

Advanced Building News

International Initiative for a Sustainable Built Environment



ABN 01, January 2004

International

iiSBE and IFC meet in Mexico

The Annual General Meeting of iiSBE took place in Monterrey, Mexico in late October. The team leaders of the 14 countries participating in the GBC process, collectively called the International Framework Committee or IFC, also held a technical meeting during the same period. The meetings were ably organized by the Mexican team. The three days of meetings ended with a half-day public seminar at the campus of Monterrey Technical University.

GBC modifies its methodology

The IFC technical meeting in Monterrey resulted in a relatively major change in design for the GBC framework.

GBC is an international R&D process operated by iiSBE, the International Initiative for a Sustainable Built Environment, in which twelve countries are currently active. The process, which has been active since 1996, focuses on the development of new methods to assess the environmental performance of buildings, and each national team then tests the system on case study buildings in its own country. Results are displayed and discussed at a series of international conferences – starting with GBC'98 in Vancouver, then SB2000 in Maastricht, and then SB02 in Oslo. The next major international event will be SB'05 in Tokyo.

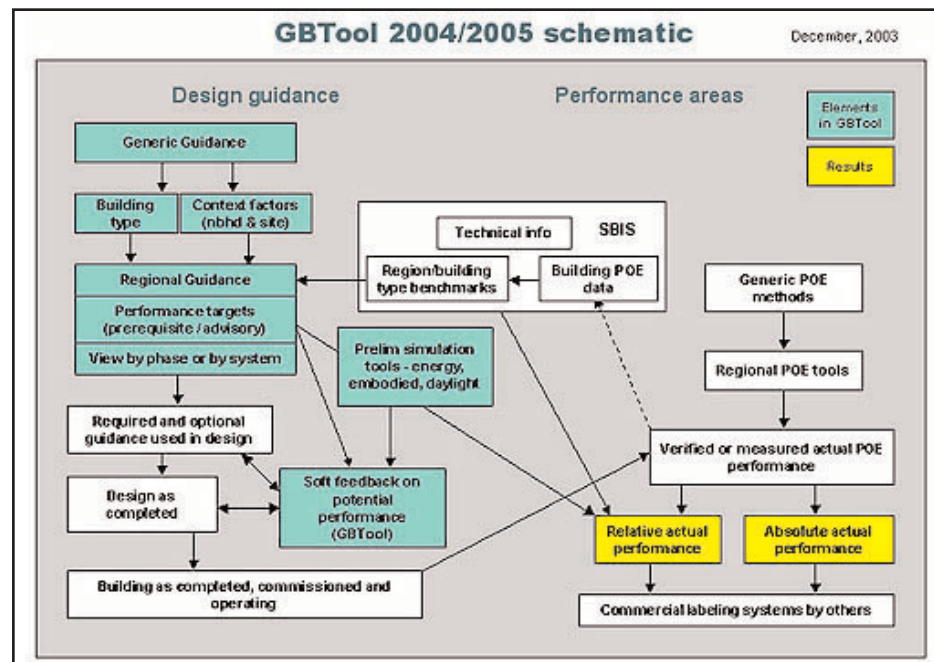
The methodology so far has concentrated on assessing, at the design stage, the potential performance of the building in its (future) operating mode. This approach is also followed by most systems that have been commercially implemented, including BREEAM in the UK and LEED in the USA. To this point, the GBC method has followed similar lines, with the major difference that the GBC system is designed to be calibrated by local teams, to insert local benchmarks and weightings that will make the system meaningful for local use.

Free sample

The GBC countries decided some time ago that it would be necessary to add a module that would measure actual performance during the operation of buildings. However, at the recent meeting, a somewhat more decisive step was decided on: to separate the system into two distinct but compatible elements, a design guideline for the design process, including soft feedback on potential performance, and a separate module for actually verifying the measures implemented and measuring the actual performance after the building has been

operational for a minimum of two years.

In a way, this move is consistent with the plan developed in 2002, but the emphasis being placed on actual performance also reflects a degree of frustration by the participation with the softness of the assessment results that result when trying to predict performance during the design stage. It has been found that the inevitable changes in design and specifications that occur during the preparation of con-



struction documents, and even during construction itself, make the initial assessments relatively poor at predicting the actual performance.

The system will retain the essential characteristic of GBC, of providing a general generic framework that will then be adjusted to make it relevant to local conditions, and of providing scores relative to local benchmarks in addition to absolute performance results. The design guideline component will build



Above: The IFC delegates
Below: Thinking hard about indicators



on previous work undertaken by the international IEA Task 23 process, the Canadian C-2000 demonstration program, a Chilean system still under development, and the U.S. LEED guidelines.

iiSBE staff hope to develop a Beta version of the system by March, 2004.

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IHEI launches environmental project

One of our Board members, Neil Munro of Canada, recently attended a meeting in Brussels, organized by the *International Hotels Environmental Initiative* (IHEI) and the *Conservation International Centre for Environmental Leadership in Business* (ICELB)

The meeting was held as a initial / start-up phase in a multi-stakeholder consultative process to establish voluntary industry-based sustainable design guidelines for hotel development.

The attendees formed a diverse group of individuals from the hospitality and hotelier industry, architects and environmental consultants, international agencies as well as the host organization. Objectives were:

- ❑ Scope the issues to be covered by the guidelines, taking into account those currently contained in siting and design manuals or guidelines used by hotel companies.
- ❑ Identify the most useful and appropriate format in which guidelines can be made available to facilitate the broadest possible uptake by the industry.

- ❑ Identify those environmental issues which require priority consideration when siting and designing new hotels.
- ❑ Identify representatives for the technical consultative groups to take specific aspects of the siting and design programme forward.
- ❑ Identify sources of funding from relevant European Commission programs.

Outcomes from the meeting include an agreement to develop a core set of guidelines for new build hotel properties.

The group will consider options for further development of the core guidelines, possibly in a modular form to address special circumstances, ie. refurbishment and adaptation of special buildings, climate bands, coastal and alpine zones, and different hotel types.

There appears to be a high level of commitment from hotels to pursue the development of these guidelines. Marriott Hotels, Hilton Hotels and Intercontinental were active during the discussions and took a relatively pro-active stance with respect to entertaining sustainable design principles. This looks like a worthwhile process.

The project timetable is for the development of the draft guidelines over the next six months, into early Summer 2004. The testing of case studies utilizing guidelines and tracking two to three possible projects to be monitored with guidelines reviewed and refined, for final publication and distribution in Spring 2005.

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The SB'04 Conferences

iSBE and CIB have announced the launch of six regional conferences on sustainable building and construction in 2004. There will be a maximum of six individual events.

Background

In 1994, the first international green building conference was organized by CIB (The International Council for Research and Innovation in Building and Construction) in the UK. This was followed by an even larger event in Paris in 1997.

A somewhat different formulation was later developed for conferences related to the international Green Building Challenge process. The first event in this series was the GBC'98 conference in Vancouver.

Following this, CIB and iSBE (the International Initiative for a Sustainable Built Environment) decided to collaborate on an on-going series of SB conferences, beginning with the SB2000 event in Maastricht and SB02 in Oslo. This on-going series of international conferences is now seen as the premier international event in the field of sustainable building, as evidenced by an attendance of 600 (with 150 turned away) at GBC '98 in Vancouver, some 800 at SB2000 in Maastricht, and over 1000 at SB02 in Oslo. CIB and iSBE decided to hold the next event in 2005, and Tokyo has been selected as the venue. UNEP has now joined iSBE and CIB in planning the series of SB events.

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A need for more emphasis on developing regions

Keynote speakers at the Maastricht and Oslo conferences emphasized the need to place an increasing focus on regional development and on the needs of tropical and developing countries. The organizers of the Tokyo event indicated in their proposal that a special effort would be made to support the attendance of students and professionals from developing countries. The change from a two-year sequence to a three-year interval between events created the possibility to organize input on regional needs and development, and to organize input from regions onto the global level.

Given this, it was decided to launch a series of regional conferences in developing countries about one year before the Tokyo SB05 event. Having a series of regional events one year ahead would give time to develop detailed action plans to advance sustainable building agendas in these regions, with SB05 being used as a venue to



SB'04

Region	Location	Date (04)	Website
Latin America	Sao Paulo, Brazil	18-21 July	http://www.clacs04.org
Africa	Stellenbosch, S.A.	13-18 Sep.	http://www.sustainablesettlement.co.za
China	Shanghai, China	27-29 Sep.	coming soon
Central/East Europe	Warsaw, Poland	27-29 Oct.	http://www.itb.pl/sb04Warsaw
Middle East	Eilat, Israel	November	coming soon
Southeast Asia	KL, Malaysia	6-8 December	coming soon

announce responses by international financial institutions, and to promote cross-fertilization of ideas.

To improve the level of basic knowledge of participants in the regions, it was decided that each regional event should be preceded by a training course, carried out in a partnership between the *Sustainable Building Centre* in Netherlands and local partners (e.g. universities and/or research institutes)

It must be noted that the emphasis on developing countries and warm climates for most of these conferences is not intended to displace the issues relevant to northern or developed countries, but rather to ensure that::

- ❑ awareness of sustainable building issues is increased within regions;
- ❑ local and regional knowledge on region-specific topics is exchanged;
- ❑ the concerns of developing and tropical countries are given greater prominence at the global sustainable building conferences;
- ❑ conclusions of the global conference in 2005 will reflect a more inclusive vision.

The overall planning and organization for the 2004 SB Regional Conferences is being supported by CIB, iiSBE and UNEP, but the regional organizers play the primary roles and responsibilities in managing each event. Each conference will therefore be unique, but organizers are following the same generic structure in all cases. The results should therefore provide valuable opportunities for comparative analysis.

In addition to two or three days of presentations and workshops, each of the regional conferences will also include:

- ❑ a preliminary study or the state-of-the-art of Sustainable Building in the region, including best practices, techniques and tools, policies, codes and standards and related issues.
- ❑ an awards ceremony, honouring best practice in sustainable building in the regions.
- ❑ a post-conference publication that will act as a strategic implementation document for each region and serve as input to SB'05. Proposed strategies and projects will be presented, and will be tabled with International Financial Institutions who will be invited to respond by SB'05.

The latest news is that the planning for all of the conferences is on track. The result will be a unique global effort to explore sustainable building in a way that follows a consistent schema, while simultaneously reflecting regionally unique issues.

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SBIS is launched

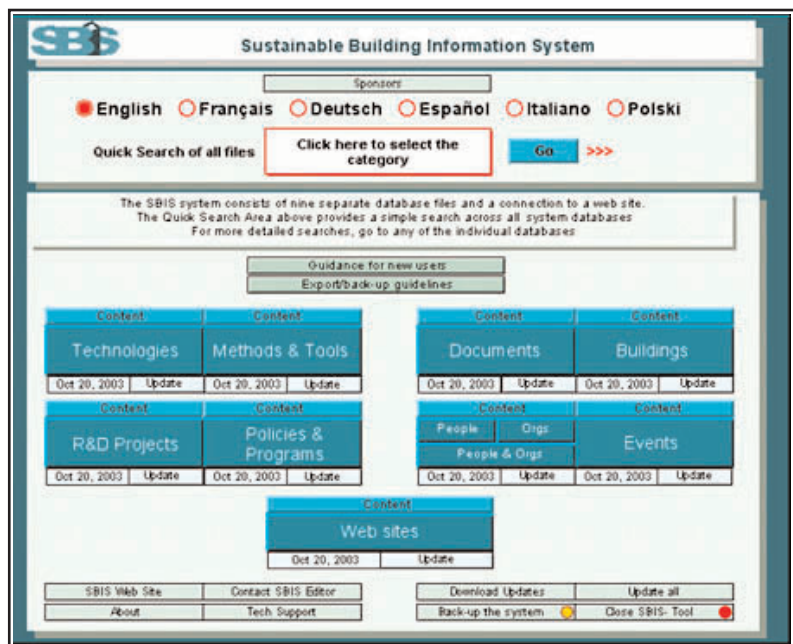
One of the main areas for iiSBE staff and consultants during the last year has been the *Sustainable Building Information System* (SBIS). The goal of the system is to allow users all over the world to gain access to a rich body of information related to sustainable building in several languages. Nine linked files provide relational access to a large body of information. The system now contains over

1,100 documents and 220 building files, making it the most comprehensive source of SB information in the world.

SBIS has several unique characteristics, which differ somewhat from the CD version and the web version. Features available on the CD will migrate to the web version as time and funds permit.

The system is designed to allow users to download a wide range of PDF documents that are relevant to sustainable building.

- ❑ The name, Sustainable Building Information System (SBIS), explicitly lacks any reference to the role of iiSBE. This means that if an organization decides to become a co-sponsor of the system, its constituents can link to SBIS from the organization's own website, and then make full use of it. This, combined with the fact that co-sponsors will be invited to join an advisory panel, means that participating organizations will have a public stake in SBIS, even if the official owner is iiSBE.
- ❑ Quality assurance is a central element of the system. Most documents are gathered from conferences, where a scientific committee has screened submissions for quality. In other cases, submitted documents will be sent out for a peer review, except for large organizations with internal QA mechanisms.
- ❑ The system interface on the CD version is currently developed in English and French, and other languages will be added as time permits. Users are also encouraged to submit documents in their own language.



Above: Home page of the SBIS CD version

The web version was launched in October at <http://www.sbis.info> and, so far, bugs have been minor.

System development was primarily carried out by Woytek Kujawski of Inpol Consulting and Adrian Rossi., while content is being added by iiSBE staff (Nils Larsson, Caroline Cheng, and Kalum Galle-Kankanange). The work to date has been made possible by contributions by several agencies. Specific organizations include:

- ❑ NREL the U.S. National Renewable Energy

Laboratory, and DOE, the U.S. Department of Energy;

- ❑ The Ministry of Land, Infrastructure and Transport of Japan

- ❑ The International Environmental Technology Centre of UNEP

- ❑ The Sustainable Energy Authority of Victoria (Australia).

- ❑ CETC, Natural Resources Canada, OEE, Natural Resources Canada and National Defence, Canada

- ❑ The Canadian Green Building Council.

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Chile: Success has its price

The rapid growth of interest in the area of green buildings has caused some organizational problems. The Chile team was successful in putting SB on the map and made many presentations within Chile, and the team is therefore being flooded by requests for help & cooperation. The environmental division of the *Camara de la Construccion* (Chamber of Construction) was the host for the team, but the team will now set up their own separate organization.

The team has developed design support software, which is almost ready for launch. More generally,

an agreement between the Camara and the Chilean Ministry of Public Works is close to completion, which will result in the greening of public buildings and for a major for a major exhibition in 2010.

Finally, CONAMA, the Chilean Environmental agency, has plans to apply the Kyoto Clean Development Mechanism (CDM) to two pilot building projects in Chile, and iiSBE will be a partner in developing this project.

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Mexico: in the start-up phase

The Mexico team is new to GBC and has found start-up assistance from the Spanish team very helpful. They are working with associations of engineers and architects. Problems of distance between Monterrey and Mexico City mean that there are two groups working in parallel – one in Mexico City and the Monterrey. Offices are at National Architects' Association, and at Monterrey Technology University in Monterrey. The goal is to adapt GBTool or at least to use it as a learning tool. The Green Building Council of Mexico, another embryonic organization, will participate in the work of the GBC team.

The Mexican team also arranged the recent IFC technical meeting in Monterrey, and all participants expressed appreciation for a high level of organization (Ed).

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Country Reports

Brazil develops a rating tool

The Brazilian GBC team is midway to develop an assessment system, derived partly from the PhD thesis of Vanessa Gomes da Silva, the team leader. The work to date has included workshops where indicators were discussed. They hope to launch a system by 2004 – perhaps by SB04 conference. They also hope to do pilot study to calibrate the tool, and to use both GBTool and their own system for buildings. The team will operate the system through a NGO with both Government, academics and professionals involved.

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Canada: CaGBC is launched

The Canada Green Building Council (CaGBC), formed less than a year ago, has already enlisted over 200 member companies and organizations. Growth has literally been exponential since the summer, due in part to as a result of interest and awareness generated from CaGBC's first six LEED Rating System training workshops held recently across Canada.

CaGBC is the first exclusive license holder of the LEED system outside of the US and is working on an adaptation of LEED for Canada. This is expected to be finalized and approved by the USGBC and by CaGBC members early in 2004. CaGBC is working on a registration and certification process for LEED Canada and is expanding its LEED training faculty as well. The CaGBC website is <<http://www.cagbc.org>>.

Other systems, including Green Globes and BREEAM GreenLeaf, are also present in the Canadian scene. With regard to the Canadian Green Building Challenge team, there will probably be no GBTool assessments prepared for SB'05, but there could be some dual assessments (Canadian LEED and GBTool) if financing can be found.

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Israel

The Ministry of Environment has provided funds for the preparation of a permanent exhibit in the Tel Aviv Building Centre, which includes green buildings. The team has given courses for students and professionals and inserted SB issues in regular courses. There is a Green Horizon website with many examples, with 700 registered users. Team members have also published a green schools guideline with Ministry of Education. The GBC team made agreement between contractors and government to build green, with details remaining to be worked out. There is also a green community project run by Ron Leshem, the co-leader of the team. The team is developing a green building standard using local assessment procedures.

Finally, the Israeli team is also looking at the feasibility of organizing a small sustainable building conference in Eilat. The location, at the junction of Israel, Jordan and Egypt, is indicative of the intent to make this a genuinely Mideast event, with a broad range of participants from several Mideast countries. Clearly, there are some delicate political

issues involved, but the team, and iiSBE, have decided that we can't wait forever for a totally peaceful context for the event, and perhaps a small conference on sustainable building can actually do something positive in that regard.

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Spain has a major process underway

The Spanish team is fully engaged in creating an industry-wide coalition to implement performance labeling in Spain. The team includes participation by the national government, architectural and engineering associations, and private industry.

Activity for the next period, leading up to SB'05, is at a high level. After the call for the selection of the Spanish buildings to be evaluated and presented at the conference Sustainable Building 2005 in Tokyo, a dissemination process was carried out by the CSCAE (Spanish High Council of Architects Associations) together with the regional associations. A total of 14 buildings have already been submitted for assessments, and for the final selection, the tool developed in IEA Task 23, "Multi-Criteria Decision Making - MCDM23", will be used in order to compare and pre-evaluate the main performance environmental aspects of the proposed buildings

During the 2nd term the main tasks carried out within this field have included:

- Review and analysis of the main Environmental Building Assessment Tools: EPBG–Australia, OKOPROFILE–Norway,

LEED-USA, GREEN LEAF-Canada, ESCALE-France, GBTool-iiSBE.

- ❑ Comparative Analysis between the indicators used for the main Environmental Building Assessment Tools.
- ❑ Proposals of indicators and structure for the Spanish Environmental Building Assessment Tool.

As it was proposed, the Convenio Específico de Colaboración para el Desarrollo de la Fase 1 (2003) del Programa sobre la Edificación Sostenible 2003-2005, sets out that all the work to be carried out will be done within four levels of activity corresponding to the different tasks to be developed by the Spanish GBC Team, as a "four level pyramid" composed of

- ❑ Base of the Pyramid - First level: Building Products Database (LCI - Life Cycle Inventory).
- ❑ Second level: Environmental Building Products Declaration (EPD)
- ❑ Third level: Building Products Life Cycle Analysis (LCA).
- ❑ Fourth or top Level of the Pyramid: Environmental Impact Assessment of Buildings (EIA) at building level and development of a software tool.

All of this will be done, as far as possible, to harmonize with the IFC-GBC and ISO recommendations. An initial proposal about indicators and structure has already been made. The system being

developed tries to keep the input data as simple as possible in order to make possible for architects because they are data needed for the definition of every project. For every indicator a calculation method has been associated, in order to allow further adjustments when they were needed or more refined methods. The next step will be to develop the weighting procedure and values, as well as the output data to characterise the building from an environmental perspective.

Finally, due to the relevance and relationship to our own work for the Spanish tool, we have also followed with special interest the IFC-GBC work (coordinated by Joel-Ann Todd of iiSBE) about indicators and we have carried out a comparative analysis between them. In this sense, we are fully agree with the new orientation of the September 8, "Discussion paper" in order to reduce the set of indicators to those strictly measurable.

Environmental Analysis of Building Materials and Components.

For this task we have continued the work of data and information gathering about the most relevant building materials and construction components in Spain.

1. Elaboration of a LCA final sheet of Building Materials and Components. and adaptation to the Spanish Building Environmental Assessment Tool.
2. Contact and Information to the Companies and Associations about the work of the GBC team and about the EU Directive about Integrated Products (IPPC) and the docu-

ment ISO/TC 59/SC 3 N 468 about "Sustainability in Building Construction – Environmental Declaration of Building Products".

3. Selection of the most relevant materials based on statistics. The 200 materials initially identified, are re-classified within 25 groups.
4. Finally, database elaboration with the selected 25 materials, using as default, the SIGMA PRO values, with the objective of progressively replace them by the information provided by the Spanish manufacturers and associations.

In this aspect, so far, a preliminary report to form part of the Sustainable Building White Paper in Spain has the following objectives:

1. To know the current status and the different sustainable building policies and initiatives at European and International level.
2. To identify the most relevant documents and instruments to be applicable to the Spanish conditions.
3. As reference for the elaboration of the Sustainable Building White Paper in Spain.

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Feel free to pass on this free sample issue to colleagues who may appreciate it !



Action for Sustainability
 The 2005 World Sustainable Building
 Conference in Tokyo
SB05Tokyo

27-29 September, 2005

**The 2005 World Sustainable Building
 Conference in Tokyo**

iiSBE and CIB are pleased to announce
 the SB'05 conference, to be held in Tokyo.

The conference is being organized by public
 and private-sector organizations in
 Japan, with the support of iiSBE and CIB.

For details, see:
<http://www.sb05.com>

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