at three levels, namely, infrastructure, services and logistics, and basically an "e-commerce ecosystem" at the territorial scale has been formed. Rural e-commerce has contributed to rural development in Meixian County in multiple aspects, including increasing farmers' income, stimulating entrepreneurship and product innovation, modernizing production and ways of living in rural areas, and promoting the territorial branding. In contrast, e-commerce is not commonly practiced in the Locride area neither at household level nor industrial level. This may be due to scarcity of support services, traditional consumer psychology and habits, and insufficient logistics and infrastructure. E-commerce in Meixian County owes its rapid, sound development to night elements, namely, a favorable institutional mechanism and necessary financial guarantee, ICT infrastructure development, an integrated approach to logistics system development, e-commerce supply chain development, use of diversified e-commerce marketing tools, developing simultaneously e-commerce in primary, secondary and tertiary sectors, a four-level e-commerce talents training system, a favorable social atmosphere, and multistakeholder partnerships.

Chapter 9 Rural Tourism

9.1. Rural Tourism in Minor Historic Towns[95, 96]

9.1.1. Rural Tourism as a Regenerative Tool

Rural tourism, or rurally-located tourism, includes not only agritourism and farm tourism, but also any tourist activities taking place in rural areas, such as camping, cultural events, adventure sports, walking trails, heritage tours, etc. (Holland *et al.* 2003). In Europe, rural tourism has long been considered as a catalyst for regeneration, particularly where traditional agricultural industries are in decline (Williams and Shaw 1998 cit in Holland *et al.* 2003) following socioeconomic restructuring. Rural areas tend to suffer high level of poverty, drain of young and skilled workers, and a lack of non-farm economic activities, infrastructural development, access to essential services and favorable policies (*ibid*.). In response to part of these problems, rural tourism can serve as an agent for rural regeneration to counter the loss of economic importance of agriculture and the ageing and decreasing populations in rural areas, and the consequent loss of public services (Carneiro *et al.* 2015). Rural tourism development therefore should not be dominated by property development; rather, it should make best use of the existing natural environment, properties and cultural heritage (Petrovic *et al.* 2018). In this way, rural tourism development is a process of value-adding of these assets already present in the place.

In developing countries, by contrast, rural tourism is often times deployed as a tool to diversify rural economy, given that smallholder farming is facing growing constraints both in terms of local resource base and international competitiveness (Holland *et al.* 2003). In China, for example, as an important driver of rural development and regeneration, rural tourism is widely encouraged in less-developed regions to alleviate poverty and promote integrated urban–rural development (Su 2012 cit in Dai *et al.* 2016). The ultimate objective of diversifying the rural economy to give it an ecologically, economically, and socially sustainable form is to improve local people's quality of life, reduce poverty, and social and environmental degradation (Petrovic *et al.* 2018). Also in developed countries like Italy, the diversification of rural economy has remained a priority in the political agenda for decades, for which agritourism is encouraged. In Italy, where agritourism has been well developed and central to rural tourism (Holland *et al.* 2003), it is required to connect and complement

[95] In Italy, more than six thousand of the 8,100 Italian municipalities have a population of less than 10,000 inhabitants, of which just over 5,800 have a population of less than 5,000 inhabitants, about 3,600 less than 2,000, nearly 2,000 less than 1,000, and more than eight hundred less than 500. In Calabria Region, of its 420 municipalities a little less than 400 are minor historic towns (MHTs) (Lauria, 2009). For the purpose of this dissertation, MHTs are defined as towns or villages of less than 1,000 inhabitants.

[96] This section has made reference to the Author's article "From Territorial Identity to Territorial Branding: Tourism-led Revitalization of Minor Historic Towns in Reggio Calabria", Conference Proceedings of the 5th UNESCO UNITWIN Conference, April 18-22, 2017, Coimbra, Portugal.

agritourism with all kinds of agricultural activities as is articulated in the Italian Law of 5 December 1985, n. 730 (Platania 2014).

In reality, regeneration and diversification tend to be two processes that are not conflicting, and both are at the same time the outcomes and means of rural tourism development. This holds especially true if a broader definition of "regeneration" is taken within the landscape framework (as in this dissertation). As the concept of ecologically friendly farming is becoming widely recognized, tourists to rural areas are showing increasing demand for ecological space and multifunctional resources of rural areas (Arahi 1998). Such a need can be satisfied only if agriculture, as an interface between rural society and environment, is regenerated towards a more eco-friendly and multifunctional pattern. This lays the material foundation for diversification (*ibid*.), which is an inevitable means for different rural tourism destinations to consider differentiated services to attract tourists of varied and ever-changing demands (Dai *et al.* 2017). In this sense, it seems that rural regeneration is actually the prerequisite for rural tourism development, in that the former is critical for making rural localities both physically and functionally attractive to tourists. Only in this way can rural tourism contribute to the revitalization of rural localities over time.

In the Locride area, similarly in the Grecanic area, the regeneration of the minor historic towns (MHTs) has played a major role in developing rural tourism, which in turn contributes to the revitalization of the MHTs. Given the degrading sociocultural landscape and built environment and sometimes also degrading natural landscape, even the formation of "ghost towns" following continuous depopulation in the MHTs, regeneration proves to be a badly needed tool to make them more physically and functionally attractive to tourists. As an integral part of the regeneration of these MHTs, rural tourism is to be developed by promoting their territorial identity and the territorial branding process. With continuous regeneration efforts, the MHTs can heighten their tourist attractiveness, which demands the coincidence of economic and cultural activities in civic design since the two are mutually impacting (Dix 1995). The most common regeneration practice is reuse and repurpose characteristic of functional adaptation and diversification. Indeed, recycling existing assets and tourism-led development can give an impetus for improving the infrastructure and sustainability of a place (Parlewar and Fukukawa 2006).

The development of rural tourism relying on rural landscapes and rural landscape regeneration provide opportunities to each other and therefore are mutually promoting. On the one hand, rural tourism tends to stimulate a variety of regenerative activities within rural landscapes such as landscape restoration and optimization which can enhance their functionality. As a carrier of territorial culture, lifestyle and traditional values, rural landscape regeneration will also provide an opportunity for the transmission and contemporization of territorial culture. On the other hand, the regenerated rural landscapes are able

to provide the prerequisite material conditions and a cultural core for the development of rural tourism, making it possible to develop diversified forms of rural tourism, such as experience, sightseeing and recreation, health and wellness. A harmonious economic ecosystem that integrates culture, industry and landscapes in rural areas is very likely to form if this mutually promoting relationship between landscape regeneration and rural tourism development is to develop in a benign way.

9.1.2. Territorial Identity as Assets

Tourism worldwide is gaining increasing popularity in rural areas, emphasizing the growing needs and aspirations of urbanites for the environment and ecological way of life. To support the tourism driven by urban needs, market-oriented development is an effective strategy for rural tourism (Dai *et al.* 2016; Petrovic *et al.* 2018). However, over dependence on the market mechanism tends to pave the way for commercialized mass tourism that exploits rural resources. A widespread practice is that rural governments seek external private investments to develop tourism projects like resorts in rural areas, and the operation and management is transferred to a third-party agency. This traditional pattern of rural tourism driven by the overwhelming inflow of external capital is in fact the antithesis of rural tourism because it deprives rural communities of the tourism development process rather than revitalize them (Arahi 1998). Besides, rural localities tend to lose their social, cultural and environmental values due to the negative externalities resulting from exploitative tourism activities, degrading rural landscapes as a whole.

To counter the tendency of mass tourism, rural tourism should, while keeping its position as an important market segment, comply with the principles of sustainable development while respecting and carrying on the local tradition and culture (Petrovic *et al.* 2018). This requires that rural tourism differentiate itself from other forms of tourism, by rooting its development in the natural, built and sociocultural landscapes. It is well recognized that rural tourism is an important development strategy in rural areas (Carneiro *et al.* 2015; Lo *et al.* 2014), for which landscape is the central endogenous resource (Carneiro *et al.* 2015). In a study on agritourists' preferences, Torquati and others (2017) found that the most important feature affecting the interviewees' propensity to pay a premium price to stay in an agritourism farm is the well-preserved traditional landscape. In view of this, it is crucial to conserve and preserve the quality of rural landscapes especially for rural tourism destinations (Lo *et al.* 2014).

As an alternative to the traditional capital-driven rural tourism, sustainable rural tourism requires an integrated approach to its development, and is primarily based on tourism motivations associated with the characteristics of rural areas, perceived as natural, cultural and traditional environments and opportunities for healthy living, with open space for a wide range of sport and recreational activities (Carneiro *et al.* 2015). The rational for such an approach lies in the fact

that tourism itself refers to an ecosystem. This determines that any successful tourism development depends on nested commercial, economic and logistical issues, such as the quality of the product, accessibility and infrastructure of the destination, availability of skills and interest of investors (Holland *et al.* 2003). What is actually required by this integrated approach is therefore a collaboration supportive for "systems thinking", since through collaboration, a greater integration between rural tourism and other economic sectors is most likely to occur, thus leading to collaborative innovation (Bramwell and Lane 2000). Therefore, in developing rural tourism, inter-sectoral linkages between various local industries are very important (Arahi 1998; Holland *et al.* 2003). "Systems thinking" is indispensable to this integrated approach, which demands a holistic conceptualization of tourism as one component of a social-ecological system (Shakya 2015). Indeed, the role of sustainable tourism in economic development should be reframed in a way to generate simultaneously social impacts to make communities more resilient and vibrant in a turbulent and changing environment (McCool 2015a).

In rural areas, integrated rural tourism can count on their characteristic territorial identity. The MHTs in the Locride area of the Province of Reggio Calabria enjoy unique territorial identity characterized by originality, diversity and richness, be it material and immaterial cultural heritage or landscapes. Territorial identity is often believed to be a contributing factor of local development, since it influences local evolutionary processes, while shaping the potential of endogenous development of territories and enhancing territorial cohesion (Lee *et al.* 2005; Ray 2006; Veneri 2011; Orduna Allegrini 2012). However, the definition/understanding of territorial identity tends to be subjective. According to Banini and Pollice (2015), territorial identity is a dynamic, open and participatory social process, gaining its shape from the institutional, economic and organizational environment (Vázquez-Barquero 2003), which marks the "social construction". While Roca and others (2016) stress the natural, economic, societal and cultural features of territorial identity, Camagni (2006) argues that social capital and cultural heritage are determinants of territorial identity. Veneri (2011) maintains that territorial identity has four main components: social capital, sociocultural identity, spatial organization of activities and governance structure. For the purpose of this dissertation, territorial identity is defined, referring to the situation of the MHTs in the Locride area and also the adjacent Grecanic area, as a totality of the material and the immaterial attributes showing the territoriality that encompass cultural heritage (both material and immaterial), landscapes, knowledge and value system, language, environment and climate, peculiar agricultural products and humanity (territorial temperament, social capital and social ethos for example). All of these are constituents of the social, physical and human capital as well as cultural and natural resources embedded in the landscapes of the MHTs. Territorial identity, in this sense, refers to all forms of capital and assets that can be mobilized to catalyze local socioeconomic development through tourism

development. The territorial identity of the MHTs, therefore, is their inherent assets and source of attractiveness. It is therefore able to fuel tourism-led local socioeconomic development on the condition that there be a value-adding process in place.

Although boasting a strong, highly potential territorial identity, such as unique landscape, tangible and intangible heritage, living traditions and rituals as well as peculiar agri-food products, the MHTs are faced with many socioeconomic and environmental problems, such as abandonment, natural disasters, depopulation, degrading built environment, unemployment and stagnating economy, and lagging facilities and services. Amaro (2009) reckons that the abandonment in MHTs is due to a lack of investment attention or economic processes, which leads to a "traumatic" result. Indeed, this territorial trauma has largely resulted from drastic socioeconomic transformations that have interrupted their traditional socioeconomic system deeply-rooted in the land, following mass outmigration to big cities and displacement along the coastal areas and the tertiarization process. As for the political-economic environment, the rural areas in Reggio Calabria generally offer a representative picture: they have long been heavily dependent on public transfers, while undergoing fragmentation of the social structure. Both factors explain "the absence of strong local actors and the protracted subordination of local elites to exogenous agency, i.e. choices and actions determined outside the region" (Barillà 2013, 256).

Given the characteristics of the MHTs' endogenous territorial identity and exogenous political-economic conditions, seemingly the only feasible pathway to the revitalization of these MHTs in the Locride and Grecanic areas is to adopt an endogenous approach that capitalizes on their territorial identity in an integrated way. Accordingly, this territorial identity-based endogenous approach can serve as a guiding principle to formulate and operate tourism activities so as to lever local socioeconomic development and revitalize these MHTs. However, it is worth noting that the functionality of the two approaches depends largely on whether proactive territorial branding practices are in place so as to add value to the territorial identity.

9.1.3. Territorial Branding as a Value-adding Tool

Given that rural areas tend to possess "limited, hyper-mobile financial, human or cultural resource" (Ashworth *et al.* 2014, 4), territorial branding (also termed as place branding) is indispensable for them to become or remain competitive. As a booster of competitiveness, territorial branding helps places gain advantages in the increasingly intense arena of competition among them (*ibid*). To begin with, through territorial branding, marginal rural localities can increase their visibility and attract tourists. This is also conducive to dispersing tourists geographically, so as to prevent negative environmental and cultural externalities due to tourist concentration in a "honeypot" tourist destination (Holland *et al.* 2003). Second, territorial branding can provide strategic guidance

for place making, a critical element for success in knowledge-based place development as planning and branding places is believed to be an effective marketing tool for attracting investment and talents (Yigitcanlar *et al.* 2017). In addition, territorial branding serves also as an important basis for multistakeholder cooperation, solutions to practical/functional place-related problems, and opportunities to maximize positive place experience to consumers (residents, visitors, investors, etc.) (Ashworth *et al.* 2014). Third, territorial branding can drive innovation both in terms of tourism development process and tourism services and products. Territorial branding touches all aspects of the territorial identity, and therefore, "systems thinking" and a special attention to interrelationships must be integrated into the branding process. In this process, innovation is quite likely to emerge as "a collective/interactive process, which cannot take place outside a highly and systemic dimension that favors it" (Bagautdinova 2012, 181).

It therefore can be seen that territorial branding has both endogenous and exogenous nature: it needs to be based on a place's inherent assets and capital while addressing its problems; and, at the meantime, it needs to have a "systems thinking" to reach out to external relationships and resources. This nature suggests its capability to support the asset-based endogenous approach to integrated rural tourism development. According to Bagautdinova (2012), the quality of territorial branding in facilitating tourism-led development practices is determined by: 1) the value of territory; 2) the level of activism of its community; 3) integrated offer of services and goods for different categories of tourists; and 4) the accessibility to the territory and its excellence. Besides, the effectiveness of territorial branding also depends on whether the territorial identity is fully mobilized and capitalized on through a value-adding process.

At present, the MHTs are undergoing various territorial branding practices largely with an endogenous approach, while exogenous approach is an emerging tool. Endogenous territorial branding is aimed at adding value to the MHTs' cultural and natural resources, with a pronounced focus on their material and immaterial cultural heritage, as well as agri-food products. Folkloric festivals serve as an important medium for this kind of territorial branding. One good practice is the *Palearizа*, an ethno-cultural-musical festival which takes place annually since 1997 in the Grecanic and Locride areas. *Palearizа* always takes place in public spaces (squares, streets, historic buildings, theatrical and entertainment areas) of numerous historic towns/villages of municipalities, such as Bova, Cardeto, Condofuri, San Lorenzo, Africo, Roghudi, Palizzi, etc. It uses minimal staging to take full advantage of public spaces, squares, facades of historic buildings or the surrounding landscapes. Indeed, the soul of the festival lies in a seamless integration between the content and cultural and environmental media, and between the material and the immaterial. Over the years, by adding value to the territorial identity, *Palearizа* has never stopped innovation. For example, in the 2015 edition, it created a summer school of

Calabrian Greek (*lingua grecanica*) organized by the Associazione Scuola Estiva di Lingua Greka di Calabria located in Bova Marina. Today, this festival has already become a business card of ethno-cultural tourism in Reggio Calabria, distinguishing itself for its ability to keep alive the territorial folklore while innovating the interpretations of territorial identity and adapting to changing times[97].

In the case of P*aleariza*, the focus of the branding is on immaterial and material cultural heritage. In other cases, what is central to the branding are agri-food products and rustic enogastronomy combined with arts. A good example is the "*Borgo dell'Arte e del Sapore*" (Village of Art and Flavor), a cultural event organized yearly by the comune of Sant'Agata del Bianco. In the third edition (August 5-6, 2018), visitors had the opportunity to enjoy, besides enogastronomic experience, various cultural events, such as dance, theater and exhibitions that took place in public spaces in the historic center. Meanwhile, a fair was established where local agri-food businesses were invited to promote their products. The agricultural cooperative "Aspromonte", for example, opened a stand and got the chance to find new customers among the tourists. Another good example is Gerace, which had a long "history" of using festival to promote its territorial identity.

Gerace, well-known for its Norman, Byzantine and Renaissance architecture, goes even one step further by creating an annual street art festival called "*Borgo Incantato, l'arte di strada nei vicoli*" (Enchanted Village, Street Art in the Alleys) since 1999. In the 2018 edition (July 26-28, 2018), for three nights, historic buildings with great value were illuminated and the streets and allies within the historic center were transformed into both an enogastronomic and street art itineraries (Fig. 90). An art restoration workshop was also opened, where visitors were able to observe how artistic pieces were restored and make inquiries to the restorers (Fig. 91). In so doing, Gerace has managed to add value simultaneously to its unique cultural heritage, gastronomy and traditional handicrafts, while raising the public's awareness of cultural heritage protection and transmission. Besides the above-mentioned festivals, in almost all towns, there are also various *sagra* festivals dedicated to promoting local gastronomic specialties while aiming at attracting visitors and tourists.

During the territorial branding process, often in close collaboration with the municipality, community-led institutions, such as *pro loco*, cultural associations and even cooperatives as well as inter-community networks play a significant role.

[97] In 2011, *Palearíza* was nominated by the Italian Ministry of Tourism as "Heritage of Italy" for its dedication to cultural events that contribute to enhancing the image of Italy and generating new tourism.

Figure 90. Light show on the Cathedral of Gerace during the Street Art Festival. © Y. OU (2018)

Figure 91. Restoration workshop open to the public during the Street Art Festival of Gerace. © Y. OU (2018)

A p*ro loco* (Latin phrase which means "in favor of the place") is a grassroots organization dedicated to promoting local tourism particularly of towns and their adjacent areas while helping improve the quality of life (especially cultural life) of the local population. Different from publicly financed organizations such as the *Azienda di Promozione Turistica* (Agency of Tourism Promotion) or the *Ufficio di Informazione e Accoglienza Turistica* (Office of Tourist Information and Reception), *pro loco* is a non-profit entity. By means of adding value to the territorial identity, it is aimed at triggering tourism-related activities and at the same time improving the quality of life of the local population. For this purpose, *pro loco*, when developing tourism activities, attaches great importance to typical enogastronomic products and local handicrafts, folkloric traditions cultural and landscape heritage on the one hand; and on the other hand, it emphasizes the protection of cultural and landscape heritage. In so doing, *pro loco* helps form a "positive feedback loop", while the initiatives meant to maintain and/or improve physical conditions of the place and the living conditions of local population lay the necessary foundation for a quality tourism, which in turn contributes to the improvement of people's quality of life and environmental protection.

According to Shakya (2015), bridging social capital has a positive impact on tourism-led local development, namely, extra-community networks are considered as a growth booster. The presence of social capital within destination communities can promote the sustainability of tourism development. Commonly considered as a contributing factor to bridging social capital, exogenous territorial branding approach starts to gain popularity in recent years. Often in the form of extra-community networks and/or public-private partnerships, territorial branding in this case is aimed at facilitating inter-territorial exchange and collaboration. For example, the private agency *Parco Culturale della Calabria Greca*[98, 99] (PCCG, in English: Cultural Park of the

[98] The Greek Calabria (Calabria Greca) refers to a strip of territory of about 500 km² that ranges from the

Greek Calabria), dedicated to the promotion of sustainable tourism, has constructed an extended network involving about 20 tourism operators, 8 cultural associations located in different towns and villages in the Greek Calabria, and the Academy of Fine Arts of Reggio Calabria. This network dedicated to rural tourism at the territorial level suggests that the agency has adopted a concept based on "systems thinking", a broad idea of territoriality, which includes the entire Greek Calabria.

Despite the above-mentioned territorial branding approaches and activities, a considerable portion of the MHTs' highly potential territorial identity remains idle assets, largely due to poor accessibility, lack of local capacities and investments, and institutional constraints. More efforts still need to be made to add value to their unique landscapes, tangible and intangible heritage and peculiar agri-food products.

9.2. Integrated Rural Tourism in Meixian County

9.2.1. All-sector Tourism

Over recent years, concepts and practices of tourism in China have shifted from the traditional "scenic spot tourism" to "all-sector tourism". According to the "Guiding Opinions on Promoting the Development of All-sector Tourism" issued by the General Office of the State Council, all-sector tourism requires considering a certain territory as a complete tourist destination and positioning tourism as an advantageous industry, and develops towards modernization, intensification, high quality and internationalization. To this end, it is required to carry out integrated planning, optimize public services, promote industrial integration, strengthen integrated management, and implement systematic marketing so as to better meet the needs of tourists. This means that tourism is a tool to promote coordinated economic and social development.

Indeed, all-sector tourism represents the direction of modern tourism development towards the promotion of integrated industrial development, harmonious urbanization and well-balanced social, economic and environmental progresses. Therefore, it is aimed to contribute to the integrated development of: 1) tourism and urbanization, industrialization and commerce; 2) tourism and agriculture, forestry and water conservancy; 3) tourism and transportation, environmental protection, land, sea and meteorology; and 4) tourism and technology, education, culture, health and sports. In essence, all-sector tourism marks China's overall tourism development strategy in the new era in response to far-reaching social and economic transformations.

Aspromonte mountains down to the Ionian Sea. This territory of Calabria is "Greek" because of its Greek legacy. Until today, the Calabrian dialect of Greek, or Greek-Bovesian, is still spoken by the elders from ancient Greek towns and villages such as Gallicianò, Bova, Condofuri, Roghudi, etc.

[99] The activities of the Park are mainly in relation to sustainable tourism in Greek Calabria, cultural laboratories, multimedia library, and tourist information and reception.

In Meixian County, all-sector tourism has served as the framework for the integrated development of rural tourism. Rural tourism, following the development concept of "tourism plus a certain sector (tourism +)", has been brought into alignment with major sectors in rural areas such as industry, agriculture, forestry and water conservancy, education, culture, and wellness, sports and transportation. Accordingly, rural tourism is composed of six sections.

- *Tourism + agriculture*, which is aimed to add value to the recreational, didactic and sightseeing functions of modern ecological farming of kiwifruits, strawberries and cherries. The emerging new rural economic entities like ecological agricultural estates and agricultural cooperatives especially those with a production base are currently leading agritourism (Fig. 92). They have altogether formed a rural tourism industry belt which provides tourists with a variety of services such as leisure and recreation, fruit picking and fishing, sightseeing, photography and vernacular culture demonstration. Along this belt, there are also facilities like agritainments (agriculture + entertainment) often hosted in local farmers' houses and run by themselves (Fig. 93). At agritainments, tourists are able to entertain themselves by experiencing seasonal fruits and vegetables picking and farm work, mountain climbing and trekking, fishing, tasting rustic dishes, etc.;
- *Tourism + industry*, which allows tourists to visit different manufacturing plants and industrial parks to discover the production of daily necessities (mainly light industrial products) like bottled water, traditional Chinese liquor, kiwifruit products, tissues, etc.;
- *Tourism + forestry and water conservancy*, which, capitalizing on the regenerated natural landscape especially wetlands along the Weihe River, forms another rural tourism industry belt that offers such services as leisure and recreation, didactic, sightseeing, photography, sport and fitness, cultural display, etc.;
- *Tourism + education*, which has developed itineraries of study tours for school children (both local and from other cities). Three itineraries are quite characteristic: study tours to the Temple of Zhang Zai (1020–1077 AD), the founder of the Guanzhong School of the Neo-Confucianism, the plant of Nongfu Spring, and the Kiwifruits Industrial Park. These study tour itineraries have helped school children get to know traditional Chinese culture and agri-food industry through interactive experiencing;
- *Tourism + culture*, which attaches great importance to the interpretation of the county's historical and cultural heritage. Especially in terms of tourism products like souvenirs, local culture is critical for developing tourism products with independent intellectual property rights and distinctive local characteristics;
- *Tourism + wellness, sport and transportation*, which has focused on areas with outstanding natural amenities and developed medical care tourism and traditional Chinese medicine tourism in Taibai Mountains. Besides, tourism

products like skiing and mountain outdoor have also been developed. In terms of transportation, the infrastructural development in scenic spots has also followed the requirement of tourism development. For example, the road system along the Weihe River Landscape Corridor has been designed in a way to match the overall natural landscape and facilitate the sightseeing[100].

Figure 92. Strawberry garden for sightseeing and picking of Huaixiang Strawberry Farmers Professional Cooperative. © Y. OU (2018)

Figure 93. A typical agritainment in Yanjiabu Village. © Y. OU (2018)

9.2.2. Endogenous Tourism Development: "Lotus Town" Project

In China, endogenous rural tourism, though desirable, faces multiple constraints. One major problem is a lack of financial capital. It is quite common for rural localities to seek private investments. However, this way of financing more often than not leads to exploitative tourism development, as private investments, often in pursuit of profit maximization, tends to commercialize the rural space on the one hand; and on the other, exclude the local population from the decision-making process and benefit allocation in the long-run.

The ongoing reform of rural collective property rights system proves to be conducive to overcoming the above constraint. As is stated in the "No. 1 Central Document of 2018" (also of 2017), the reform should be aimed to help transform resources into assets, financial capital into shares, and farmers into shareholders so as to explore new forms and operational mechanisms of rural collective economies. In the first transformation, resources such as natural resources (e.g. land, forests, grasslands, barren hills, tidal flats and waters), physical capital (e.g. collective properties, construction land and infrastructure) and human capital (e.g. technical skills, techniques and intellectual property rights) can be, after careful verification, evaluation and property right identification and certification (Cui 2017), converted into shares and invested in collective economic development initiatives. In the second transformation, without changing the

[100] This section is based on the interview with the director of the Cultural Heritage and Tourism Bureau of Meixian County.

nature and purpose of their use, various types of public funds, including rural production and development funds, agricultural ecological restoration and governance funds, rural infrastructure construction funds, and special funds to support the village collective economic development, are to be integrated and converted into shares in collective economies (Liu 2016). In the third transformation, farmers are encouraged to convert and invest on a voluntary basis their personal resources into shares, such as contracted land, bank savings, skills and assets into collective economic development initiatives. This means that, to be successfully implemented, this reform has to be accompanied by three simultaneous supporting reforms: 1) rural collective property rights system reform; 2) reform of rural economic entities (from smallholder farming to collective economies of moderate scale) by incorporating social capital; and 3) reform of the use of fiscal funds. Besides, a new risk preparedness mechanism needs to be established (Cui 2017). Through this reform, natural assets and idle capital stock in rural areas are expected to be mobilized, and farmers' enthusiasm to participate and collaborate in collective projects can be stimulated as well. Therefore, the three-transformation is believed to be able to make contributions to the development of collective economies of moderate scale, poverty alleviation and farmers' income increase, industrial restructuring, transformation and upgrading, and rural governance modernization (Li and Zhang 2016; Zhang 2017; Zhang *et al.* 2017).

With the introduction of this reform, rural tourism, as a new form of collective economies, has been provided with a powerful new engine that underpins endogenous tourism development led by the villagers' committees. The "Lotus Town" project appears as a good example of how the three-transformation reform supports endogenous rural tourism.

"Lotus Town" is a rural tourism project initiated and implemented by the Villagers' Committee of Hedi Village. As a major project to develop the village's collective economies, the project is actually an extension and complement of the Lotus Park which has limited touristic functions as no catering or entertainment facilities are provided. Basically, the two sites are separated by the tourism road along the Weihe River Landscape Corridor.In fact, the planning of the Lotus Park had integrated an area dedicated to catering and entertainment, but in the end, its implementation had to abandon it. This is because first, initially the funds available were only enough to construct the park; second, there was the tactic idea to use the Lotus Park as a "test" of the feasibility: if the park was to attract a considerable number of both local visitors and external tourists and gain high popularity, a catering and entertainment area would be more feasible. This incrementalist approach has proved to be quite reasonable given the financial constraint and also potential project failures. As the Lotus Park had opened to the public for two years (2015-2016) and become a popular tourist attraction, the Villagers' Committee of Hedi Village observed people's new needs for dining and entertaining as well as the need to siphon off the heavy tourist

flows during peak seasons, the construction of a catering and entertainment area was put on the agenda again, which finally led to the "Lotus Town" project. In 2017, led by the Villagers' Committee of Hedi Village, the Meixian Lotus Park Tourism Development Co., Ltd. was established so as to better implement the project and manage the Lotus Park.

The project, taking into account the local conditions and adopting a "company + collective + farmers" tourism development pattern, carried out the three-transformation reform with the following measures. First, wasted collective lands were reclaimed for construction purposes. The site where the "Lotus Town" is located covers an area of about 7.1 ha which used to be barren wastelands. But since the lands belong to two villagers' groups, they were converted into the shares of the two groups. Second, funds were raised by integrating public funds under the collective economy project, the collective's own funds, and mortgage loans (the secretary of the villagers' committee mortgaged his own company). The project did not involved any private investments, so as to decide its own "economic fate". Third, in the initial stage, no farmer invested their personal funds in the project, as they were not sure if the project would promise a success. However, to help alleviate poverty in the village, ten poor households, guaranteed by the Villagers' Committee (which bears all risks), were encouraged to take loans (each household 30k yuan) from the local Credit Cooperative under its poverty alleviation program. Each household holds one share, for which the annual dividend is set at 1,000 yuan. During the initial operation, the poverty alleviation funds are not related to the actual business operation and payable on the date as is stated in the shareholding agreement. When the project starts to make net profits, the ten households will have the right to participate in the secondary dividend based on the turnover.

The project was completed in 2018 and started to receive tourists in July. To make sure that the most vulnerable villagers could take advantages from the project, jobs related to management like cleaning, guards and gardening were assigned to villagers under poverty. For all villagers from Hedi Village who wanted to start a business like restaurant or shop, the company offered them the opportunity to rent a space within the "Lotus Town" without paying a lease and deposit. For people from other places, a deposit of 50,000 yuan was required, while no lease was payable. The company is in charge of all procurement and logistics for all the restaurants within the "Lotus Town" so as to guarantee the quality and security of food. The strategy is, in the first two years of operation, the objective is not to make big profits; rather, it is aimed to build up a positive "word of mouth" of "Lotus Town" and gain enough popularity among local visitors and those from other cities. After two years, a lease will be required, shareholders will be able to take dividends and the rest of the net profits will be pooled into the fund owned by the collective for the site management and infrastructural improvement, as well as other collective investments.

9.3. Conclusions

Rural tourism has long been considered as a catalyst for regeneration, and is often deployed as a tool to diversify rural economy. In practice, regeneration and diversification tend to be two processes that are not conflicting, and both are at the same time the outcomes and means of rural tourism development. On the one hand, rural tourism tends to stimulate a variety of regenerative activities within rural landscapes such as landscape restoration and optimization which can enhance their functionality. On the other hand, the regenerated rural landscapes are able to provide the prerequisite material conditions and a cultural core for the development of rural tourism, making it possible to develop diversified forms of rural tourism. In the Locride area, similarly in the Grecanic area, the regeneration of the minor historic towns (MHTs) has played a major role in developing rural tourism, which in turn contributes to the revitalization of the MHTs.

The traditional pattern of rural tourism driven by the overwhelming inflow of external capital is hardly sustainable due to its exploitative nature and inevitable negative externalities. Alternatively, sustainable rural tourism requires an integrated approach of development with a "systems thinking" that counts on the characteristic territorial identity of rural localities. The territorial identity of the MHTs refers to their inherent assets and source of attractiveness, therefore is able to fuel tourism-led local socioeconomic development on the condition that there be a value-adding process in place.

Territorial branding is indispensable to the value-adding process. As a booster of competitiveness, territorial branding can help marginal rural localities to increase their visibility and attract tourists, provide strategic guidance for place making, and drive innovation both in terms of tourism development process and tourism services and products. At present, the MHTs are undergoing various territorial branding practices largely with an endogenous approach to add value to their cultural and natural resources, with a pronounced focus on their material and immaterial cultural heritage, as well as featured agri-food products. Folkloric festivals serve as an important medium for this kind of territorial branding. During the territorial branding process, often in close collaboration with municipalities, community-led institutions, such as *pro loco*, cultural associations and even cooperatives as well as inter-community networks have played a significant role.

In China, over recent years, concepts and practices of tourism have shifted from the traditional "scenic spot tourism" to "all-sector tourism", an important tool to promote coordinated economic and social development at the territorial level. In Meixian County, all-sector tourism has served as the framework for the integrated development of rural tourism. Rural tourism, following the development concept of "tourism plus a certain sector (tourism +)", has been brought into alignment with major sectors in rural areas such as industry,

agriculture, forestry and water conservancy, education, culture, and wellness, sports and transportation. With the introduction of the reform of "three-transformations" in China that is essentially aimed to transform idle assets into economic and industrial advantages, rural tourism, as a new form of collective economies, has been provided with a powerful new engine that underpins endogenous rural development led by villagers' committees.

The "Lotus Town" project has seen the implementation of the "three-transformations" reform by means of carrying out rural collective property rights system reform, reform of rural economic entities and reform of the use of fiscal funds. Through this reform, the project has overcome the constraint of access to capital and offered the opportunity to local farmers to change from passive receivers to both participants and beneficiaries of the industrial chain, capital chain and value chain. In this way, the project has been able to generate both economic and social benefits. Similar to the rural tourism based on territorial identity in the Locride and Grecanic areas, the project is also a typical example of endogenous tourism development, in that its development has seen the integration of locally embedded capital and the "economic fate" has been seized in the hands of the local villagers' committee.

Part 5 Drawing a Conclusion

Chapter 10 Findings, Limitations and Suggestions

10.1. Findings

A diachronic comparison suggests that China and Italy, despite their disparate geographic, historic, socioeconomic and politic contexts, have quite similar trajectories in terms of rural landscape transformations and agricultural development since the rural modernization up to date. By contrast, a synchronic comparison shows that, as the two countries are currently at different stages of development (different degrees of urbanization), their rural landscapes manifest different *status quo* and change at different pace and scale: China, in the midst of rapid urbanization, sees rural landscape transformations at a greater pace and scale compared to Italy. Regarding rural development, while Italy has gone through, more than two decades ago, a shift from a development pattern that prioritized quantity and economic efficiency to one that balanced quantity and quality, and economic efficiency and environmental sustainability, China has started to experience the same process in recent years.

The proposed landscape approach to rural development aims to balance the needs of landscape management and rural economic development. Essentially, it seeks to coordinate the development of innovation economies and landscape regeneration practices, so as to generate a concurrent positive effect on rural development and rural landscapes. Therefore, at the landscape level, the aim is to manage rural landscape changes, and bring about a vibrant, livable countryside. To this end, regeneration is an indispensable tool. At the economic level, the approach recognizes that healthy landscape evolution depends largely on healthy development of rural economies. It therefore tries to spur innovation economies to reinforce the competitive advantages of rural communities, and meanwhile curtail the pressure of economic growth on rural landscapes.

Based on empirical examples from Meixian County (China) and the Locride area (Italy), multiple findings at landscape and economic levels have resulted. At the landscape level:

- Locally embedded traditional knowledge and values, properly revitalized and reinterpreted based on contemporary needs, have played a significant role in natural landscape regeneration;
- Both economic and ecological benefits have been created when abandoned agricultural landscapes have been reclaimed and regenerated;
- The revitalization of cultural heritage is critical to regenerate the built landscape while preserving local characteristics, as well as the linkage between tradition and modernity;
- The regeneration of public spaces (and in Meixian County's case, the initial creation thereof), has played an important role in meeting changing sociocultural and even economic needs;
- The regeneration of the sociocultural landscape, either through the

revitalization of traditional culture and values, or through fostering the spirit of collaborative work, has helped build up social capital;
- In Meixian County, landscape regeneration has been "top-down", whereas it has been mainly "bottom-up" in the Locride area;
- Through landscape regeneration, not only has the functionality of rural landscapes been maintained, updated and improved, but new economic activities like rural tourism and cooperative economies have been made possible.

As an adaptive activity, landscape regeneration is by nature holistic (system), incremental (process) and contextualized (place). As a means to coordinate and integrate the sociocultural, environmental and economic dynamics into the rural development process, rural landscape regeneration should not only focus on the (improvement of) physicality of rural landscapes, but more importantly on the development of their core, that is, people, society and economy. Therefore, for the purpose of a harmonious and maximum integration of social, economic and environmental dynamics during rural landscape regeneration, the landscape approach needs to comply with three fundamental principles: 1) *the synergy principle*, namely synergy between economic, sociocultural and environmental dynamics, between instrumental rationality and ethics, between spontaneity and normativity, and between government and governance; 2) *the balance principle*, namely, balance between efficiency and equity, and between the part and the whole; and 3) *the continuity principle*, namely, continuity between tradition and modernity, and between short-term and long-term. Based on the three overall principles, rural landscape regeneration in practice can be implemented in compliance with six principles that cover planning, implementation and management: 1) integrated and participatory planning; 2) mixed governance; 3) minimum intervention; 4) conformity to process and incrementalism; 5) functional diversification; and 6) participatory management mechanism.

<u>At the economic level</u>:

- In the era of the knowledge economy, innovation economies play a crucial role in reinforcing the competitiveness of rural economies and driving rural development. Place, network and innovation, as well as land reform and rural-urban linkages, are fundamental prerequisites for innovation economies;
- Innovations in agricultural economies prove to be a crux in regenerating rural landscapes and socioeconomic fabrics. Generally, innovations in the agricultural production process are largely limited to the application of modern technologies and knowledge;
- Regarding agricultural entrepreneurial innovations, a circular economy is an effective way to build up economies that save resources and are environmentally friendly, while generating social benefits. Another major entrepreneurial innovation is the network contract among small firms. This has helped them reduce the costs of production and operation, and also stimulate collaboration and information sharing;

- Agricultural cooperatives (ACs) and e-commerce are two major forms of innovation economies in rural areas. ACs have spurred innovation by capitalizing on local resources and highlighting knowledge, networking, standardization and multichannel marketing. They have also helped increase members' income via strengthened negotiation power with high quality products, increased supply capacity and diversified marketing tools;
- Rural e-commerce, developing at the territorial scale, has contributed to rural development in Meixian County. This is due to the roles e-commerce plays in increasing farmers' income; stimulating entrepreneurship and product innovation; modernizing production and ways of living in rural areas; and promoting territorial branding;
- Sustainable rural tourism requires a development approach integrated with "systems thinking" that highlights, and derives from, the characteristic territorial identity. As a booster of competitiveness, territorial branding is indispensable to adding value to the territorial identity. Cases from both study areas demonstrated that endogenous tourism development can be promoted by capitalizing on local assets with this kind of integrated approach.

Concerning governance, one of the central issues of rural landscape regeneration and the development of innovation economies, an improved governance is needed in both case study areas. In the process of rural development, the relationship between governance and government should be best perceived as complementary, rather than dualistic, as a mixed regulation form between centralized and participatory decision-making. Public intervention is especially critical for incentivizing activities of which a territorial impact is more desirable, such as environmental protection, e-commerce and circular economy.

10.2. Limitations

Though this study was carefully designed and prudently reflected on, it still shows the following three limitations due to some personal and external constraints, which tend to prevent the thesis from going deeper.

First of all, since this dissertation is an interdisciplinary research and its theoretical construct is built based on an extensive literature review, it requires a sound knowledge and understanding of a wide range of subjects including landscapes studies, development studies, regeneration theories, innovation, heritage and tourism. However, the author's knowledge, to a certain extent, is limited in some fields such as tourism. As a result, the analyses may seem superficial and the conclusions may have been drawn in haste.

Second, the mixed-methods approach has allowed the author to analyze the issues under discussion with real-world evidence and data. However, the scale and scope of the semi-structured interviews and questionnaire surveys (especially in the Locride area) should have been larger to make the data more representative and inclusive, so that the corresponding analyses would have been more trustworthy. For example, no players of the public sector in the

Locride area were interviewed. Besides, due to time limitations and accessibility issues, the on-site investigations did not cover a greater area of the case study areas. Still another limitation is, as during the on-site investigations, some local people were asked to fill in questionnaires on the spot. Their answers might have been influenced by the author's presence, in a way that has reduced the objectivity and reliability of the quantitative data.

Third, as the interviews and questionnaire surveys were conducted in Italian, and in some cases the respondents even spoke the Calabrian dialect, this also posed a major challenge to the author whose Italian proficiency can be limited. Consequently, possible misunderstandings or insufficient explanations may have led to wrong interpretations or inaccurate replies.

10.3. Suggestions

Apart from overcoming the above-mentioned limitations, future research can conduct comparative studies to illustrate the effectiveness of the landscape approach to rural development in improving local people's quality of life. It is also tenable to explore in what ways rural economic development can contribute to the management of rural landscapes by fostering an internalized, endogenous mechanism. Another important question that future studies should answer is how to further develop the proposed landscape approach into a sort of toolkit for policy design that is not only rural but urban-rural, so that it can be more relevant to integrated urban-rural development.

Through the on-site investigations which allowed not only collecting visual observations but also interacting with local populations, the author came to realize that "rural China's yesterday was rural Italy's the-day-before-yesterday", despite the two have disparate political economic background. As rural China is undergoing socioeconomic transformations of unprecedented scale and pace while rural Italy is more stable, the trajectory of rural landscape evolution in Italy can serve as an important reference for rural China. This reference will be significant to facilitate China to better plan and manage its rural landscapes before its degree of urbanization reaches about the same level as that of Italy in the 2050. Now the question is, how to build up a "better tomorrow" of rural China and a "better the-day-after-tomorrow" of rural Italy? Future research therefore is suggested to carry out a "timeline study" to compare landscape and socioeconomic issues when the two countries had the same or similar degree of urbanization. Such a study is expected to reveal the general trajectory of landscape and socioeconomic transformations, and be supportive for related planning. It is equally suggested to carry out further interdisciplinary research to explore the role of rural landscapes as heritage in sustainable rural development, and ways to make the existing institutional instruments more analytical and practicable in addressing factual socioeconomic and political issues as well as landscape issues in rural society.

In terms of innovation economies, future research may well look into the economic impact of agricultural cooperative aggregation, incorporate other cooperative types into the discussions on cooperative economies, and explore ways to foster new businesses based on rural-urban linkages and balance economic specialization and economic diversification. The public-private partnerships in landscape regeneration and the development of innovation economies is still another research field worth furthering.

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Acknowledgement

This dissertation is part of the MAPS-LED research project, which has received funding from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant Agreement number 645651.

Upon the conclusion of this challenging dissertation that fulfills a long-held dream, I am so grateful to numerous people who have helped me with their genuine love, care, friendship and guidance.

My heartfelt thanks first go to my supervisors, Prof. Christer Bengs and Prof. Carmelina Bevilacqua, whose meticulous guidance and support are always precious to me, not only because they helped realize my dream, but will definitely continue to encourage me in the future. My gratitude also goes to Prof. Claudio Marcianò who has offered me inspiring advice and generous help, and to all my interviewees Mr. Qi Jiansheng, Ms. Bai Mei, Mr. Zhang Chun, Mr. Liu Fangming, Ms. Patrizia Morano, Mr. Anthony Reale, Ms. Tiziana Pizzati, Mr. Carmelo Basile, etc. Also, I would like to express my deepest appreciation to Prof. Li Naicheng, Mr. Lu Genquan, Mr. Deng Peng, Mr. Ren Xiaolong, Mr. Yang Jian, Ms. Han Hao, Ms. Giuseppa Romeo, Prof. Giuliano Menguzzato, Ms. Santo Casile and Ms. Erika Fammartino who provided me with either materials or assistance.

I'm especially grateful to my "brothers" Teodoro Candiloro, Giuseppe Filippone and Giuseppe Florio, to Mr. Yan Wentuan and Mr. Su Quanxi, and to my brothers-in-law Mr. Hu Xiaoxiang and Mr. Zhu Xinjun who assisted me a lot in the on-site investigations and interviews. My heartfelt thanks should also go to Ms. Ulpiana Hasani, who helped me with mapping, to Prof. Francesco Bagnato, who has always been understanding and responsive to my needs at the student residence, and to Ms. Diana Abramo and Ms. Marie-Noël Tournoux, who have proofread the manuscript and offered me precious comments and suggestions. Also, I'd like to give my sincere thanks to my friends Valentina Giannino, Edith Hof, Diana Abramo, Ulpiana Hasani, Wen Haili, Patrice Verhée, Dennis Back, and Thibaut Regnier, for whenever I got frustrated during the writing, it is their care and comfort that have motivated me. I'm especially grateful to my "families": Giannino, Filippone, Florio, Marcianò, Candiloro, Mallamaci, Furfaro, Pedullà, Morano, Stagno, Errigo and Minervino families in Italy, and Bernard and Barrett, Abramo and Adler, and Snively families in the United States, who showed me great hospitality, respect and affection in these three years of a "floating yet dreamy life".

I'm also profoundly grateful to all the teachers who have instructed me in Reggio Calabria and Boston and witnessed my growth during the three-year Ph.D. studies, and to my evaluators Prof. Anna Laura Palazzo and Prof. Domenico Camarda, who offered very useful suggestions to improve my dissertation.

Without their devotion, my horizon would not have been broadened. Also, I'd like to take this chance to thank Ms. Laura Battaglia, Ms. Flore Bernier, Mr. Antonio Errigo and Mr. Ahmed Elgharib who have offered me help with all their kindness and friendship, as well as other URED fellows with whom I shared quality moments of joy and growth.

Last but not least, I'd like to extend my deepest thanks and most heartfelt gratefulness to my father Mr. Ou Bowen, my mother Ms. Yang Suqin and my two sisters for all their love, sacrifice and support, and to all the lands and predestined unbelievable encounters that have enlightened my heart and soul, without which I wouldn't have been who I am and reached where I am today.

Reggio Calabria, February 27, 2019

己亥年正月廿三日

Publications during PhD Studies

Article "Place, Relationships, and Community-Controlled Capital: On Ecosystem-Based Innovation towards an Equitable Competitive Advantages Distribution, the Boston Ujima Project Case" (2018), *International Journal on Sustainable Development and Planning*, 13(8), pp. 1072–1089. DOI: 10.2495/SDP-V13-N8-1072-1089;
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Appendices

Appendix 1: Survey on the Rural Residents' Perception of the Landscape, and Their Sociocultural and Economic Life in Meixian County

Q1. 您是哪个年龄段？Which is your age group?

18-30
31-40
41-50
51-60
61-70

Q2. 您受的最高教育是？What is the highest education you received?

小学 Primary School
初中 Middle School
高中 High School
大中专 Vocational School
大学 University

Q3. 您家里有人在城里工作/打工或者学习吗？Does anyone in your family work or study in the city?

有 Yes
没有 No

Q4. 您觉得自己生活幸福吗？Do you feel happy in your life?

幸福
不幸福

Q5. 您觉得村里集体有凝聚力吗？Do you think there is cohesion in the village collective?

有 Yes
没有 No

Q6. 您对村子的生活环境（村容）满意吗？Are you satisfied with the living environment of your village?

满意 Yes
不满意 No

Q7. 您对村子的生态环境满意吗？Are you satisfied with the ecological environment of your village?

满意 Yes
不满意 No

Q8. 您对村里的文化生活（娱乐、年节等）满意吗？Are you satisfied with the cultural life in your village?

满意 Yes
不满意 No

Q9. 您觉得您生活的村子漂亮吗？Do you think your village is beautiful?

漂亮 Yes
不漂亮 No

Q10. 您注意到村里近几年都有哪些变化？（多选） What are the changes in your village you noticed in recent years? (multiple options)

生活条件提高 improved living conditions
生活环境改善 improved living environment
生态环境改善 improved ecological environment
便民设施增多 more public facilities
新房增多 more new houses
道路改善 improved roads
外出务工增多 more migrant workers

Q11. 您使用村委会以下设施吗？（多选） Have you ever used the following facilities in the Villagers' Committee? (multiple options)

阅览室 library
文娱室 recreation room
棋牌室 play room
村史馆 village history museum
健身器材 fitness equipment
都不使用 none of the above

Q12. 您期待村里能多些哪类服务或设施？（多选）Which service or facilities do you expect to have more in your village? (multiple options)

花草树木 greening
小广场 little square
宗教场所 place of worship
农民合作社 farmers' cooperatives
城市基础设施（如水厕）urban infrastructure
网购服务站 e-commerce service stations
商店 shops

Q13. 您觉得现在村里突出的问题有哪些？（多选）Which are the most outstanding problems in your village? (multiple options)

环境卫生 environment and sanitation

便民设施 public facilities
经济发展 economic development
集体事务组织和管理 collective affairs organization and management
文化生活单一 cultural life
不赡养老人 not supporting the elderly
村民外迁 relocation
交通 transport
教育医疗 education and medical care
垃圾回收 garbage collection and disposal

Q14. 您有没有使用乡村淘宝等网购平台？Have you ever used Rural Taobao online shopping platforms?

有 Yes
没有 No

Q15. 您有没有网上销售农产品？Have you ever sold your agricultural products online?

有 Yes
没有 No

Appendix 2: Survey on the Rural Residents' Perception of the Landscape, and Their Sociocultural and Economic Life in the Locride area

Q1. Appartiene a quale delle seguenti coorti di età?

18-30
31-40
41-50
51-60
61-70
più di 70

Q2. Qual è il Suo livello di istruzione?

scuola primaria
scuola media
liceo
istituto/scuola professionale
università

Q3. Qualcuna/o nella Sua famiglia lavora o studia in città (es. a Reggio Calabria, a Roma)?

Si
No

Q4. Si sente felice nella Sua vita quotidiana?

Si
No

Q5. Pensa che il collettivo del quartiere dove abita Lei abbia coesione?

Si
No

Q6. Pensa che tra i compaesani ci sia la feducia?

Si
No

Q7. Lei è soddisfatta/o dell'ambiente abitativo del paese dove abita Lei (es. la pulizia e la bellezza degli spazi pubblici)?

Si
No

Q8. Lei è soddisfatta/o dell'ambiente ecologico circostante del paese dove abita Lei (es. vegetazione naturale, assenza di inquinamento dell'acqua e del suolo e della deforestazione)?

Si

No

Q9. Lei è soddisfatta/o della vita culturale nel paese dove abita Lei (es. intrattenimento, festival, ecc.)?

Si
No

Q10. Lei pensa che il paese dove abita sia bello?

Si
No

Q11. Tra i seguenti, quali sono i cambiamenti che negli ultimi anni Lei ha notato nel paese dove abita? (anche più di una scelta)

Miglioramento delle condizioni di vita
Miglioramento dell'ambiente abitativo
Miglioramento dell'ambiente ecologico
Miglioramento dell'infrastruttura
Più turisti
Più nuove case
Più persone che lavorano fuori, soprattutto giovani
Più servizi pubblici
Migliori servizi pubblici
Più vecchie case degradate

Q12. Quali sono servizi e strutture pubblici che Lei spera di essercene più nel paese dove abita? (anche più di una scelta)

Spazi verdi (es. fiori e alberi)
Piazzette per socializzazione
Luoghi di culto
Cooperative agricole
Migliori infrastrutture
Negozi
Centro di assistenza per commercio elettronico
Più investimento al restauro architettonico

Q13. Quali pensa che siano i problemi maggiori attualmente nel paese dove abita? (anche più di una scelta)

Ambiente abitativo
Servizi pubblici
Sviluppo economico

Organizzazione e gestione degli affari comunitario
Vita culturale
Ambiente ecologico
Sostegno agli anziani ed alle persone in difficoltà economica
Spopolamento
Traffico e trasporto
Istruzione e assistenza medica
Raccolta e smaltimento dei rifiuti

Q14. Lei ha mai venduto i prodotti agricoli online?

Si
No

Q15. Lei pratica ancora attività agricole?

Si, solo per il consumo della mia famiglia
Si, sia per il consumo della mia famiglia che per fare soldi
Si, solo per fare soldi
No

Q16. Qual è lo stato di utilizzo e la dimensione dei Suoi terreni?

tutti usat per scopi agricoli
parzialmente usati per scopi agricoli
affitati agli altri
venduti agli altri
parzialmente abbandonati
tutti abbandonati
meno di un ettaro
1-3 ettari
4-6 ettari
7-9 ettari
più di 10 ettari

Appendix 3: Members' Satisfaction of the Agricultural Cooperative they are in in Meixian County

Q1. 您对您所在的合作社满意吗？ Are you satisfied with the cooperative which you joined?

满意 Yes
不满意 No

Q2. 合作社有没有帮助您增加收入？Has the cooperative helped you increase your income?

有 Yes
没有 No

Q3. 合作社有没有帮助您提高耕作技能？ Has the cooperative helped you improve your farming skills?

有 Yes
没有 No

Q4. 合作社有没有促进社员间经验分享和交流？ Has the cooperative improved the experience and knowledge exchange among its members?

有 Yes
没有 No

Q5. 合作社内部团队凝聚力高吗？ Is the team within the cooperative cohesive?

高 Yes
不高 No

Q6. 合作社内管理层领导力强吗？ Does the manager of the cooperative show strong leadership?

强 Yes
不强 No

Q7. 合作社有没有方便您销售农产品？ Has the cooperative facilitated you to sell your agricultural products?

有 Yes
没有 No

Q8. 合作社有没有让您转变传统耕作观念？ Has the cooperative make you change your traditional farming concepts?

有 Yes
没有 No

Q9. 合作社有没有帮您提高您所生产的农产品的品质？ Has the cooperative helped you improve the quality of your agricultural products?

有 Yes
没有 No

Q10. 您从所在的合作社主要获得了以下哪些服务？（多选） Which services have you received from the cooperative? (multiple options)

农资购买及配送 agricultural inputs purchase and delivery
农产品销售 agricultural products sales
农技培训 farming skills training
国家政策宣传 dissemination of national policies
经验交流 experience and knowledge exchange
自然灾害应对（如霜冻） response to natural disasters

Q11. 您认为合作社提供的以下服务的质量仍需要提高？（多选）Which services do you think still need to be improved? (multiple options)

农资购买及配送 agricultural inputs purchase and delivery
农产品销售 agricultural products sales
农技培训 farming skills training
国家政策宣传 dissemination of national policies
经验交流 experience and knowledge exchange
自然灾害应对（如霜冻） response to natural disasters

Q12. 您觉得合作社自身哪方面仍需要改进？（多选） Which aspects of the cooperative still need improving? (multiple options)

组织管理 organization and management
团队建设 team building
销售协助 sales assistance
公平公正 fairness and equity
社员规范 member rules
沟通交流 communication

Q13. 您是以何种形式加入所在合作社的？（多选） How did you join the cooperative? (multiple options)

土地入股 land as share
资金入股 capital as share
个人种植/养殖 individual farming

Q14. 就您的满意度，请给您所在合作社打分（1-5 由低到高）。 Please indicate your degree of satisfaction of your cooperative (from 1 lowest to 5 highest)

1	2	3	4	5

Q15. 您受的最高教育是？ Which is your highest education attainment?

小学 primary school
初中 middle school
高中 high school
大中专 vocational school
大学及以上 university

Appendix 4: Survey on the Innovation and Development of Rural SMEs in Meixian County

Q1. 以下因素对贵公司/合作社的发展有多重要？请根据您个人的评估打分 1（最低）到 5（最高）。 How important are the following factors for your company's or cooperative's development? Please rate 1 (lowest) to 5 (highest) according to your personal assessment.

资金 funding

1	2	3	4	5

社会网/人际关系 networks/interpersonal relationships

1	2	3	4	5

同行间信任 trust among partners

1	2	3	4	5

同政府、私营和民间部门间的伙伴关系 partnerships with government, private and social sectors

1	2	3	4	5

知识和技术 knowledge and technology

1	2	3	4	5

当地的地域传统和文化 local traditional and culture

1	2	3	4	5

Q2. 贵公司现有员工人数 How many employees are there in your company?

10 人以下
11-20 人
21-50 人
51-100 人
100 人以上

Q3. 贵合作社现有成员户数 How many members are there in your cooperative?

10 户以下 fewer than 10 households
11-20 户 11-20 households
21-50 户 21-50 households
51-100 户 51-100 households
101-150 户 101-150 households
151-200 户 151-200 households
200 户以上 over 200 households

Q4. 您的公司性质属于以下哪一选项？ Which of the following is the nature of your company?

合作社 cooperative

家庭农场 family farm
股份公司 joint stock company
个体户 sole proprietorship
合伙经营 joint venture

Q5. 贵公司/合作社和以下哪些机构有合作？（多选） With which institutions does your company/cooperative have cooperation? (multiple options)

政府机构 government institutes
同一行业的公司/合作社 companies/cooperatives from the same sector
不同行业的公司/合作社 companies/cooperatives from different sectors
大学/科研机构 universities/research institutes
非营利组织 non-profit organizations
以上都不是 non of the above

Q6. 贵公司/合作社与其他机构有哪些方面的合作？（多选）Which cooperation does your company/cooperative have with other institutions? (multiple options)

社会服务 social services
知识和信息的共享 knowledge and information sharing
技术援助 technical assistance
技术转让 technological transfer
联合创新 joint innovation
产品研发 R&D
培训 training

Q7. 您是否了解国家或地方政府对涉农企业/合作社的扶持政策？Are you familiar with the supportive national policies concerning companies/cooperatives related to farming? (multiple options)

了解 Yes
不了解 No

Q8. 您个人如何评估当前贵公司/合作社的发展？ How to you assess the current development of your company/cooperative?

非常好 very good
良好 good
一般 so so
差 poor

Q9. 以下哪些因素制约了贵公司/合作社的发展？（多选）Which of the following factors have limited your company/cooperative's development? (multiple options)

资金短缺 shortage of funding

缺乏人才 lack of talents
市场对接不充分、不高效 insufficient and inefficient access to market
同行之间的恶性竞争 vicious competition between peers
缺乏自主创新 lack of independent innovation
缺乏有力的政府政策和引导 lack of strong government policies and stewardship
公司/合作社内部缺乏凝聚力 lack of cohesion
缺乏社会网、人际网和协作 lack of networks, interpersonal relationships and collaboration
技术和生产工艺陈旧 outdated techniques

Q10. 贵公司/合作社通过以下哪些渠道筹措资金/融资？（多选） Through which of the following channels does your company/cooperative raise funds? (multiple options)

公司/合作社自筹资金 own funding
抵押贷款 mortgage
吸纳社会资本 social capital
政府项目经费/补贴 government subsidy/funding
合伙人或股东联合筹款 joint stock
股权转让 equity transfer
外商投资 foreign investment

Q11. 以下哪些方面的工作，贵公司/合作社做过或正在做？（多选） Which of the following have your company/cooperative practiced or is practicing? (multiple options)

聘用当地居民 local hiring
慈善事业（例如援助经济困难的居民等）charity
资助社会公益项目（例如基础设施建设、环境保护等） funding social welfare projects
对某些消费群体（例如本村村民）的价格优惠 price concessions for certain consumer groups
以上都没有 none of the above

Q12. 贵公司/合作社所使用的土地（多选） The land that your company/cooperative use are (multiple options)

自有土地 own land
村集体土地 village collective land
荒废农用地流转租用 contract of transferred abandoned agricultural land
耕作农用地流转租用 contract of transferred cultivated agricultural land
荒废工业用地流转租用 contract of transferred abandoned industrial land
工业/产业园区办公厂房租用 contract of office spaces within industrial park
荒废滩涂流转租用 contract of deserted tidal flats

Q13. 贵公司/合作社的生产过程/产品 （多选） The production process/products of your company/cooperative (multiple options)

遵循并尊重传统知识或工艺 follow and respect traditional knowledge or techniques
融入现代知识、科技或工艺 integrate modern knowledge, technology/techniques
遵循生态环保原则 environmental friendly
不断创新 continuous innovation
遵循职业道德伦理 respect professional ethics

Q14. 您属于以下哪个年龄段？ Which is your age group?

18-30 岁 18-30 years old
31-40 岁 31-40 years old
41-50 岁 41-50 years old
51-60 岁 51-60 years old
61-70 岁 61-70 years old
70 岁以上 over 70 years old

Q15. 您的文化教育程度是？ Which is your education attainment?

小学 primary school
初中 middle school
高中 high school
中专 vocational school (level 1)
大专 vocational school (level 2)
大学 university

Appendix 5: Survey on the Innovation and Development of Rural SMEs in Reggio Calabria

Q1. Quanto sono importanti i seguenti fattori per la Sua azienda/cooperativa? Indichi la Sua valutazione da 1 (il più basso) a 5 (il più alto).

a. Finanziamento/Fondi	1 2 3 4 5
b. Networking/Relazioni Interpersonali	1 2 3 4 5
c. Fiducia tra i Partner	1 2 3 4 5
d. Partnership con i settori pubblico, privato e civile	1 2 3 4 5
e. Conoscenza e Tecnologia	1 2 3 4 5
f. Cultura, Tradizione e Patrimonio Locale	1 2 3 4 5

Q2. Numero di dipendenti
A. meno di 10 B. 11-20 C. 21-50 D. 51-100 E. più di 100

Q3. Quali tra le seguenti scelte descrive meglio la Sua impresa?
A. cooperativa agricola B. azienda agricola a conduzione familiare
C. società per azioni D. ditta individuale E. società di persone

Q4. Quali sono gli enti con cui la Sua azienda/cooperativa ha una collaborazione? (anche più di una scelta)
A. enti pubblici B. altre aziende/cooperative dello stesso settore
C. altre aziende/cooperative di diversi settori D. università e/o istituti di ricerca
E. organizzazioni Onlus F. nessuno dei precedenti

Q5. Che tipi di collaborazione ha la Sua azienda/cooperativa con gli altri enti? (anche più di una scelta)
A. servizi sociali B. condivisione delle conoscenze ed informazioni
B. assistenza tecnica D. trasferimento tecnologico
E. innovazione congiunta F. ricerca e sviluppo dei prodotti G. formazione (training)

Q6. Conosce le politiche di sostegno regionali/nazionali per le attività agricole/aziendali?
A. Si B. No

Q7. Come valuta lo sviluppo attuale della Sua azienda/cooperativa?
A. Molto buono B. Buono C. Accettabile D. Scarso

Q8. Quali fattori stanno ostacolando lo sviluppo della Sua azienda/cooperativa? (anche più di una scelta)
A. mancanza di fondi/finanziamenti B. mancanza di talento
C. poco o insufficientemente connesso al mercato D. concorrenza viziosa tra pari
E. mancanza di innovazione indipendente F. mancanza di politiche favorevoli
G. mancanza di coesione H. mancanza di networking e collaborazione
I. tecnologia e tecniche produttive obsolete

Q9. Quali sono i mezzi che la Sua azienda/cooperativa usa per avere fondi/finanziamenti? (anche più di una scelta)
A. fondi propri dell'azienda/cooperativa B. poteca finanziaria
C. raccolta del capitale sociale D. sussidi e fondi speciali governativi o dell'UE
E. raccolta fondi congiunta dei partner e degli azionisti F. trasferimento di equità
G. investimento straniero

Q10. Quali tra le seguenti azioni ha fatto o sta facendo la Sua azienda/cooperativa? (anche più di una scelta)
A. assunzione di residenti locali
B. servizi di beneficenza (es. aiuto ai residenti in difficoltà economica)
C. donazione a progetti di interesse pubblico (es. infrastruttura, tutela ambientale)
D. trattamento economico a certi gruppi di consumatori (es. compaesani)
E. nessuno dei precedenti

Q11. I terreni che usa la Sua azienda/cooperativa sono (anche più di una scelta):
A. terreni di sua proprietà (Lei è il proprietario dei terreni)
B. terreni coltivati in affitto C. terreni industriali in affitto
D. terreni abbandonati in affitto E. terreni coltivati acquistati
F. terreni industriali acquistati G. terreni abbandonati acquistati

Q12. La produzione/I prodotti della Sua azienda/cooperativa: (anche più di una scelta)
A. segue e rispetta le pratiche/conoscenze tradizionali
B. integra pratiche/conoscenze moderne
C. rispetta l'etica dell'uomo e degli animali
D. è rispettosa dell'ambiente
E. si innova continuamente

Q13. Appartiene a quale delle seguenti coorti di età?
A. 18-30 B. 31-40 C. 41-50 D. 51-60 E. 61-70 F. più di 70 anni

Q14. Qual è il Suo livello di istruzione?
A. scuola primaria B. scuola media C. liceo D. istituto/scuola professionale E. università

Appendix 6: Informed Consent Form for Interviewees from Meixian County

受访知情同意书

本人，即采访人，欧亚鹏，现为欧盟资助博士项目“城市更新和经济发展”2015—2018 届在读。因博士毕业论文研究需要，现邀请受访人（以下称作“您”）参与本次采访。在您决定是否参与之前，请尽可能仔细阅读以下内容，以便了解本人的研究内容和目的、采访内容以及受访信息安全问题等。如有任何疑问请随时告知本人。

1、论文题目：《基于景观方法的乡村发展——乡村景观中的景观再生与创新经济体，以中国眉县和意大利洛克里德地区为例》。
2、论文简介和研究目的：本论文通过案例分析，比较研究城市化高速发展的中国陕西乡村地区，和城市化发达但经济相对落后的意大利卡拉布里亚乡村地区的景观在环境、社会和经济层面的现象和问题，旨在以政治经济学、景观生态学、文化地理学等为研究视角，通过定性和定量的研究，探究基于乡村景观的乡村发展模式，即在乡村景观内部，通过修复更新自然环境、建筑环境和社会环境，同时创新乡村经济，促进乡村社会、环境和经济的协调发展。
3、采访内容：采访内容涉及本地乡村政策及乡村社会、经济和环境建设问题。受访过程本人将做笔录，您 a）同意____ b）不同意____ 采访过程被录音（请选择并打勾）。
4、信息安全：本次采访内容将只用于本人博士论文及相关学术活动，亦不会涉及您的个人信息。在必要情况下，只有本人就读大学学术伦理委员会成员导师、答辩委员会可以查阅采访原始记录，但仍不会披露您个人的任何信息。
5、本次采访为自愿，不涉及任何费用。同时，您也可自愿选择完成采访或中途退出。

我，即受访人，已经阅读了上述有关本次采访的背景介绍，而且就此产生的疑问有机会提问采访人，并得到满意答复。我知道本次采访为自愿参加，并了解相关的信息安全问题。我确认已有充足时间对此进行考虑，而且明白：

1、我可以随时向采访人咨询更多的信息。
2、我可以随时退出本次采访。
3、我将获得一份经过签名并注明日期的知情同意书副本。

最后，我决定同意参加本次采访。

受访人签名：　　采访人签名

日期：　　日期

Appendix 7: Informed Consent Form for Interviewees from Reggio Calabria

LIBERATORIA
PER L'UTILIZZO DEI DATI DEI QUESTIONARI E DELL'INTERVISTA

Sono a conoscenza del fatto che OU Yapeng (anche detto l'Autore) sta sviluppando una tesi dottorale dal titolo: Towards a Landscape Approach to Rural Development: Landscape Regeneration and Innovation Economies in Rural Landscapes, Cases from Meixian County (China) and the Locride Area (Italy).
Al fine di assistere l'Autore nella preparazione della ricerca, io accetto di rispondere all'intervista/al questionario e di fornire ulteriori informazioni inerenti alle specifiche necessità della ricerca. **Sono consapevole che l'intervista può essere registrata. Sono informata/o del fatto che il questionario è in forma ANONIMA, dunque, le risposte del questionario e le informazioni raccolte durante l'intervista non faranno riferimento in alcun modo né al nome o al cognome dell'intervistato**. Dunque, sono consapevole del fatto che non esiste la possibilità di risalire alla mia identità tramite i dati del questionario che sto compilando e le altre informazioni che rilascerò ai fini della ricerca.

DICHIARO

che con la presente liberatoria, concedo e attribuisco all'Autore il diritto di utilizzare le informazioni presenti nel questionario e dell'intervista ai fini della sua ricerca in Italia e in tutto il mondo. Nello specifico, concedo ad l'Autore i seguenti diritti:

1. Il diritto di utilizzare i dati del questionario e di utilizzare e pubblicare i materiali dell'intervista;
2. Il diritto di sviluppare, produrre, distribuire, pubblicizzare, promuovere e sfruttare la ricerca al fine dello sviluppo di un libro, articolo academico o di qualsiasi altro lavoro, in qualsiasi modo che l'Autore ritenga appropriato. Comprendo e riconosco che l'Autore sarà l'unico proprietario di tutti i diritti d'autore e degli altri diritti della ricerca.

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Letto, firmato e sottoscritto

Firma _____

Data e luogo _____