

Sustainable Construction in Public and Private Works through IPP approach



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Sustainable Construction Competition

SUSCON is a LIFE – Environment project (LIFE 05 ENV/GR/000235) aiming at the adoption and application of “sustainable construction” concept in the practices of construction industries, engineering consulting companies which draft technical specification of civil works, public authorities which issue technical tenders, suppliers of construction materials and other stakeholders involved in this field.

Project Partners:

- National Technical University of Athens (School of Chemical Engineering)
- EDRASIS C. PSALLIDAS S.A.
- EPTA Ltd. – Environmental Consultants Engineers
- University of Cyprus (Department of Civil and Environmental Engineering)
- CYBARCO Ltd.
- Technical Chamber of Cyprus

The first competition on Sustainable Construction is being organized in the framework of SUSCON project. The competition will take place in Greece and Cyprus under the auspices of the National Technical University of Athens and the University of Cyprus. The projects that will be eligible for participation in the competition sort in two main categories: buildings (existing or new ones) and Road Works (public projects).

In Greece, there are some efforts to have the competition included in the Greek Awards for the Environment, that were organized for the first time in 2006 by the Greek Association of Environmental Protection Companies (PA.S.E.P.PE). These awards take place in Greece every two years. This effort focuses on ensuring a wider publicity for the Competition and establishing a permanent award category in the Greek Awards for the Environment, called “Sustainable Construction”.

In Cyprus, an open tender for the Sustainable Construction Awards is expected to be published in September 2007. The evaluation of the candidate projects will take place in November 2007 by an Evaluation Committee. This Committee will consist of experts from the construction sector, environmental and energy sector, as well as researchers and managers specialized in public and private projects.



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Editorial

Public authorities, which are responsible for the preparation of tender documents for civil works, lack of environmental knowledge and as a result no environmental requirements are taken into consideration in procurement. In addition, construction industries consider environmental specifications as an extra burden in any construction activity, since there is no such legislative requirement and most of the tenders are awarded based on the most economically advantageous offer. The introduction of the sustainable construction concept accompanied by the development of practical tools can be the starting point for all the bodies involved in the construction sector, to get familiar with environmental aspects of construction and promote more environmentally friendly products and services.



Second Meeting of the Advisory Board

The second Meeting of the Advisory Board took place in Cyprus in December 7th 2006. At the meeting, the environmental impacts related to the construction activity in both Greece and Cyprus was discussed and reviewed. The results of the Life Cycle Assessment on both construction activities were presented together with the functional specifications for the development of the EUpalinius Information Database for the Sustainable Construction.

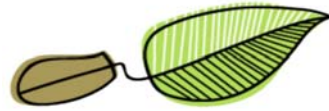


On both meetings it was agreed that the design phase of a construction is very important part of its life cycle. Consequently, the development of ecodesign criteria is an important step for promoting and adopting sustainable practices in the construction sector. Among the most important ecodesign parameters one can find energy efficiency, the use of environmental friendly construction materials and the increased life cycle of the project.

On the 27th of April 2007, the 2nd Advisory Board Meeting took place in Greece. The main contents of the meeting were the National Sustainable Construction Competition in public and private sector and ecodesign criteria proposals on the construction sector. In the meeting, a common consensus was reached. The participants agreed that it is difficult and time-consuming to establish a National policy on Sustainable Construction. All involved actors need to closely collaborate and make big efforts in order to achieve their goals.



Progress of the Project



Regarding the progress of the project during the last six months, the following actions have been realized:

Publicity

Regarding the publicity of the project, the official web page is regularly updated and informed with the progress and results of all the on-going actions.

(<http://www.uest.gr/suscon/>).

Final Stage of the Sustainable Development Database

The Eupalinus database is completed and it is expected to ensure easy and quick access on information regarding the Sustainable Construction sector. The Eupalinus database services will be beneficiary for construction companies, construction materials suppliers, actors involved with the environment, public authorities and the end users.

(www.uest.gr/eupalinus)

The principal aim of this database is to promote research on construction materials and phases through the interdisciplinary specialization of Engineers on integrated interdisciplinary approach and research techniques, so that they are able to cover adequately the needs of the Social, Private and Public sectors. In addition to this, this database aims at developing the research capacities of engineers and scientists making them capable for producing fresh knowledge.

Award Evaluation Criteria

The evaluation are divided into five main categories : Environmental criteria (minimization of the environmental impacts during the life cycle), energy criteria (the main purpose is increased energy efficiency during construction and use), social criteria (health, security and comfort conditions for the users), financial criteria (construction, maintenance and operation costs), design and planning criteria (harmonic integration of the building in the natural and built environment).



Life Cycle Assessment on Roadworks - Conclusions

Environmental Impacts of the roadwork life cycle are divided between construction (51%) and usage phase (49%)

Greenhouse effect is the most important environmental impact as it is responsible for the 52% of the total environmental impacts from roadworks.

Environmental impacts during a roadwork are mainly attributed to fossil fuel consumption, transportation of large volumes of inert materials and the on-site construction phase. In general, the choice of proper construction materials is a crucial factor for the overall environmental impact of Roadworks.

Future Actions

The action plan of the project for the next months includes many actions, among which are the following:

News about the Competition in Cyprus

The sustainable construction the open competition in Cyprus is expected to take place from September the 3rd to November the 2nd. The candidate actors will compete in two main category projects:

- A. Sustainable Construction of a Building Award and
- B. Sustainable Construction of a Roadwork or any other public work

3rd Advisory Board Meeting

On June the 20th there will be conducted the 3rd Advisory Board Meeting in Cyprus. in order to evaluate the progress and results of the project.

The 3rd advisory Board meeting in Greece will take place at fall 2007.

Ecodesign criteria software tool

For the evaluation of the environmental performance of construction works a web-based software tool will be developed. All public organizations in Greece and Cyprus dealing construction works will have access to this tool. The software will be available for the public only after the end of the project. Each construction company will apply the software to all the construction projects, where ecodesign criteria are available. Individual environmental manager will be assigned in each company and will be responsible to run the software and produce reports for all the construction works.



For more information, you can visit the project website:

www.uest.gr/suscon/

