

PORTUGAL SB10
SUSTAINABLE BUILDING
AFFORDABLE TO ALL
Low Cost Sustainable Solutions

Organized by



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AFFORDABLE TO ALL
Low Cost Sustainable Solutions

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Foreword

The conference Portugal SB10 - Sustainable Building Affordable to All is organized by University of Minho – UM, Technical University of Lisbon – IST and the Portuguese delegation of the International Initiative for a Sustainable Built Environment – iiSBE Portugal in Vilamoura, Algarve - Portugal, from the 17th till the 19th of March 2010.

This conference is included in the “SB10” series of international conferences that are being organized all over the world. The event is supported by high prestige partners, such as the International Council for Research and Innovation in Building and Construction (CIB), the United Nations Environment Programme (UNEP), the International Initiative for a Sustainable Built Environment (iiSBE), Ordem dos Engenheiros (OE – Portuguese Engineers Professional Association) and Ordem dos Arquitectos (OA – Portuguese Architects Professional Association).

Currently it is undeniable the importance of buildings on sustainable development due to their potential environmental impacts. It is also undeniable the role that the construction sector can play against climatic changes through the integration of high performance and low emission construction solutions, contributing to the reduction of the environmental impacts throughout the buildings life cycle. Several solutions are already available on the market that allow performance improvements, proving that it is actually possible to contribute to the formulation of new construction strategies, not only with improved technical and environmental quality, but also economically feasible, innovative and capable of promoting the sustainable development.

The international conference Portugal SB10 is an excellent opportunity to discuss and reflect on good technical practices applicable not only to buildings but also to urban areas and communities. With the organization of this event, we expect to share knowledge, examples and strategies, to formulate proposals that include new principles and initiatives for the creation of a more sustainable environment and to stimulate sustainable construction policies that can lead to more responsible construction, affordable to all.

The subjects discussed in this conference cover a wide range of important issues related with sustainable construction. The contributions given by the authors are the reflection of profound work and critical research that will give an important contribution towards sustainable development. The issues presented include:

- Six invited keynote papers (Chapter 1);
- Policies to low cost sustainable construction (Chapter 2);
- Low cost sustainable building solutions (Chapter 3);
- High performance sustainable building solutions (Chapter 4);
- Monitoring and evaluation (Chapter 5);
- Case-studies (Chapter 6).

Sustainable Construction, affordable to all, undeniably responds to the actual strategies of responsible and sustainable development, strongly contributing to innovative partnerships and for local employment, becoming thus an engine of social cohesion and an important instrument of economic, environmental and social policy for present societies.

Besides the keynote papers in Chapter 1, all the other papers selected for presentation and published in these proceedings, went through a systematic process of revision and were evaluated by at least, two reviewers.

The Organizers want to thank all the authors who have contributed with papers for publication in the proceedings and to all reviewers, whose efforts and hard work secured the high quality of all contributions to this conference.

The Organizers want also to thank the support given by InCI (Instituto da Construção e do Imobiliário) that sponsored and made possible the edition of these Proceedings.

The organizers are also grateful to the following institutions that contributed to this event: STAP, FCT, IRHU, CIN, Soares da Costa, DST, CASAIS, energypark, SECIL, CIMPOR, Turismo de Portugal Algarve, Câmara Municipal de Loulé, Câmara Municipal de Lagos e Universidade do Algarve.

A special gratitude is also addressed to Eng. José Amarílio Barbosa that coordinated the Secretariat of the Conference, to Eng. Miguel Silva that prepared and made available the Conference Webpage and to Eng. Catarina Araújo, Eng. Daniel Pinheiro and Eng. Deolinda Chaves for their help in administrative matters.

Finally, “Portugal SB10 - Sustainable Building Affordable to All” wants to address a special thank to CIB, UNEP, iiSBE, OE and OA and wish great success for all the other SB10 events that are taking place all over the world.

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Welcome

The strategy defined by the Portuguese Government for construction and real estate is based in sustainable concepts, optimizing the State regulatory functions in view to reduce bureaucracy, improve processes transparency, strengthening cooperation and guarantying an effective coordination in the definition and implementation of Government Program policies.

As a result of the above mentioned strategy, the Portuguese Government recently assigned a new mission and new challenges to InCI - Instituto da Construção e do Imobiliário, I.P. (Institute of Construction and Real Estate).

The mission of InCI, I.P. comprehends the regulation of the construction and real estate markets being the new challenges the promotion and implementation of solutions that achieve sustainability priorities, reduce environmental impact, enable energy efficiency in buildings, contribute to energy and environment certification, improve the rational use of materials and the construction waste management in Portugal. Summarizing, InCI, I.P. has an ambitious and challenging aim that is the modernization of the Portuguese construction sector contributing to the efficiency and sustainability of construction in general and of buildings in particular.

The aims of InCI, I.P. are fully in line with the scope of the conference “Portugal SB10 - Sustainable Building Affordable to All” and, therefore, participating in the edition of these Proceedings is a contribution to positively changing the construction industry towards the adoption of sustainable and efficient building practices.

InCI’s support will also promote the opportunity to increase awareness and interest among the economic operators to the issues related to sustainable construction, through the exchange of practices, experiences and information.

It is with a great pleasure that InCI, I.P. warmly welcomes all the participants and wishes a great success to the conference Portugal SB10 - Sustainable Building Affordable to All.

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