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NiLab. Nile as Laboratory

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(Article begins on next page)

05 June 2026

Egypt Pavilion

18th International Architecture Exhibition
La Biennale di Venezia 2023

20.05 - 26.11 2023



La Biennale di Venezia

18. Mostra
Internazionale
di Architettura

Partecipazioni Nazionali

NILAB

Nile as Laboratory



NiLab. Nile as Laboratory

Commissioners

Ministry of Culture Arab Republic of Egypt
National Organization for Urban Harmony
Egyptian Academy in Rome

Curators

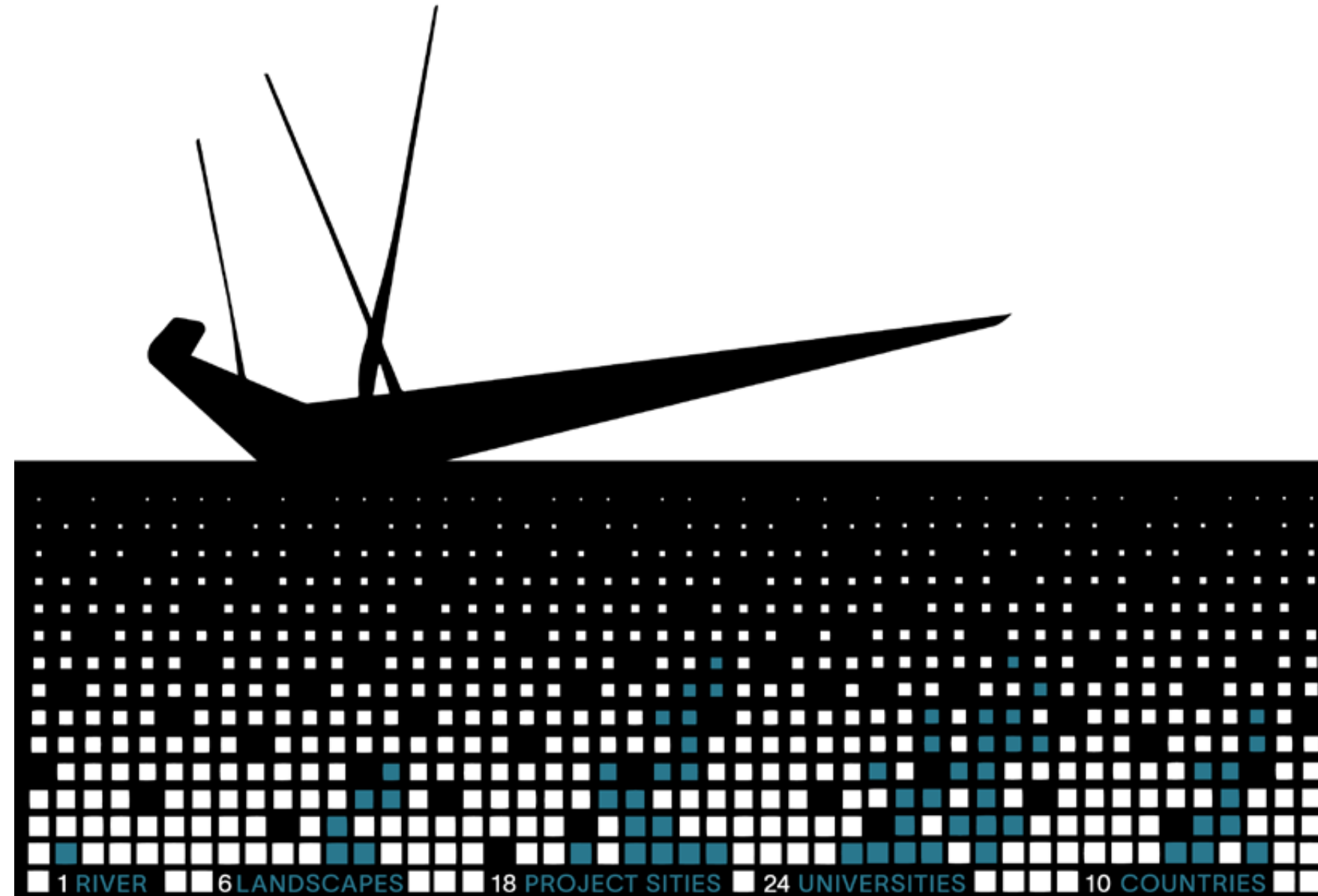
Ahmed Sami Abd Elrahman, Marina Tornatora,
Ottavio Amaro, Moataz Samir, Ghada Farouk Hassan

Participants

Ain-Shams University, Faculty of Engineering (Egypt)
Università Mediterranea di Reggio Calabria (Italy)



@NiLab_eg



The Ministry of Culture pays great attention to participating in important International Forums, to highlight the civilized image of Egypt, its Ancient Culture and Arts.

The Venice Biennale is one of the most important gateways overlooking the International Cultural scene, and the Architecture Biennale is a predominant opportunity to display Egyptians' creativity, ideas, new and innovative Architectural visions.

Egypt has a great influence in this International event for many years, as it is the only Arab and African country that has a pavilion in the Biennale, which indicates early awareness of the importance of participating in international events, overlooking Global occasions, and exposure to various experiences that would develop Egyptian Architectural thought.

The participation of this year revolves around the Nile, which is considered the lifeblood of Egypt, and it deserves to be dealt with in a way that works on extensive scientific research for ways to benefit from its excessive data and information. All Thanks to the National Organization for Urban Harmony for its efforts for honorable participation of the worthy position of Egypt and the ancient history of its Architecture.

And sincere wishes to the participating work team for success in presenting a meaningful and innovative visual vision.

Prof. Dr. Nevin Al-Kilani

Minister of Culture

Ministry of Culture Arab Republic of Egypt

The Nile is the official spokesperson for the life of the Egyptians, it is their artery that runs through their veins, the source of their happiness, and the secret of their exclusivity from other nations.

Therefore, choosing the Nile as a pivotal of Egypt's official participation in the Venice Biennale of Architecture this year has a great impact in linking the lived reality with Architectural visions and ideas, which must tweet outside the traditional frameworks, and open more spacious horizons that harmonize between imagination and reality to produce Architectural creations worthy of participating in one of the most important International events in the field of Architecture is the Venice International Biennale.

What is new this year is the participation of National, Regional and International Universities with research and projects that are presented through the axes provided, which are Nature, Agriculture, Urbanization, Infrastructure, Industry and Archeology, and it is a new tributary that offers opportunities for mingling between scientific research, mental and artistic creativity.

VI The National Organization for Urban Harmony has taken upon itself the responsibility of taking care of this event, and creating the appropriate atmosphere for the Egyptian participants, allowing them to present the best image that reflects the interest of the Ministry of Culture in international participation in general, and in the Biennale in particular.

It is a matter of pride that the selection of the team that represents Egypt is made by a committee that includes a group of experts who are keen to choose an honorable project worthy of Egypt's status and Ancient Architectural Heritage.

Prof. Dr. Nevin Al-Kilani, Minister of Culture, also pays great attention to this event, and keens to overcome all obstacles, for Prestigious representation that reflects the interest of Egypt in International Cultural events.

All Thanks to the sectors of the Ministry of Culture that contributed and supported this participation, and we look forward to the participation in this edition receiving the interest of followers from all over the world.

Eng. Mohamed Abo Seada

Head

National Organisation for Urban Harmony

"Hail to thee, O Nile! Who manifests thyself over this land and comes to give life to Egypt! (...)". Just few words from the *Hymn to the Nile*, composed in ancient times, however full of meanings to understand the extent of the role this river has played over the centuries.

And from the past... towards the future as in a journey, we are called through our present to confront each others and respond to the urgent challenges of our times. This is the spirit of the 18th International Architecture Exhibition of la Biennale di Venezia that will represent this year, more than ever, this call. The heart of its concept is a "Laboratory of the Future" where for the first time a particular focus is on Africa and the African diaspora as colorful and rich contribute in the international debate, thanks to the unique patchworks represented by their different cultural identities.

As Director of the Egyptian Academy of Fine Arts in Rome, I feel particularly proud to represent my country in this edition of la Biennale. In the frame of this dynamic *"Laboratory of the Future"*, the Egyptian Pavilion presents a wide project titled NiLab. A brilliant result of synergies through the well- established cooperation between the Ain-Shams University in Cairo, the Mediterranean University in Reggio Calabria in Italy and others International universities. Once again, a tangible example of how dialogue between cultures and the mutual knowledge are powerful tools for building new bridges and searching solutions to the problems that affect our planet and its different communities.

The Nile as laboratory, is a place of meetings to reflect, all together, on pressing issues as the role of water, "the blu gold" of the planet under the light of the global climate change, starting from the Nile.

An immersive journey through Nature and History sailing on the waters of our imagination because before creating a better world, it must be imagined. We need to be great dreamers to create the future.

I would like to express my deep gratitude to H.E. Neveen El Kilany, Minister of Culture of Egypt for the precious and ongoing support to all the cultural programs promoting an ever increasing and fruitful cooperation between Egypt and Italy

I would like as well to thank all the colleagues in Egypt and Italy who have made possible this wonderful project facing all its difficulties with professionalism. I wish you an enriching trip into the Egyptian Pavilion through the Egyptian land,

"Gift of the Nile" as the Greek historian Herodotus said long time ago...

Heba Youssef

Director

Egyptian Academy of Fine Arts in Rome

I am honored and very pleased as a Dean of Ain Shams University, Cairo to be at La Biennale di Venezia as Representative of Egypt.

The Biennale is a memorable opportunity to showcase the artists in our country, where this year our professors and students with our Italian partners in Università Mediterranea di Reggio Calabria are honored to represent our country, but also to interact with international artists, architects and colleagues around the globe.

Egypt was one of the first participants in La Biennale di Venezia for more than one hundred years ago since 1922. But this year has a special flavor as the main theme is our continent "Africa" and also the main topic is "Lab of the future" which presenting fruitful cooperation between the two universities, and we represent Egypt through Nile Lab or "NiLab".

The Nile River was and will remain a focus of participation, through scientific research and cooperation between countries, and not a source of conflict or disagreement. Its importance extends from its source passing several African countries until its estuary in the Mediterranean Sea. From the ancient Egyptian era to the present day, the Nile was and still the source and center of life, hope and work for Egypt, Africa and the people who settled on the banks of the river. It is also source of inspiration for all countries in the globe that have this wonderful environmental unique element, with all the potentials and also the challenges.

The illustrated projects are proposed by the two universities and designed by twenty-four international universities from, Czech Republic, France, Macedonia, Portugal, Spain, Sudan, Sweden, U.K., U.S.A. besides Italy, and Egypt, that were invited to participate in these projects, through the NiLab laboratory, in which they discussed different views on how possible scenarios could be implemented for the great Nile River.

Collaborating as *Mediterranea* to curate the Pavilion of Egypt at the 18th International Architecture Exhibition in Venice is a source of pride and an endorsement of the international role that our university has been able to achieve in recent years.

The meaning of calling ourselves *Mediterranea* lies in the desire to perceive ourselves in a supportive Mediterranean context of scientific and cultural cooperation and exchange.

For several years now, through the *Double Degree Program Agreement* signed with our University-Department of Architecture and Territory_dArTe and Cairo's Ain-Shams University, Faculty of Engineering, we have been involved in educational, training and research exchanges with faculty and dozens of students who, in addition to representing our internationalization mission, constitute a cultural and scientific enhancement for the whole community.

The cooperation in curating the Egypt Pavilion is the result of the experiences that the design teams of the two universities have accumulated over time in the fields of architecture, city, and landscape.

A virtuous outcome of this relationship is the theme chosen for the Pavilion, which is linked to epochal issues such as climate change, the use of water resources, and sustainable development, through reflection on the Nile River, which is surely the heritage of all humanity.

In this regard, I would like to thank the Egyptian Public Institutions, the Dean of Cairo's *Ain-Shams University, Faculty of Engineering*, and our professors Prof. Marina Tornatora and Prof. Ottavio Amaro who, through the *Landscape_inProgress* Laboratory and their collaborators, students and researchers, have dedicated commitment and professionalism in recent years to the growth of this relationship and the creation of the Pavilion.

Omar Elhusseiny

Dean

Faculty of Engineering, Ain-Shams University (Egypt)

Giuseppe Zimbalatti

Rector

Mediterranea University of Reggio Calabria (Italy)

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The following images are taken from the video "Contemporary Grand Tour on Nile" produced for the Egypt Pavilion, 18th International Architecture Exhibition La Biennale di Venezia, 2023



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| NA_01 UMEÅ UNIVERSITY SCHOOL OF ARCHITECTURE, SWEDEN + GERMAN UNIVERSITY IN CAIRO ARCHITECTURE AND URBAN DESIGN PROGRAM,

EGYPT _Cornelia Redeker

_Yosra Malek Manar

Karam _Hassan Hussein

_Sara Abu Henedy

_Ibrahim Samy _Bassant Adel _Ethar

Amr _Youssef Ayman | NA_02 LA

SAPIENZA, ROMA, ITALY _Fabrizio Toppetti

_Viola Bertini _Elisa Donini _Giuseppe Geraci _Marco

Rosati _Cristian Sammarco _Maria Virginia Theilig

_Francesco Tosetto | NA_03 MANCHESTER SCHOOL OF

ARCHITECTURE + ARCHITECTURE SHEFFIELD HALLAM

UNIVERSITY, UK _Loris Rossi _Laura Pedata _José Ángel

Hidalgo Arellano _Nicolas Turchi | AG_04 IUAV, VENEZIA, ITALY +

FUTURE UNIVERSITY IN KHARTOUM, SUDAN _Mauro Marzo

_Sandro Grispan _Gabriele Catanzano _Mattia Coccozza _Robert

Vicentini | AG_05 AIN SHAMS UNIVERSITY, FACULTY OF

AGRICULTURE + FACULTY OF ENGINEERING, URBAN DESIGN

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Tuqa Galal _Omar El Henedy _Malak Hazem

_Mennatallah Saleh _Mohamed Selim _Rana

Shams _Yara Soliman | AG_06 UNIVERSITÀ DI

CAMERINO + UNIVERSITÀ DI UDINE, ITALY

_Luigi Coccia _Claudia Pirina _Sara Cipolletti

_Giovanni Comi _Pietro Ferrara _Alessia Guaiani

_Simone Porfiri _Ettore Vadini | UR_07 AIN SHAMS

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AND FUTURE CITIES LABORATORY FOR

SUSTAINABLE URBAN SOLUTIONS (SFCL) – EGYPT

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Khalil _Nadine Mohamed _Donia Mostafa | UR_08

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TECHNICAL UNIVERSITY PRAGUE, CZECH

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_Tommaso Lolli _Elisa Maruelli _Luca Preis _Dai

Yichang _Liu Yudi _Qin Ya _Song Zirong _Zakir

Hussain _Ummi Fathima _Xie Wanyi | UR_09

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_Cristiana Penna _Eric Franklin Romeo _Maria

Lorenza Crupi _Matteo Milano _Arwa Ehab Abbas _Malak

Haytham Weshahy _Wegdan Hossam Faydullah _Yomna

Walid Ali _Menna Medhat Qubtan _Omar Mohamed Elhamer

_George Rafik Azer _Esraa Ahmad Farrag _Sara Amr Kandil

_Zena Zahran | IS_10 UNIVERSITÀ DI CAMERINO, ITALY +

UNIVERSITÀ DELL'AQUILA, ITALY _Luca Galofaro _Stefania

Manna _Rok Kuzman | IS_11 ÉVORA UNIVERSITY ARCHITECTURE,

PORTUGAL + IUAV, VENEZIA, ITALY _João Magalhães Rocha

_Marco Ferrari _Jorge Duarte de Sa _Antonio Luis Alves _Claudia Sofia

Batista | IS_12 UNIVERSITÀ FEDERICO II, NAPOLI, ITALY + ENSA PARIS

MALAKUAIS + ENSA STRASBOURG, FRANCE _Orfina Fatigato _Angela

D'Agostino _Christelle Lecoeur _Mathieu Mercuriali _Giuseppe D'Ascoli

_Giovangiuseppe Vannelli _Simona Capaldo _Francesco De Falco | IN_13

UNIVERSITÀ DI ENNA KORE, ITALY _Gianluca Peluffo _Domenico Faraco

_Gabriele Filippi _Antonio Lagorio _Paola De Lucia | IN_14 FACULTY OF

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Mickovski _Ana Rafailovska _Tamara Djerkov _Mila Gavrilovska _Dimitar Milev _Frosina Stankovska

| IN_15 UNIVERSITÀ DI PARMA, ITALY _Enrico Prandi _Giuseppe Verterame _Riccardo

Rapparini _Alessia Simbari _Luca Bosco | AR_16 GRENOBLE SCHOOL OF ARCHITECTURE,

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Gabaly _Ahmed Ramadan _Dalia Magdy _Mohamed Mubarak _Nada ELBeik _Nada Mokhtar

_Nourhan Mohamed _Zena Zahran | AR_17 VALLADOLID UNIVERSITY + SEVILLA

UNIVERSITY, SPAIN _Darío Álvarez Álvarez _Antonio Tejedor Cabrera _Miguel Ángel de la

Iglesia Santamaría _Mercedes Linares Gómez del Pulgar _Sagrario Fernández Raga _Nieves

Fernández Villalobos _Laura Lázaro San José _Ana Muñoz López _Lara Redondo González

_Carlos Rodríguez Fernández _Flavia Zelli _Emma González Biro _Cristina González Ordóñez

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Tarek _Yara Soliman _Tasneem el naggar _Nour el Khayat _Donia elboghdady _Nour Zikry _Arwa

Ehab Abbas _Malak Haytham Weshahy _Wegdan Hossam Faydullah _Yomna Walid Ali _Menna

Medhat Qubtan _Omar Mohamed Einamer _George Rafik Azer _Esraa Ahmad Farrag _Abdelaziz

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AND WEB COMMUNICATION _Ludovica Amaro _Donia Elboghdady | VIDEO _Ahmed Yasser

_Mohamed Selim _Aly ElGabaly _Fady Iskandar _Mark Baher _Yasmina Safwat _Osama Elhagan.

NiLab

Nile as Laboratory

Ahmed Sami Abd Elrahman,
Marina Tornatora, Ottavio Amaro,
Moataz Samir, Ghada Farouk Hassan

NiLab is a Laboratory for the knowledge and development of ideas and projects along the Nile River, an emblematic opportunity to reflect on the theme of water in the broader context of climate change.

Never as in Egypt, the presence of a waterway has been identified with the history of civilization in its cultural, scientific, and humanistic aspects. Its extraordinary geographical dimension traces natural and man-made landscapes and feeds cities, productive systems, reserves, and agricultural landscapes.

Any alteration of the Nile River can cause a destruction of the millennial balance between living species and the historical and natural landscape, especially in an age where major territorial and productive transformations risk disturbing the established natural balance, causing entropy and decay.

The themes, corresponding to six landscape sections – *Nature, Agro, Urbe, Infrastructure, Industry, Archaeology* – were developed within eighteen areas of design intervention, identified for a common international comparison between Egypt and the planet.

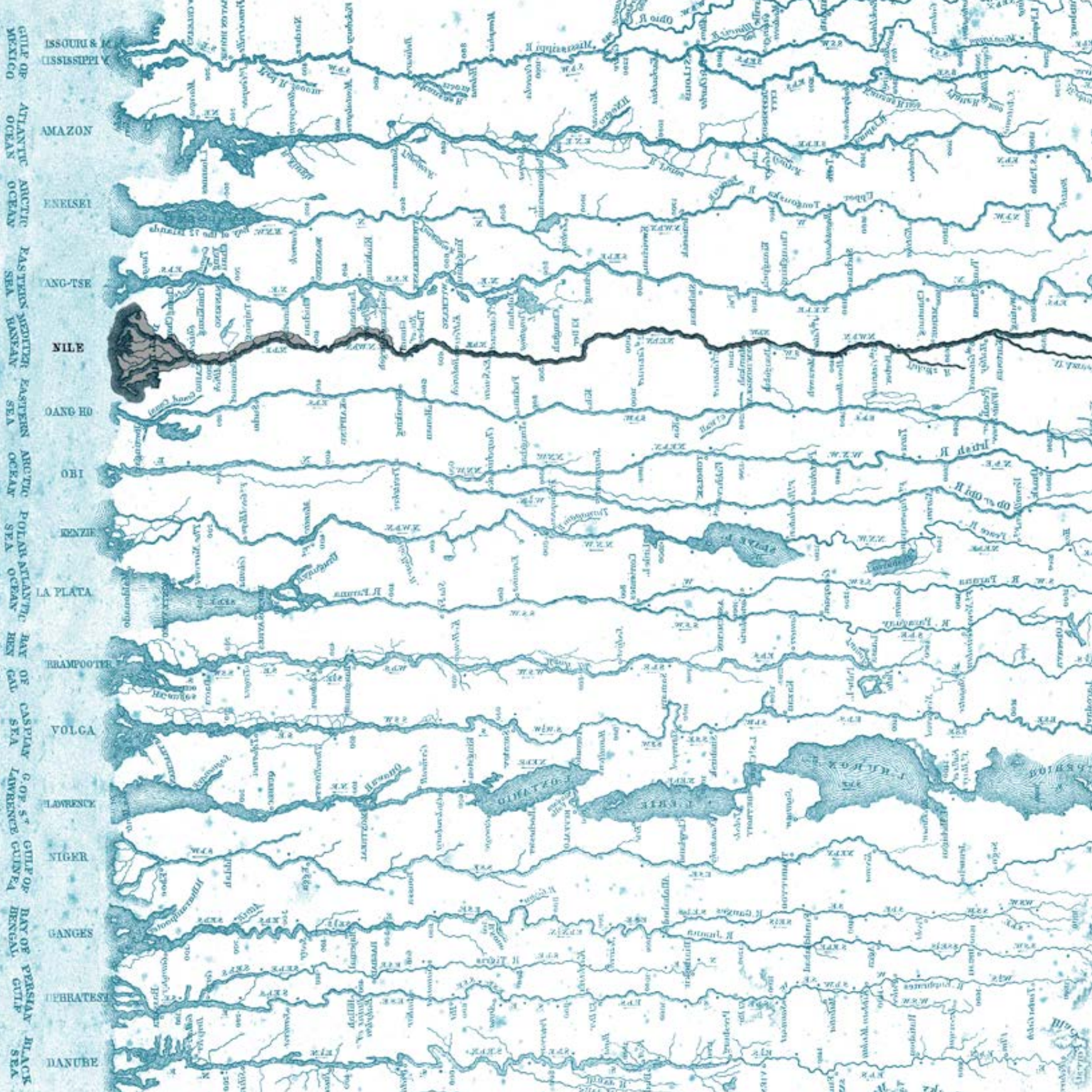
Together with the Faculty of Engineering of the Ain-Shams University in Cairo (Egypt) and the dArTe Department of the Mediterranea University of Reggio Calabria (Italy), who have been collaborating for years in research and teaching activities, 24 international universities have been invited to build NiLab. In this laboratory, students, teachers, and researchers discuss possible future scenarios along the river.

The aim is to produce a reflection on design strategies as a contribution to major urban and landscape emergencies, fulfilling the needs of the broader contemporary context, where projects are required to provide new reflections on architectural tools and languages.

Mountains & Rivers, Colton, G.W; 1856

The Colton firm published this map in their world atlas from 1856 to 1880 and perhaps later.

© David Rumsey Map Collection. Cartography Associates | www.davidrumsey.com



An Open Project Lab on the Nile

Marina Tornatora, Ottavio Amaro

Located in the Mediterranean area, which is continuously facing increasingly epochal ecological-environmental crises, Egypt, with its Nile region, has once again become emblematic of the possible consequences of the ongoing phenomena of drought, sea rise, energy crisis, and the potential weakening of its settlement and territorial system.

Bearing the burden of 11 African countries with ever-increasing populations, including Egypt, with more than 80 million people exploiting 98% of their water needs from their river, the Nile represents both a resource and a problem.

Egypt has continuously performed territorial actions to prioritize economic and productive interventions involving the delta since the post Second World War period, with a keen eye on globalization processes, often far from the sustainable use of local resources. This risks impoverishing entire geographic areas with significant imbalances between city and countryside, widespread settlement systems in agricultural villages, and further marginalization by extending suburbs in urban areas.

In light of such planetary changes, NiLab. Nile as Laboratory invited eighteen research groups, drawn from twenty-four Egyptian, European, and non-European universities, to reflect on design and architectural strategies along the Nile River. This context is a unitary and paradigmatic geographic sphere with a strong identity in the history of civilization, concerning cultural, scientific, and humanistic aspects, despite the current territorial imbalances.

NiLab. Nile as Laboratory intends to prioritize the academic sphere in the belief that the projects constitute the necessary field of research, a moment of knowledge, and the meeting point between theory and practice. The central theme is water, in its human and design-related significances and concerning how it interacts in historical and contemporary landscape contexts. The river is proposed as a body in the natural and urban landscape with a changing form, where design can configure contemporary spatiality with different relationships between the built, natural and man-made elements. The relationship between soil and water, between constructions and water, becomes the binder of places' interpretation through design experimentation as a product of knowledge.

Three sites are proposed for each of the six themes - *Nature, Agro, Urbe, Infrastructure, Industry,*



Egypt, Arabia Petraea and Lower Nubia. Nile Valley.
BARTHOLOMEW 1898 old map

“Nature has never been concerned with creating beauty. We are the ones who feel psychologically touched by what we think is beautiful. We feel the creative force behind the form, and this affects us both emotionally and physiologically. The ancient Egyptians did not strive to make their temples beautiful as an end in itself. Their level of understanding of the whole universe, higher than ours, and their attempt to make the temple a small mirror of it made this happen automatically”

Hassan Fathy ¹

¹ Fathy H., Cosa è una città (What is a City), in "Casabella" n. 653, 1998 pag. 56

Archaeology – making up a possible synchronous synthesis of current scenarios along the Nile.

Concerning *Nature*, despite the major changes that have modified and often compromised the identity of the river's flora and fauna, there are still important nature reserves, nurturing that mythological and religious imagery at the root of ancient Egyptian civilizations, identified with the presence of certain animal species. Today more than ever, this heritage of biodiversity and naturalistic identities must be protected on a scientific, environmental, and landscape level, considering climate change and drought phenomena.

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Agro is the theme identifying the area's character along the river, organically linked to the spatial-temporal transitions of nature, obscured by a system of infrastructures (dams, morphological changes, etc.) that have transformed some identity features. The agricultural activity is nonetheless primary for subsistence and the production of the majority of Egypt's alimentation and creates challenges regarding production, landscape and innovation related to new environmental challenges and the sustainable use of the water resource.

Urbe, the territorial imbalance implemented primarily in the postwar period, through the depopulation of the countryside and the creation of large urban concentrations towards the Nile Delta, has led to the construction of endless hybrid city suburbs in a condition of non-city and decay. The combination with the trend that had already begun with the importation of European urban models in the late 19th century and continued in contemporary times with building and architectural globalization leads to urban degradation and eradication. Moreover, uncontrolled expansion into the countryside and desert, abandonment of historical centers, and polluting transportation threaten to destroy the identity of an Islamic city with public space, collective places, buildings, and technological systems in close relationship with the place and its environmental specificity alongside its distinctive elements.

Concerning *Infrastructure*, although the Nile still holds its historical role as a line of transportation and exchange between the entire settlement system developing along its course, the relationship between land and water needs to be reconsidered. Port systems, crossings, as well as embankments, and fishing-related activities, can allow the original recovery of the meaning of living along the river, together with the landscape balance, which is too often compromised by polluting and invasive interventions.

Industry has grown in the logic of globalization, often at odds with territorial and landscape sustainability.

It is now experiencing a condition of reconversion on both the technological and environmental levels. The proposed theme addresses the need to redesign old, polluting, and invasive industrial areas to privilege, both in terms of research and production, the innovative systems of green industry linked to local resources, and advanced technological development in harmony with urban and natural settlement systems.

Archaeology along the Nile, both on a monumental and general level, narrates a cultural heritage of humanity strongly linked to the place in its essence of water, soil, and desert. Therefore, actions on this design theme can re-establish meaningful relationships with the settlement systems, which have developed in a spreading and often indifferent manner over time. This is coupled with the cultural need for tourism enhancement concerning services, accessibility, and an overall more innovative supply.

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In this context, the eighteen sites identified along the river's course, from the Aswan Dam to the Delta, represent a paradigmatic system of territorial and landscape conditions to perform design reflection on the variables contemporaneity poses. This journey is taken by adopting inverse perspectives, from the river and the land, in search of relationships and interactions between memory and innovation.

In addition to representing a critical analysis system for the transformations of the last decades in extraordinary sites, the projects address future scenarios to re-establish balances between nature and the environment, along with visions that, without sacrificing the aesthetic and expressive language of places and architecture, represent new living conditions.

Water, energy, biodiversity, pollution, reconversion processes, and soil enhancement are all variables of infrastructural and architectural scenarios to look at innovative and scientific processes without losing sight of the intertwining of memory and the project's ability to engage with existing resources to design the new forms of landscape and territory.

In other words, a new awareness emerges, concerning the relationship with nature, history, and the environment, within the complexity of the post-industrial reality and a society increasingly oriented toward communication and immateriality scenarios.

Within this context, the projects appear as possible narratives of stages of a new contemporary *Grand Tour*: agricultural scenarios that recognize the iconographic power of the geometrizations of rural plots, relating to

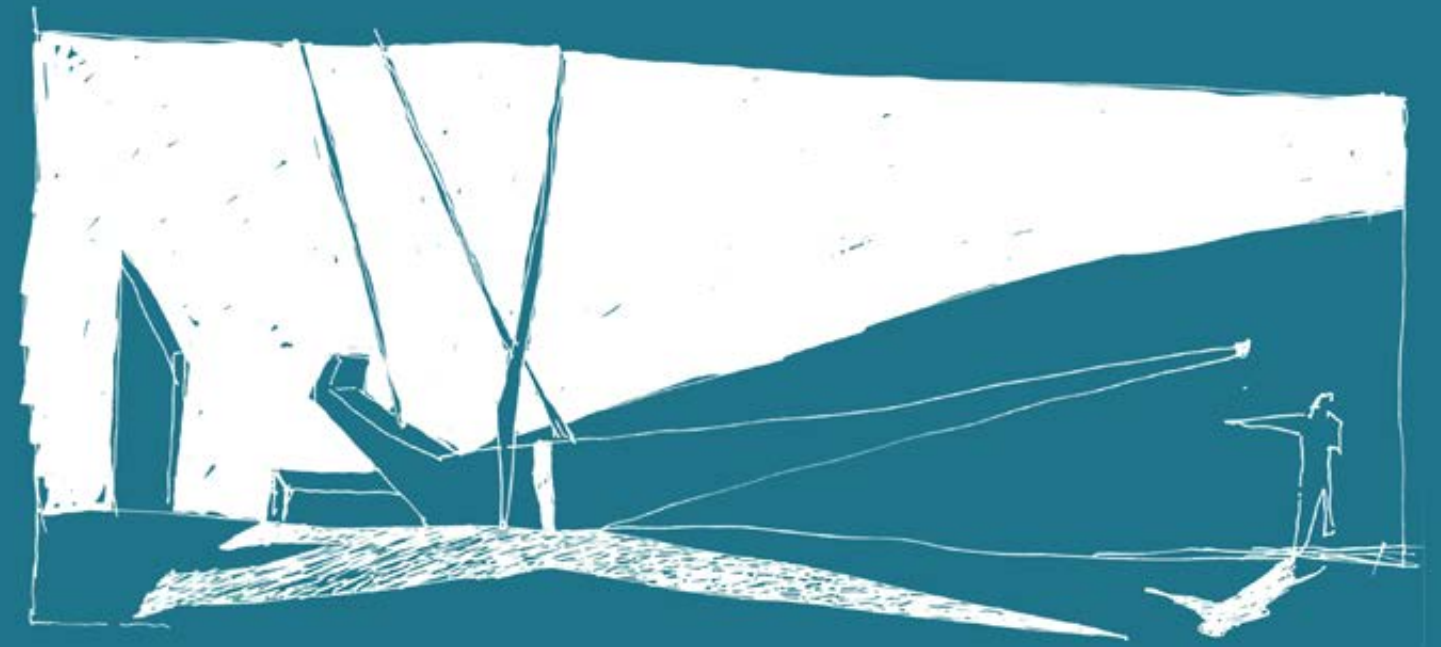
² Marot S., *The Return of the Landscape*, in *Desvigne & Dalnoky*, Motta Architettura Milano, 1996, p. 7

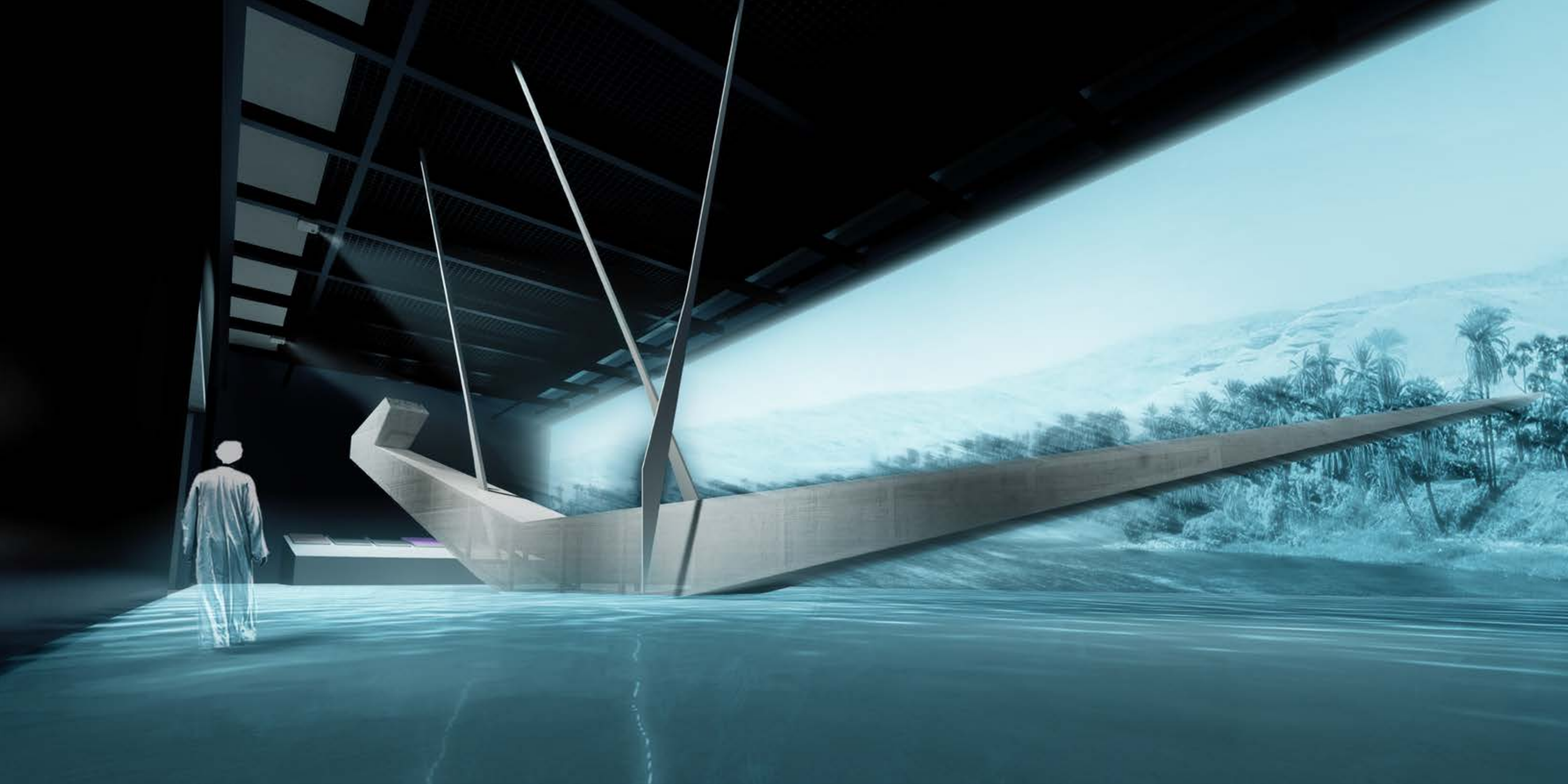
the urban ones within a design idea that seeks reciprocal boundaries. This is compounded by innovation 'sanctuaries', such as research centers and ecological infrastructures at the service of nature. The impressive Nile's 144-island archipelago emerges as a habitat for biodiversity and a new green map of the river's course, complementing archaeological landscapes' powerful and evocative character. They make up a true 'second nature' whose history must be enhanced beyond its monumental aspects. Moreover, the large residual voids from industrial reconversion processes are turned into opportunities to rediscover environmental balances and new proportions within the city, evoking resilience that re-proposes new interactive edges with the river and new forms of infrastructure. Finally, the urban system pursues a symbiosis with nature on the topic of sustainability, regenerating large building densities through the injection of green areas, the creation of voids and public spaces together with typical settlement systems of the Islamic city, often succumbing to globalization-driven models.

The elaboration of projects is a necessary step of the research work, as a synthesis of knowledge, investigations, and experiences through drawing, leading to project ideation. The attempt is to operate the anamnesis mentioned by Sébastien Marot, "... looking at the territory and public space as a land of ancient culture or a palimpsest bearing the more or less evident sign of all the gestures that, in memory, have contributed to shaping that specific landscape, and nothing else. In these contrasting or universal traces layered over time, anamnesis deciphers intentions and potentials to be safeguarded and transmitted." - ²

Punctual responses, along with the *utopia of reality* (E.N. Rogers), are the outcomes of workshop and design experiments distributed differing by schools and research areas, re-weaving plots and threads with the history of places in the awareness of current global and local radical transformations.

In this sense, the Nile tends to a new unitary dimension, with the sites of the Laboratory as the starting points to take concrete action for the regeneration and re-signification of its presence in a possible future.





Nature

- NA_01
Dahab Island
- NA_02
Karaman Island – Sohag
- NA_03
Philae Island – Aswan

Agro

- AG_04
Edfu – Aswan
- AG_05
El Fawal Island – Behira
- AG_06
Sa El Hajar – Gharbia

Urbe

- UR_07
Naqada – Qena
- UR_08
Tell El Amarna – Menia
- UR_09
Downtown – Cairo

Infrastructure

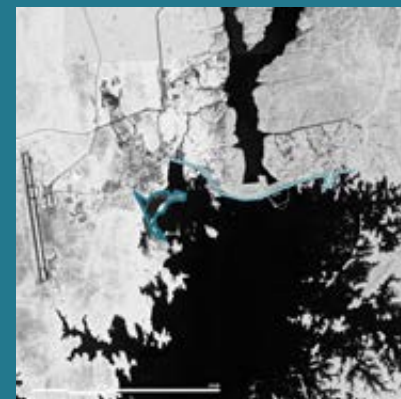
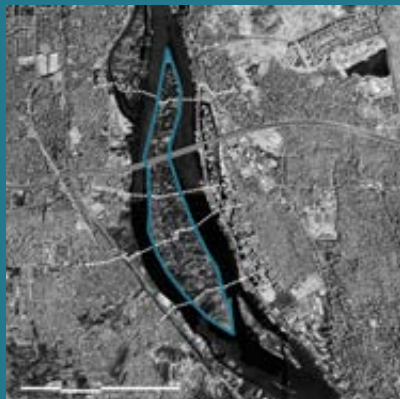
- IS_10
Naqada – Qena
- IS_11
Magra El Oyoun – Cairo
- IS_12
El Qanater El Khayreya

Industry

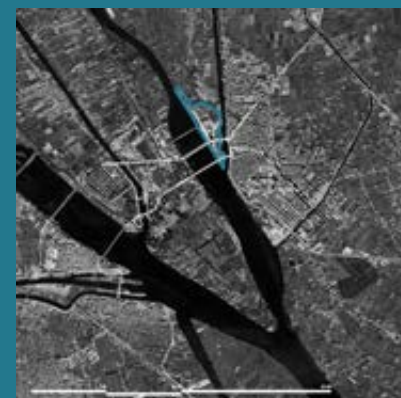
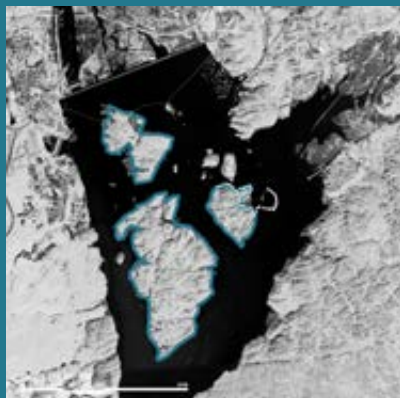
- IN_13
Ezbet El Borg – Damietta
- IN_14
Naga Hamady – Qena
- IN_15
Helwan – Cairo

Archaeology

- AR_16
Abydos Temple – Sohag
- AR_17
Elroda Nilometer – Cairo
- AR_18
Qaitbay Citadel – Rosetta



32





Nature

NA_01
Geziret El Dahab – Cairo
Dahab Island

Umeå University School of Architecture,
Sweden + German University in Cairo
Architecture and Urban Design Program,
Egypt

NA_02
A Friendly Giant for Rebalancing
Nature
Karaman Island – Sohag

La Sapienza University, Roma, Italy

NA_03
Axis Naturae
Philae Island – Aswan

Manchester School of Architecture +
Architecture Sheffield Hallam University,
UK

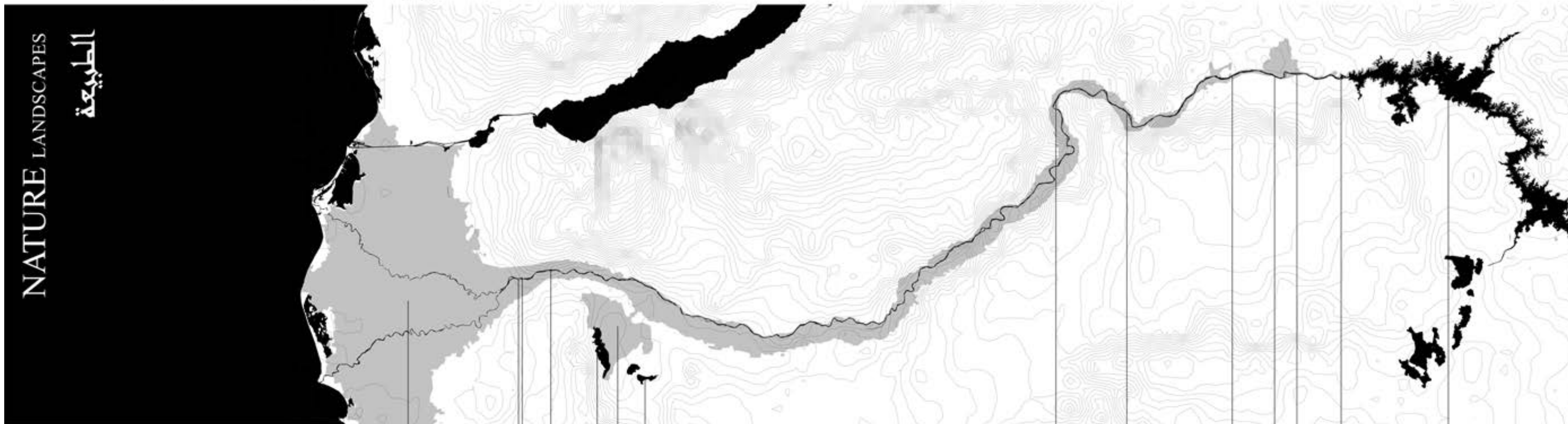
36 The nature (flora, fauna, etc.) on the riverbanks, including its natural island reserves, holds a grand importance for the Nile and Egypt. Myths and religious forces have flowed in nature, embodied by animals that are glorified in all historical iconography with their beauty and power. However, significant climatic changes have occurred along the Nile, erasing some identity connotations due to the disappearance of animals and species that once formed Egypt's ecosystem.

Therefore, the vast natural system, in relation to ongoing environmental changes, must be valued and protected on a scientific, landscape, environmental and touristic levels.

The Nature Landscapes theme focuses on DAHAB, KARAMAN and PHILAE islands, located within the geography of the Nile. The project aims to repropose these islands as an opportunity for a contemporary challenge for environmental, productive, touristic and settlement dynamics in relation to their own roots and identities.

The goal of the project is to develop a vision of a natural landscape with experimental and innovative functions that can reactivate these islands.





FAUNA	MIGRATING BIRDS ROUTE														
	BIRDS														
	REPTILES														
	FISH														
			A1	A2	A3				A4		A5	A6	A7	A8	A9
						B1	B2								

A
BLACK SAND

A1
Black sand deposits
between Burullus lake
and the Nile river

A2
Black sand deposits
between Manzala lake
and the Nile river

B
WETLAND RESERVES

B1
El Burullus Natural Reserve



B3
El Rayan Natural Reserve



B2
Qarun Natural Reserve



B4
Salouga & Ghazal Natural Reserve



C
TREES / VEGETATION RESERVES

C1
El Burullus Natural Reserve
Saguar Cane *Zygophyllum Albu*



C3
Wadi El Assiut Protectorate
Palm Trees



C2
El Rayan Natural Reserve
Albogi *Banana Trees*



C4
Banana Island
Tamarisk



C
TREES / VEGETATION RESERVES

C5
Botanical Island
Acacia Seyal *Mimosa Pigra*



C6
Salouga & Ghazal Natural Reserve
African Mahogany *Palm trees*



C7
Lake Nasser
Eichhornia Crassipes *Tamarisk*



Acacia Nilotica *Lawsonia Inermis* *Persicaria senegalensis*



Hibiscus



Acacia Nilotica



Potamogeton Pectinatus



Najas Armata



Typha Domingensis *Ipomoea Cahirica*

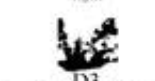


D
GEOLOGICAL RESERVES

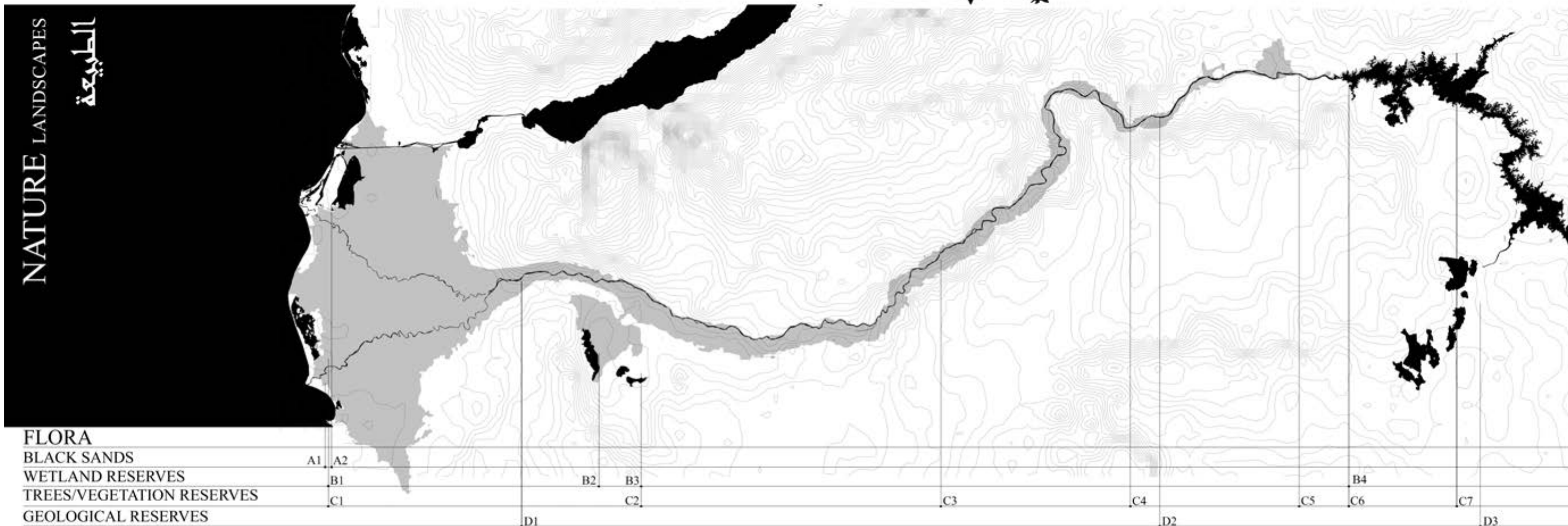
D1
Kobet El Hassana
Saloluboko



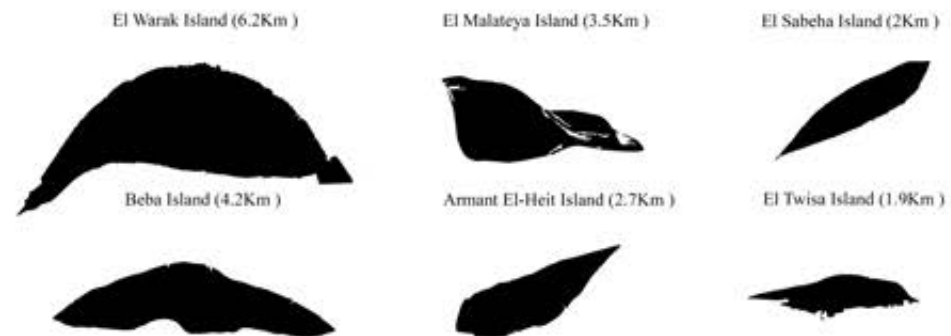
D2
El Dababyah Island
Iffra



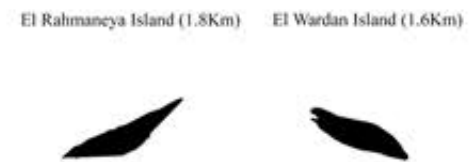
D3
Nayzak El Gabal Reserve



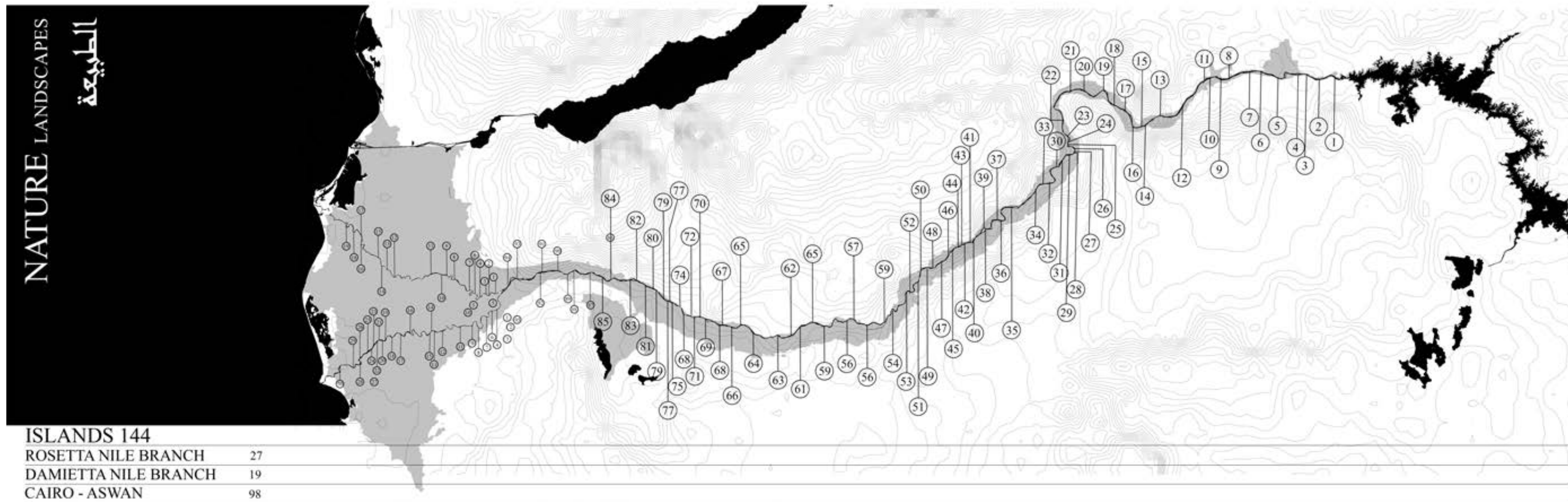
Islands from Aswan to Cairo



Islands in Rosetta Nile Branch



Islands in Damietta Nile Branch





Dahab Island

DAHAB ISLAND, Geziret El Dahab, «Island of Gold», located inside the Greater Cairo Region, inaccessible by car and reached only by the river, is inhabited by almost 11,000 fishermen and farmers. It also accommodates Prince Nagiub Hassan Palace, alongside other scattered buildings in between the farms and crops.

Despite its proximity to urban areas, its population still has a rural nature.

The island traces three fundamental relationships between architectural buildings and its landscape: natural and geographical components within the urban space, consolidated parameters and current forms of settlements, and with its slow construction in relation to the regional context.

The island is subject to a process of transformation of its agricultural nature in favor of the model of the globalized modern city.

The goal of the project should be to strengthen the characteristics of the island, which represents a fragment of agriculture present within a dense urban tissue. It would be essential to maintain a continuous dialogue with the landscape, the territory, and its productive conditions.

Dahab Island needs to experiment with a typological settlement scenario, where the relation between nature and architecture could define new landscape scenarios.

Therefore, a slow tourism could take place in a diffused architectural form "experiential hotel"; this could revive the island and put it as a destination and/or exodus from the polluted environments that characterize the Greater Cairo Region.



NA_01

Geziret El Dahab – Cairo

Umeå University School of Architecture,
Sweden + German University in
Cairo Architecture and Urban Design
Program, Egypt

Cornelia Redeker, Yosra Malek

with Manar Karam, Hassan Hussein,
Sara Abu Henedy, Ibrahim Samy,
Bassant Adel, Ethar Amr, Youssef Ayman

Nile Islands are the remnant of the dynamic Nile landscape formed by alluvial deposits and shaped by currents and changing water levels. Their soft embankments and dense wetland fringe offer abundant habitat to birds, amphibians, fish and invertebrates and are an important wintering ground for water birds in Egypt. On Geziret El Dahab we find many characteristics that cities all over the world are currently struggling to reinstall. How to activate the island's qualities to protect this much needed public amenity, with its abundant ecosystemic services? It is aimed to show how the needs for services and growth can be accommodated in the context of the surrounding city to avoid further urbanization on the island, while creating pedestrian and cycling connections from the felucca stops to enable safe access to public transport for all. For the island itself, a model of self-sufficiency is anticipated to ensure the protection of one of Cairo's largest green lungs and popular urban escapes.



Karaman Island – Sohag

KARAMAN ISLAND, with an area of 500 acres, forms an integral part of Sohag in Upper Egypt, where the dynamic of the Nile River seasonally changes its contour lines in response to different water levels. Considered a natural reserve and park, it is often known as the Island of Flowers.

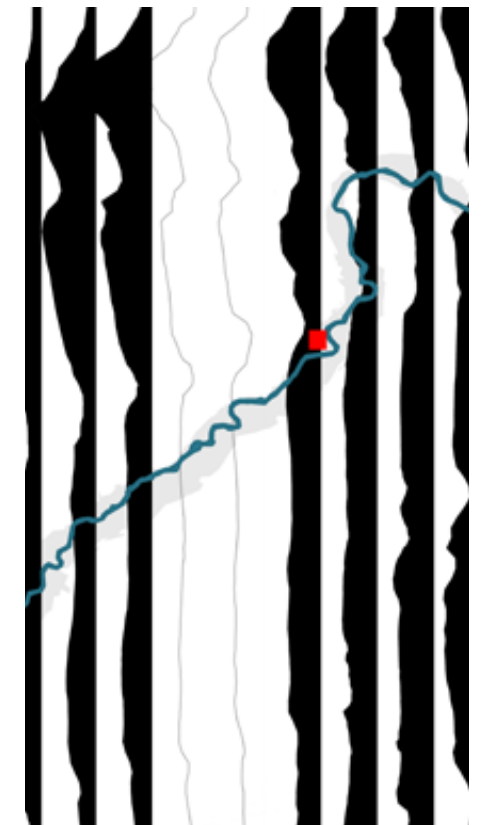
Like most of the Nile islands in Egypt, it lacks the basic necessities of life, which brought an aversion of the Sohag's inhabitants, and it became like deserted islands despite having been otherwise. Unfortunately, it became a place of informal activities.

Nowadays, Sohag's inhabitants aspire for better living conditions, identifying them by a city with a dynamic economy, efficient public services, cultural encouragement and social integration of different social and economical strata.

The quality of the natural assets could be reaffirmed through the project, since focusing on the existing environment is capable of adding value to the island.

Proceeding from the historical conservative approach, the project is a challenge to rethink the contemporary potential of the past traces integrated with existing elements for a future vision.

The idea for developing the island could be turning it into a cultural hub for the river bank inhabitants in Sohag. This transformation would contribute to enhancing the natural dimension of the island, in addition to the provision of a series of functions, which will have a great impact on social and urban scales.



A Friendly Giant for Rebalancing Nature

La Sapienza University, Roma, Italy

Fabrizio Toppetti, Viola Bertini

with Elisa Donini, Giuseppe Geraci, Marco Rosati, Cristian Sammarco, Maria Virginia Theilig, Francesco Tosetto

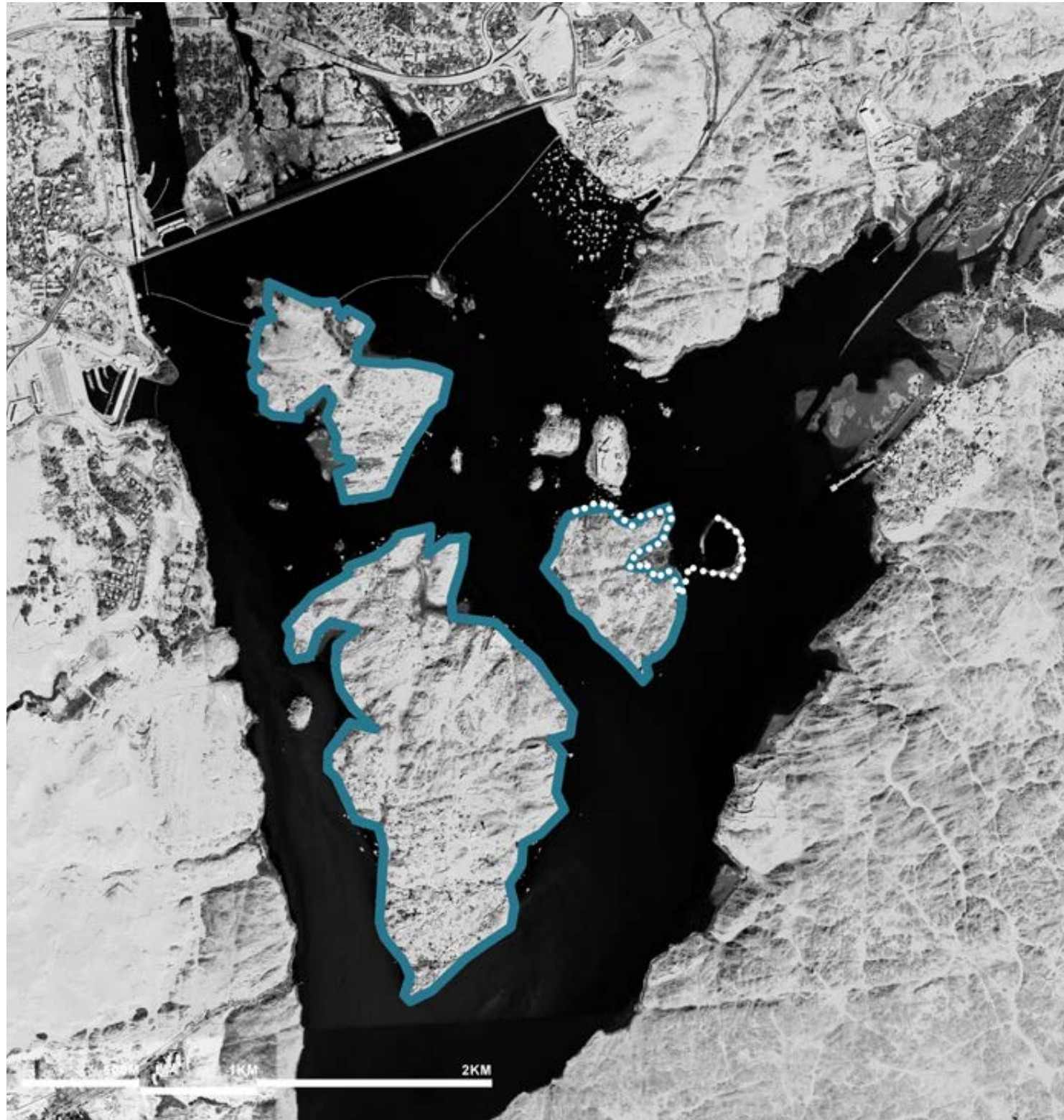
An island is not alone. An island is the moment of accumulation and representation of a stellar geographical system that in a single fragment can trace and express the meaning of the whole, a condition that constitutes its design potential.

For Sohag, the capital that Karaman Island represents can guide future development towards a horizon of sustainability declined in an inclusive way on ecological, social, and economic levels. The program, a cultural and research centre, has been interpreted holding together nature and man work in a virtuous relationship. The proposal is a large agri-food technology park. The imagination has gone so far as to prefigure a new reality based on agricultural production, cultures, and traditions, focusing on the fertility of the earth. The result is a large ecological infrastructure capable of giving strength and incisiveness to the renewed role that the island assumes on a territorial scale. The project takes on an experimental and provocative character and is aimed at stimulating a renewed environmental awareness.

A FRIENDLY GIANT FOR REBALANCING NATURE
AGRI-FOOD TECHNOLOGY PARK FOR KARAMAN ISLAND AND SOHAG COMMUNITY

NA_02

Philae Island – Aswan

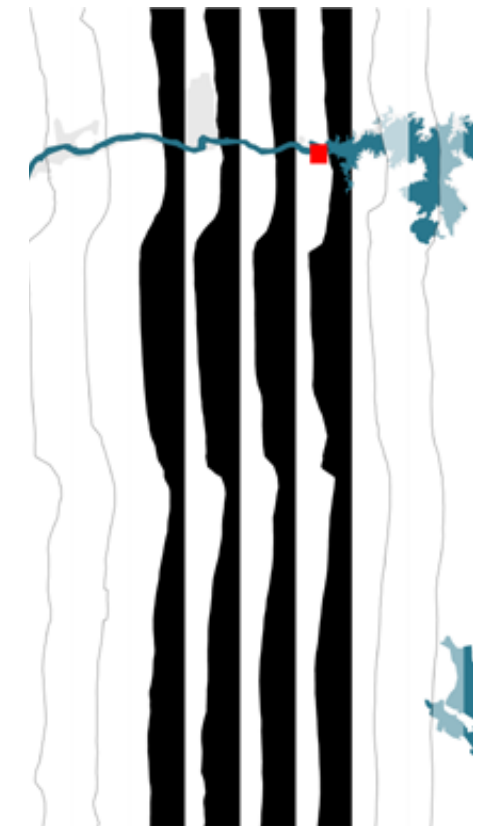


PHILAE ISLAND, *Jazīrat Filah* or *Jazīrat al-Birba*, «Temple Island», is located along the Nile river, between the Old Dam and the High Dam in Aswan Governorate in Southern Egypt. The conventional name (Philae) is Greek, but locally, the site is known as *Qa r Anas al-Wuj d*, named after a hero of the “One Thousand and One Nights” tales.

Before the construction of the Old Aswan Dam and its reservoir, the highest points of the island have always been unaffected by the Nile flooding, especially the alluvium- covered granite rock of Philae, with dimensions of 1,500 by 490 feet (460 by 150 meters). However, with important temples, such as Philae, and Abu Simbel, being built on lower contours, translocation has been carried out, moving them to the remaining areas of the island above the water level. The historical site currently functions as a system of three separated islands.

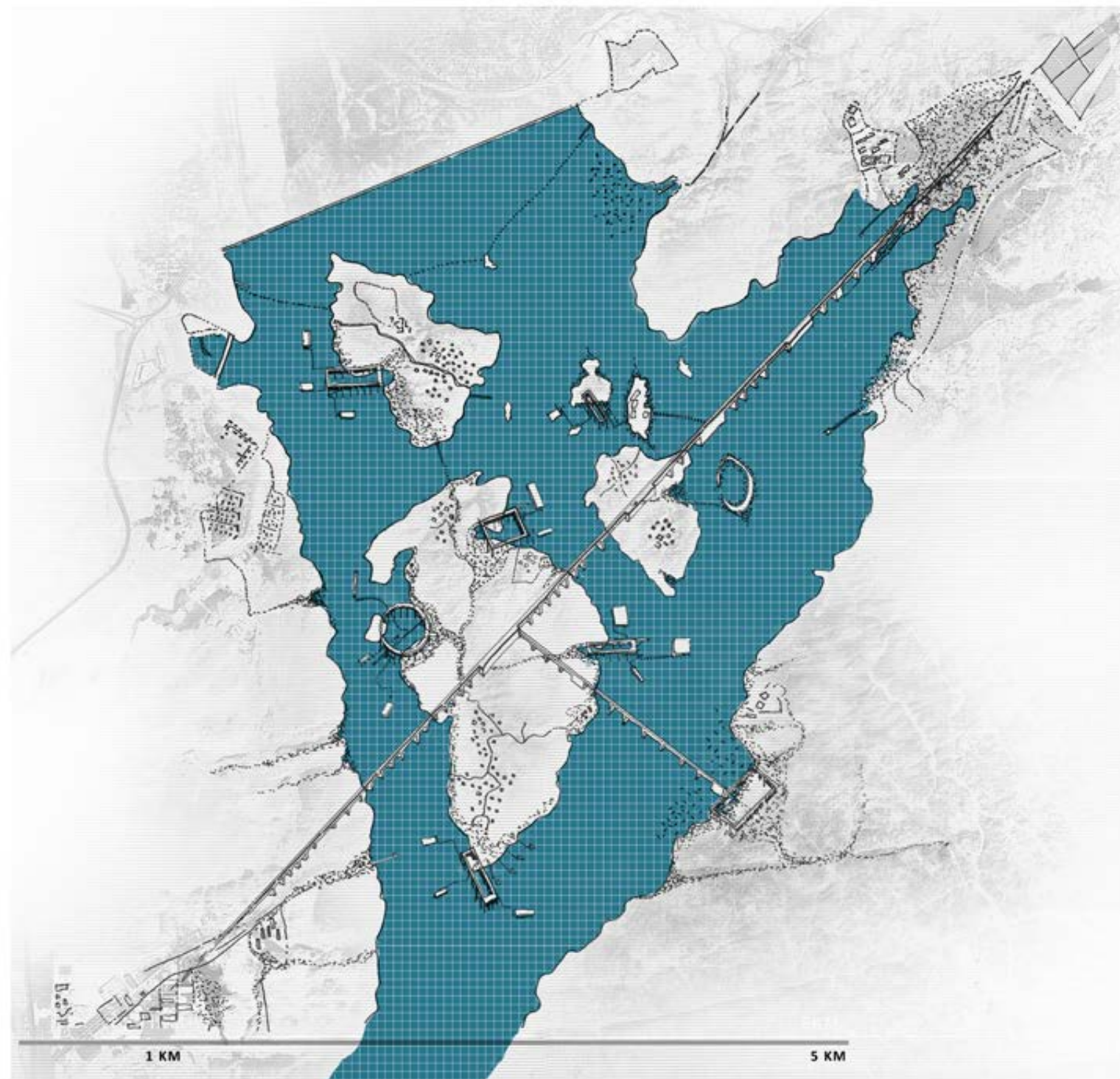
Philae Island is recognizable as a place of collective memory, one of the most beautiful islands on the Nile. Nevertheless, its current borders are either interrupted or isolated from each other, overlapping or contiguous with each other, stable or conflicting against each other.

Considering its borders as the focus of the design project, the system of these three islands could be conceived as an open museum. Consequently, it will recall the traces of such monumental artifacts with its historical role, which would become evident in its positive effectiveness not only on the environment, but also on the nature and landscape dimensions.



NA_03

AXIS NATURAE



Axis Naturae

Manchester School of Architecture +
Architecture Sheffield Hallam University,
UK

Loris Rossi,
Laura Pedata, José Ángel Hidalgo
Arellano, Nicolas Turchi

Axis Naturae is an imaginary vision that proposes a new order in the biodiversity in the Philae Islands and beyond that brings back the ecosystem altered by the construction of Aswan Dam. It creates a complex net of relations between nature and culture, earth and water, past and future.

As the desert conditions have intensified in the last years, it is essential to generate a new equilibrium. An infrastructure is conceived that links the Nile with different partes of Africa and the Mediterranean Sea. Connected to the axis, a series of "islands" favour new water distribution, enriching biodiversity and creating new dynamics in the territory. In this archipelago, each island becomes an oasis containing cultural, social and natural facilities that create pockets of natural species.

Axis Naturae is conceived as a timeless global spine that opens a dialogue with the existing, becoming a bridge that fertilizes the land and creates a new nature distribution, acting as a balancing system in light of the climate emergency.

Agro

AG_04
Reweaving Edfu
Edfu – Aswan

IUAV University, Venezia, Italy +
Future University in Khartoum, Sudan

AG_05
City into Nature
El Fawal Island – Behira

Ain Shams University, Faculty of
Agriculture + Faculty of Engineering,
Urban Design Department, Egypt

AG_06
Egyptian Topography
Sa El Hajar – Gharbia

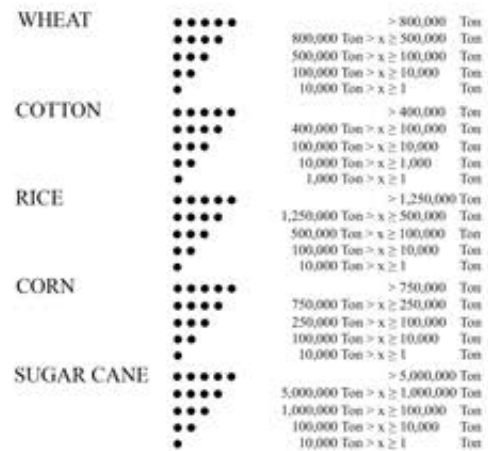
University of Camerino, Italy +
University of Udine, Italy

The Nile has always been the most suitable location, since ancient Egypt, to grow the food needed by the riverbank's settlers. The flow of the three seasons — flooding, sowing, and harvesting — represents the space-time passage which symbolizes the life cycle of nature and people.

58 The productive aspect, linked to the native agricultural resources along the river, is joined with the landscape aspect of agricultural scenarios to present an identity where nature, flora, fauna, and human presence come together in a historical and geographical balance of primary importance.

The Laboratory focuses on three sites: EDFU, EL FAWAL island and SA EL HAJAR, territories that must be freed from the industrial and urban agglomerations to be transformed into productive areas, with proposals for different forms of inhabiting rural space. A different perception of these sites could change their destiny, becoming not only suspended areas without urban definition, but spaces that experience a dialogue between production issues, public and living spaces.





WHEAT¹⁻²: 965,386 Ton



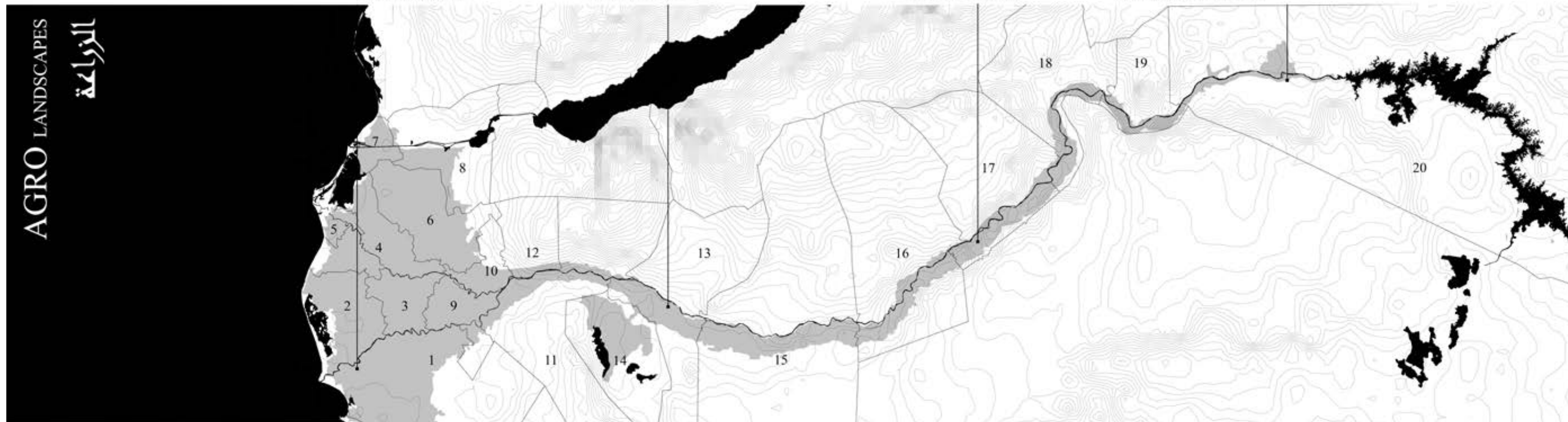
CORN¹³: 445,882 Ton



WHEAT¹⁷: 581,784 Ton



SUGAR CANE²⁰: 4,226,960 Ton



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
WHEAT	•••••	•••••	•••	•••••	••	•••••	••	•••	•••	•••	••	•	•••	•••	•••••	•••••	•••••	•••••	•••	•••	•••
COTTON	•••••	•••••	•••••	•••••	•••	•••••	•••	•••	•••	•	•••	•••	•••	•••	•••	•••	••	•••	•••	••	••
RICE	•••••	•••••	•••	•••••	•••	•••••	••	••	•	••	••	•	••	••	•	•	•	•	•	•	•
CORN	•••••	•••••	•••	•••••	•	•••••	••	•••	•••••	•••	•••	•	•••••	•••••	•••••	•••••	•••••	•••	••	••	••
SUGAR CANE		•		••	•	•				•	••	•	•	•	•••••	••	•••	•••••	•••••	•••••	•••••
	El-Beheira	Kafr El-Shaikh	Al-Gharbia	Al-Dakahlia	Damietta	Al-Sharqia	Port Said	Ismailia	Al-Menofia	Al-Qalyubia	Giza	Cairo	Beni Suef	Fayium	Menia	Assiut	Sohag	Qena	Luxor	Aswan	



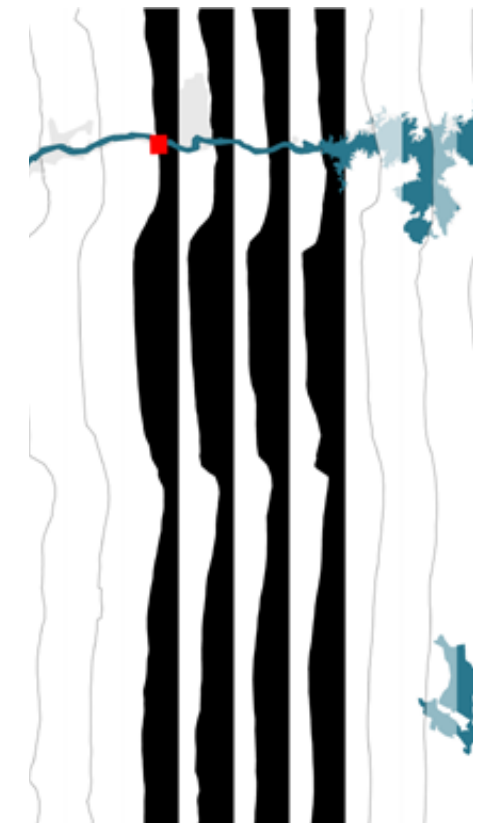
Edfu – Aswan

EDFU is an Egyptian city located on the west bank of the Nile River between Esna and Aswan, with a population of approximately 60,000 inhabitants. It is the location of the temple of Horus and an ancient settlement. The remains of the ancient settlement of Edfu are situated about 50 m to the west of the Ptolemaic temple. Although most of the settlement shows severe signs of erosion, some preserved areas show a cross-section of Edfu's development as a provincial city from the end of the Old Kingdom to the Byzantine period.

The compact layout of the city, along the Nile, carves out a very geometric agricultural landscape, measured by small canals and an external road network. The agricultural landscape of Edfu is characterized by the specialized cultivations of medicinal plants, linked to the pharmaceutical industry, and by fields of nationally-valuable vegetables. The project theme sets this dual dimension as the characterizing condition: agricultural landscape and urban landscape projected along the water line of the Nile.

The design proposal intends to merge the two realities, enhancing the agricultural identity vocations through exhibition and cognitive spaces. In particular, a new architectural building is thought of, along the Nile, on the site of a small sports field, to be transformed into a commercial exhibition hub for agricultural products. Moreover, a redevelopment of the main axis will be carried out, highlighting the morphology of the city, which dissolves directly into the agricultural fields. A new configuration of this axis is envisioned, through slow passages and bicycle paths with the presence of small green public spaces as fragments of local agricultural essences. In this context, the axis is repurposed as a tourist infrastructural spine capable of enabling widespread hotel actions.

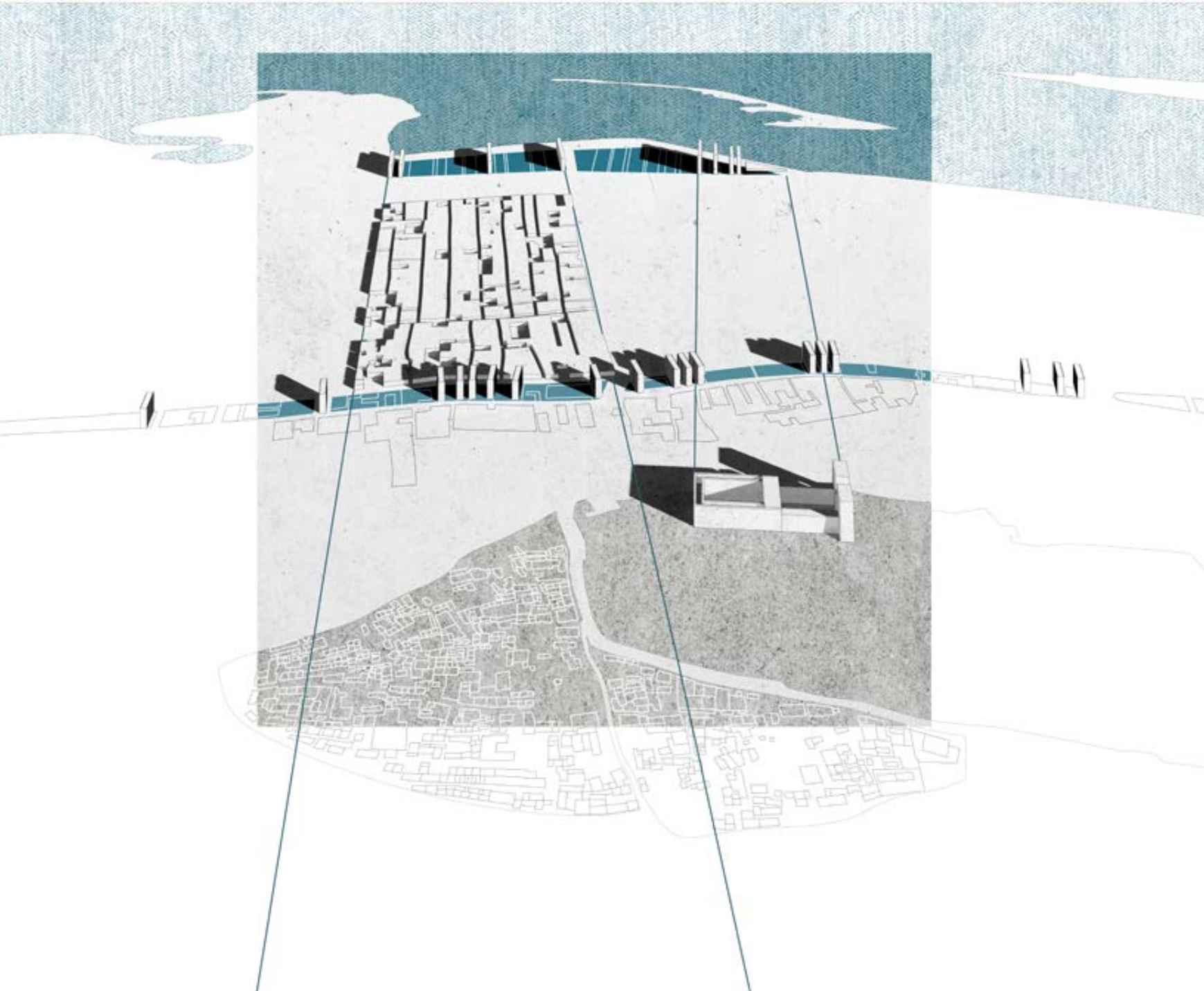
AG_04



Reweaving Edfu

IUAV University, Venezia, Italy + Future
University in Khartoum, Sudan

Mauro Marzo, Sandro Grispan,
Gabriele Catanzano, Mattia Cocozza,
Robert Vicentini

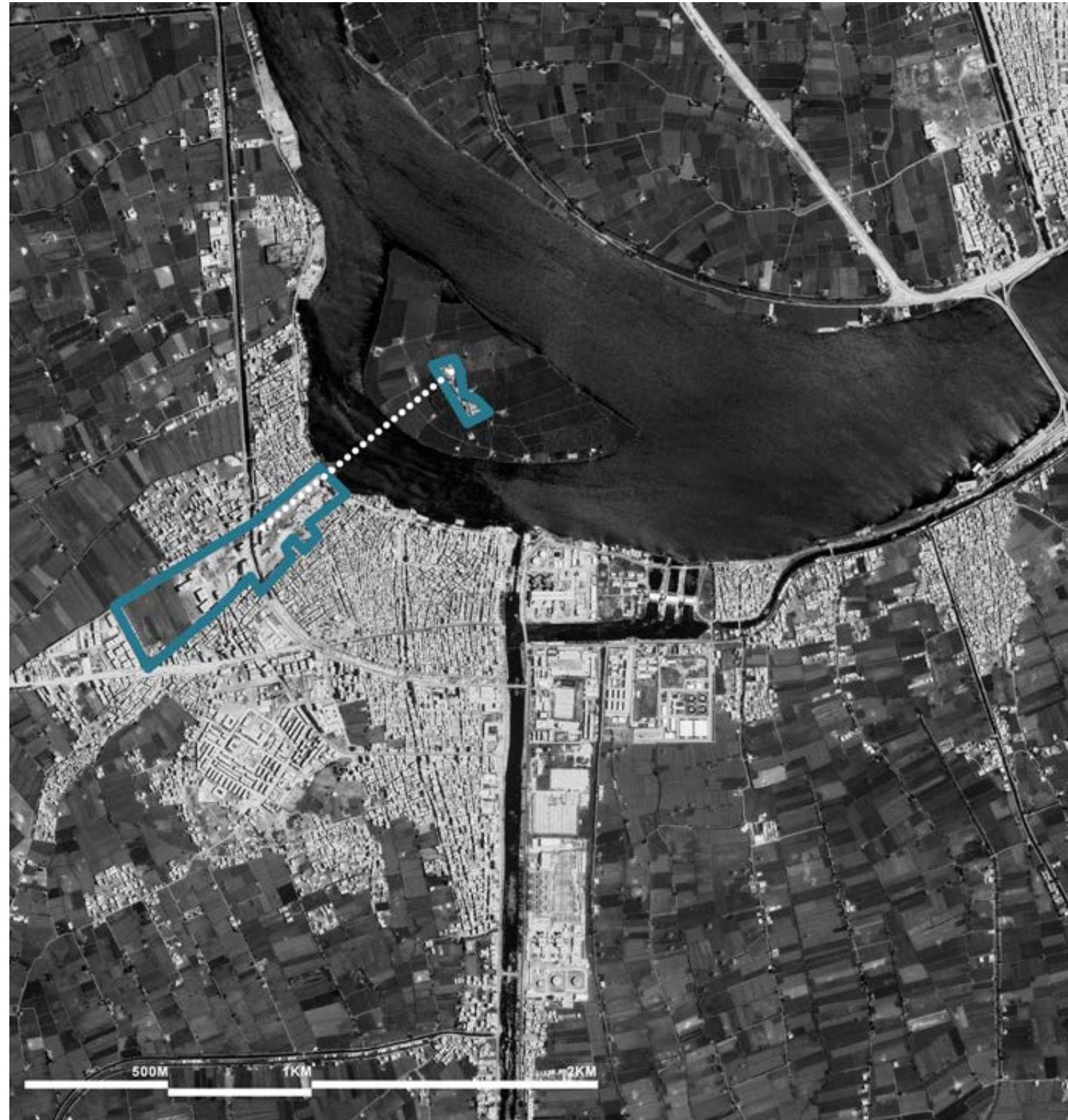


The relationship of continuity between city and countryside is assumed by the project as a geometric rule for the construction of a new urban image of Edfu.

The geometries of the pre-existing land parcels, generating a sort of compositional continuity between the road layouts and the agricultural textures that embrace the body of the city, become a reference for the extension of the same green spaces and the reconfiguration of existing gardens along the Nile. According to the traditional presence of water surrounded by shading local tree species, green exhibition spaces and public places of leisure and pleasure are thus offered.

The guidelines of the agricultural textures are also a reference for the placement of buildings and green spaces along the main north-south axis that connects the old part of the city with the modern urban expansion of Edfu along the edge of the river. The dimensions, proportions and orientation of the Temple of Horus guide the definition of the architectural devices and green open spaces that overlook the Nile, accommodating the exhibition and commercial hub of agricultural products of the region.

El Fawal Island – Behira



EL FAWAL ISLAND, one of the most beautiful agricultural islands in Behira Governorate, is located along the Rosetta branch, within the northern part of the Nile Delta. With an area of 0.1km², it has an important agricultural role, producing various vegetables and fruits, with focus on artichokes and citrus fruits.

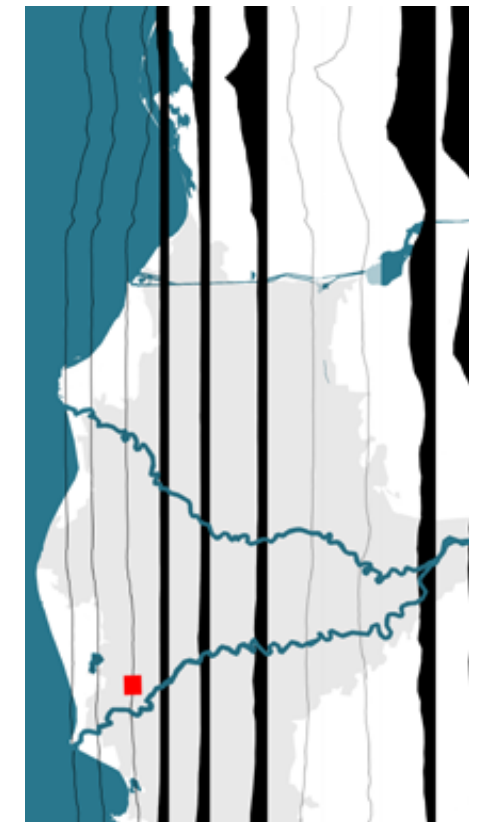
The island is known for the typical products of Egyptian agriculture like its own rice, cotton, wheat and sugar beet. Additionally, along its coasts exists significant fish farming activities.

The place is characterized by three landscape systems: the countryside formed of cotton fields, the city with its sprawling tendency to occupy agricultural lands and the island on the Nile, which remains a natural oasis alongside cotton cultivation.

The project should aim to merge these three landscapes into a unified idea, capable of identifying the essence of the place.

This way, the targeted area would constitute a real *wedge* that starts from the agricultural system, crosses the city, creating a green zone up to the Nile, where the island forms the frontal element.

Conceived to return the built system to the natural soil, the intervention area could be redesigned through a university research center on cotton cultivation. Consequently, the island on the Nile would constitute an experimental area for the research center, containing all the characteristics of biodiversity and rural archeology typical of the Egyptian tradition.



AG_05

City into Nature

Ain Shams University, Faculty of
Agriculture + Faculty of Engineering,
Urban Design Department, Egypt

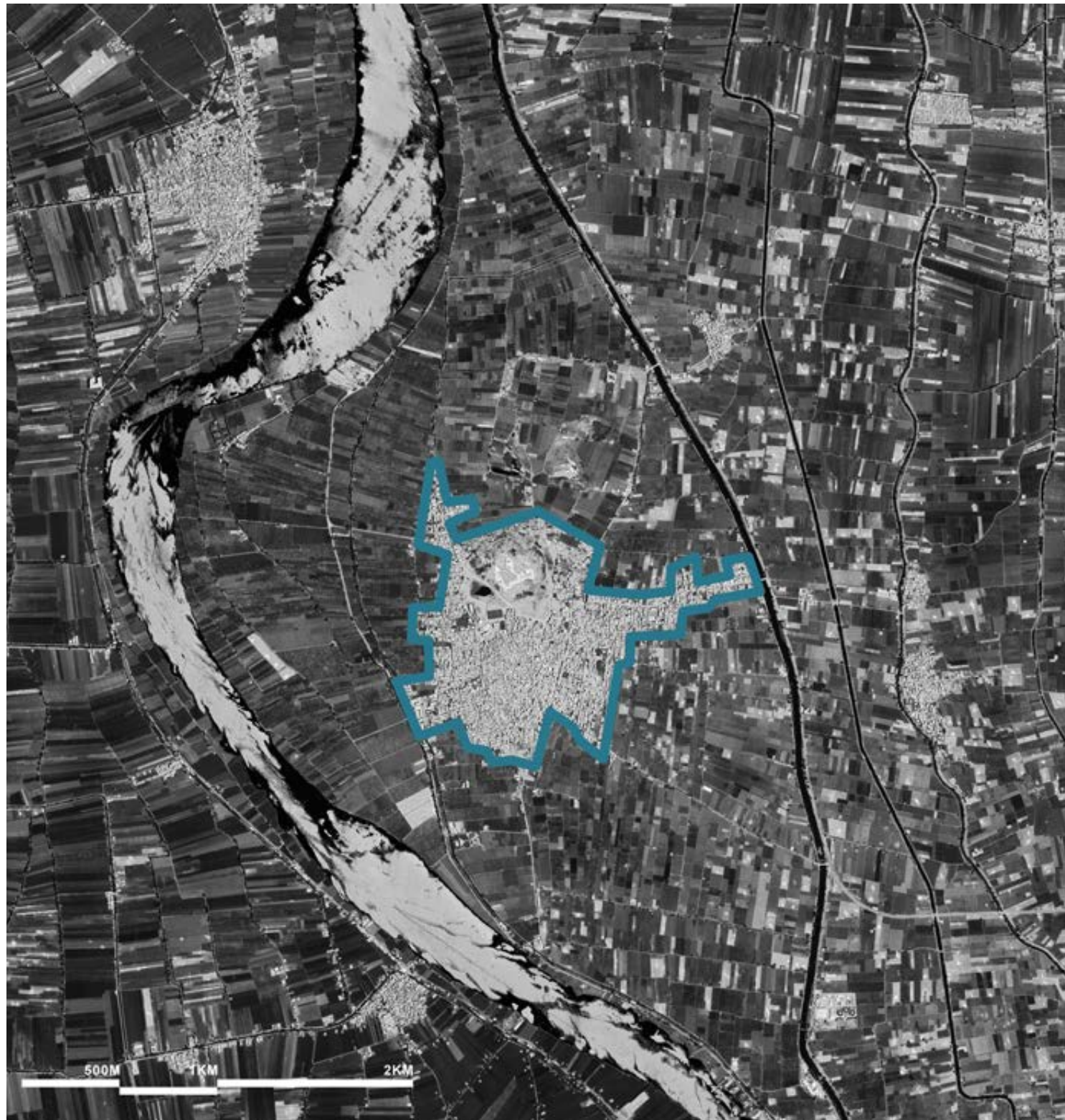
Mohamed Heweidy,
Mohamed El-Fayoumi

with Malak Hazem, Mennatallah Saleh,
Mohamed Selim, Rana Shams,
Tuqa Galal, Yara Soliman

El Fawal Island is characterized by the confluence of three elements: agriculture related to cotton production, the river, and the ever-increasing built-up area. The progressive process of urbanization continues to consume rural areas, erasing the memory of a place historically inhabited by farmers and fishermen. The project proposes a possible coexistence between present identity elements and innovative programs on both production and housing levels.

The project proposes an agricultural research center on cotton production, modeled on the design of the fields, following the existing topography. The configuration of new public spaces connects with the surrounding landscape and the Nile to reinforce a sense of place and belonging.

The use and accentuation of the original vegetation together with the new architectural artifact, the enhancement of the rural systems design, and the revitalization of the relationship with the old water channel create the right interaction between nature and artifice, resulting in new urban and landscape configurations that enhance local identities.



Sa El Hajar – Gharbia

SA EL HAJAR is one of the villages of Basyoun Center in Gharbia Governorate in Egypt. Its name during the era of the Pharaohs was "Sau", and the Greeks transliterated it to "Sais", and in modern times it is called Saïs Al-Hijr.

The city has an ancient history dating back to the Old Kingdom and is mentioned in many Pharaonic manuscripts. Excavations show that the history of Sais dates back to 4000 BC. It was the capital of Pharaonic Egypt during the era of the 26th and 27th dynasties, and among its most famous kings was Psamtik I (656 BC), who formed an army and expelled the Assyrians from Egypt, and King Amun Hor.

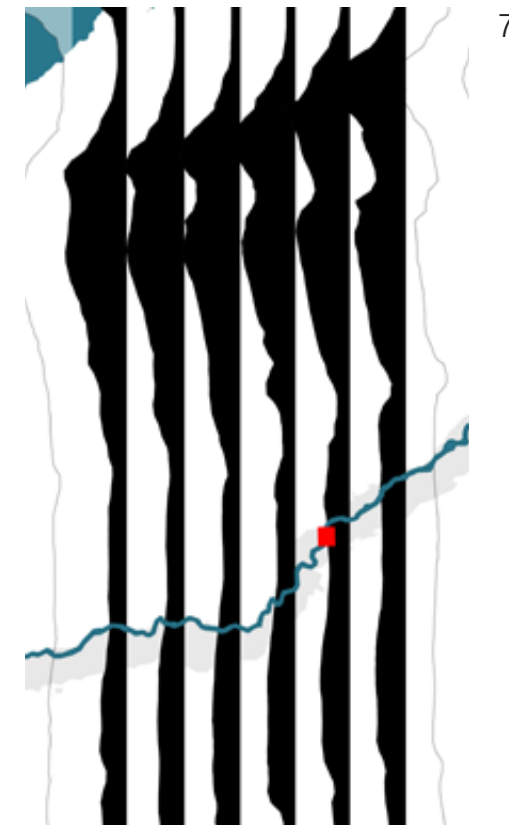
Being recognizable for its star shape, this city is found within an agricultural landscape marked by water channels and strongly geometric field plots.

This area of strong productive value in Egypt's rural economic scenario is often threatened by undifferentiated and sprawling urban development.

The project intends to reverse the city-countryside relationship, prioritizing agricultural land not only as a productive base, but also as a landscape and identifying quality.

In this sense, the project theme is focusing on the border between city and countryside, as a viable element/barrier, a sign of a possible linear park with dual effect: on the one hand towards nature and the Nile, on the other towards the built environment.

The park is characterized by a leisurely path and is configured as a narrative of the knowledge of rural systems and crops, with a concurrent exhibition for the sale of small artifacts and products.



AG_06