

## W082 - Future Studies in Construction

We are highly indebted to W082 Coordinator Luc Bourdeau for a detailed report on the recent W082 Meeting. This is reproduced in extenso below and readers will be particularly interested in the accounts of the current and proposed projects.

More than twenty W082 members attended the meeting, which took place in the premises of VTT Building Technology in Espoo, Finland on 15th and 16th September 1999. On the afternoon of the first day and on the morning of the second day, a special session dealing with the new project on Construction Related Sustainability Indicators was held.

The afternoon of the second day featured presentations made by VTT about some of their activities related to sustainable construction. Finally W082 members were invited to participate on a technical tour around Helsinki and to attend the Workshop which was organised by the European Commission BEQUEST Network on the third day.

Luc's summary of the main items discussed at the meeting follows.

### **W082 Publication and Web Site Sustainable Development and Future of Construction**

Members were reminded that the Publication Home Page had been made available by CSTB in late February 1999 at the following address:

<http://bativille.cstb.fr/cib.htm>

A link to this address had been established from the CIB General Secretariat Website.

As of today, the Executive Summary, the International Synthesis and half of the National Reports (Finland, France, Greece, Hungary, Italy, Romania, United Kingdom and United States) are available. Other National Authors were asked to get in touch with CSTB as soon as possible in order to establish other links.

It was also agreed that the National Reports on the Website should be updated in order to provide a good current state of the art of sustainable construction in the countries.

### **Introduction to the W082 Project on Construction Related Sustainability Indicators**

Pekka Huovila reported on the status of this new project proposal made in Barcelona.

This project was viewed as the next step after the "Sustainable Development and Future of Construction" project. It deals with the development of sustainability indicators for Construction, which are needed to measure performances and to set targets at various levels of the construction sector activities. The scope of the project includes indicators:

- dealing with qualitative or quantitative issues
- covering environmental, economic, social, institutional and cultural issues
- covering buildings and the built environment
- covering the whole process from the initiation of the project to the end of the life cycle.

The main activities will deal with the development of a common framework/structure for these indicators, the gathering of a list of indicators proposed by the partners of the project with information on their validity, experiences of implementation and other characteristics, the proposal of a futures

scenario supporting the (regional, national and global) targets and choice of indicators.

So far 21 countries have stated their intention to participate in the project. First National Reports with a state of the art showing national indicators, experiences, targets etc. are expected for October 2000.

A special session dedicated to presentations in line with the topic of this new project took place on the afternoon of the first day and on the morning of the second day.

This comprised the following papers:

- The Question of the Sustainable Development Indicators in Romania (Jana Suler, UrbanProiect, Romania)
- Sustainability Indicators for the Building Services Industry (Dorothee Colas, BSRIA, UK)
- Evaluation of Health Compatibility of Building Products. Report on a project in Germany (Christian Wetzel, Fraunhofer, Germany)
- Indicators for Sustainable Development in South Africa. A first snapshot (Chrisna Du Plessis, CSIR, South Africa)
- Sustainability Indicators at District Level (Roël Lanting, TNO, The Netherlands)
- MISTRA Bygg Sustainable Building (Stephan Wallner, Chalmers, Sweden)
- Factors Influencing National Sustainability Priorities in Building (György Kunszt, EMI, Hungary)
- Indicators for Sustainable Building (B.P. Simons, BBRI, Belgium)
- EcoEffect. Environmental Indicators (Mauritz Glaumann, KTH, Sweden)
- Proposal for Promoting Sustainable Buildings (Tomonari Yashiro, Tokyo University, Japan)

Steve Curwell (Salford University, UK), Niall Walsh (Sustainable Design International, Ireland) and Marc Alavedra (UPC, Spain) also reported on their activities.

### **New Project on Effects of Climate Change on Construction Activity**

Ranko Bon introduced this project proposal at the Barcelona meeting in December 1998. The idea is to piece together a picture of how climate change is distributed in space and what effects it will have on construction activity, given the demographic, economic, environmental and other factors. The ability of the construction sector to respond to the challenges of climate change may be of interest to a wide variety of people and organisations.

The first step to be undertaken should be an investigation into people, institutions, projects, etc., concerned with climate change as such and its possible effects. The next step is to establish contacts with them and to see how collaboration could be developed. Only then will it be possible to see how all the factors that have been identified could be combined into a meaningful project spanning a number of disciplines and a number of countries or continents.

Several people expressed their interest for this proposal and consequently it was agreed that Ranko Bon would continue with the idea and would propose a detailed plan of action.

Ranko Bon had sent a message mentioning that a Centre on the Impact of Climate Change may be set up in UK next Year. He asked also W082 members to underwrite some research funds, via another research institution in Europe or elsewhere, to give a more rapid start to the project.

### **W082 Year 2000 Meeting in Atlanta (May 18-19) and Report on Technology and Future of Construction**

The Georgia Institute of Technology (Atlanta) had kindly accepted to host the next meeting on 18th and 19th May 2000. In addition to the regular W082 meeting a one-day Workshop would be organised by Saeid Sadri on the topic Technology and Future of Construction. A report based on the Proceedings will be edited. Plans are for this to initiate a new W082 Project with regular exchange of information and on-

going projects on that topic.

## Other Project Proposals

After a brainstorming discussion on the launching of other future studies project in the framework of the W82 Commission, it was agreed to proceed with three ideas, which generated a large interest among the participants. These are described below.

- **The future of traditional technologies in construction.** How can these traditional technologies, which are also often local technologies, maintain their place in the development of the construction sector? How can they be adapted to fit the new requirements linked to productivity, sustainability, and security? How can they survive to a globalisation of the construction industry, when large projects would be dealt with at an international level and only small projects by local firms? How can they be mixed with new technologies in order to increase the performance of the final product without losing cultural and often esthetical aspects?
- **The capacity of the construction industry to cope with sustainability, for example in liaison with refurbishment activities and small contractors.** Now that a clearer view of the concepts of sustainability is emerging, it appears that the application of these concepts often leads to contradictions that must be coped with by all the actors in the construction sector. It is in fact an exercise in optimisation which has to be carried out on a case by case basis depending on many factors. In particular, refurbishment activities impose additional constraints arising from the fact that these activities have to start from an already existing set of objects located in a given environment.
- **Stakes and challenges confronting the construction industry.** Apart from the challenge mentioned above, the construction industry has and will have to cope with major stakes and challenges linked to the heavy trends of the external factors that exert a strong influence on the sector. Demography, construction policies, technological development, urban and land management, economic factors, globalisation, life style diversification etc. are all domains in which major changes are already occurring or are going to occur and which cannot be ignored by the construction sector. As a matter of fact these trends can lead to difficulties for the sector or, on the contrary, can be seen as opportunities from which the sector can benefit on the condition that it takes them into account in its development.



No lack of interest from the participants at the W082 Meeting in Espoo which as usual attracted a significant attendance.

It is not only the number of participants that makes for a fruitful meeting. A wide geographical spread is important and that is where CIB can usually score heavily. On the right Jana Suler from Urban Project, Bucharest, Romania was able to bring input from Eastern Europe.





Gyorgy Kunszt, EMI, Hungary gives his contribution to W082. Few can equal his period of service to CIB - Chris Pollington recalls frequent references to him when editing the Information Bulletin.

Coordinator Luc Bourdeau has been the key figure in producing the eagerly awaited Agenda 21 for Sustainable Construction, now successfully launched. He can also with justification be satisfied at the progress of W082 under his leadership as the accompanying report shows. He is in pensive mood (right) with a colleague (Joint-) Coordinator Chrisna du Plessis (CSIR, South Africa) from the nearly established TG38 - Urban Sustainability.



## The EC Project BEQUEST

Steve Curwell made a presentation on the already up and running EC Project BEQUEST - Building Environmental Quality for Sustainability through Time, which has close links with the project on Indicators and which can bring useful background to it.

BEQUEST, funded by the European Commission (through Framework IV), is an international network of academic and commercial interests working towards sustainable urban development in order to protect the environment and the quality of life for future generations.

The objectives of this concerted action are to lay the foundations of a common EU understanding of sustainable urban development through a multi-disciplinary network of representatives of all actors involved in the provision, use and maintenance of the built environment.

An integrated approach to built environment quality assessment will be developed which will help to reduce the environmental uncertainty facing decision makers in the development and infrastructure industries.

The primary outputs include:

- an effective multi-professional, international, interactive built-environment quality evaluation and sustainability networked community
- a directory of environmental assessment techniques and methods currently in use and emerging in the built environment sector, across the EU
- a directory of professional advisors in the field
- a procurement protocol for sustainable urban development

Full information on BEQUEST can be found on the Website of the project at <http://www.surveying.salford.ac.uk/bqextra/>.

## Future Meetings

The next meetings of W82 are envisaged as follows:

- Atlanta (Georgia Institute of Technology) on 18th - 19th May 2000.
- Wellington (New Zealand) (to be confirmed) linked to the CIB World Building Congress on 2-6 April 2001.
- Malaysia in February 2002 (to be confirmed).

**Luc Bourdeau**

