

Advanced Building News



International Initiative for a Sustainable Built Environment

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claCS'04

The Latin American SB04 (claCS'04) was held in São Paulo from July 18th to 21st. The first of the SB04 conferences was a huge success. claCS'04 was held in conjunction with the 10th Brazilian Meeting of *Technology of the Built Environment* (ENTAC'04). We had more than 1200 submitted abstracts and around 800 complete papers, from which 272 were selected for oral presentation and other 175, to be presented as posters. More than 750 delegates attended, overcoming our expectations. All sessions were very well attended, and the level of interest was very high.

Plenary sessions were arranged in the morning, covering subjects identified as of major importance in the region. We counted on the splendid contributions of José Goldemberg (Challenges of Sustainable Development); Rodney Milford and Oded Grajew (Sustainable construction, Social responsibility and Sustainable Development); Orestes Gonçalves, Maria S. Weber and Wilson Passetto (Water use and conservation); Ronald Rovers, Rafael Salgado, Norman Goijberg, Rui Leite and Aser Cortines (Public Policies for SB); Marina Godoy, Roberto Lamberts and Ilso Sauer (Energy efficiency in buildings); Ray Cole (Shifting from green to SB), Nils Larsson, Shuzo Murakami, Nigel Howard and Vanessa Gomes (Assessment systems worldwide and a proposal for assessments in Brazil); Armando Deffis Caso and Luis Alvarez-Ude (SB Case Studies); Wayne Trusty and

Vanderley John (Life-cycle Analysis and Selection of building materials). Outstanding divulgation and organizational support was provided by iiSBE contacts in the region, namely Cesar Trevino, Norman Goijberg and Silvia de Schiller.

As a closure for the last plenary session, Shuzo Murakami and Kazuo Iwamura gave a detailed overview of SB05 and SB04 links to it. The Latin American SB04 was closely coordinated with SB05Tokyo Conference and Academic Programme, and all participants were strongly encouraged to submit abstracts to SB05Tokyo, to strengthen the Latin-American representation in the global event.

The need for initiatives on education for SB was consistently pointed out in many sessions of the conference and, in the closing session, a new iiSBE project on Education for Sustainable Building was announced. Ray Cole (University of British Columbia) agreed to lead the formation of an iiSBE working group that will cover curriculum changes at the international level. This will probably have major long-term importance, but the project had imme-



diately gotten reactions and manifestations of interest from some Latin American countries.

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Note that the clacS'04 conference was the first of a series of five regional sSB conferences taking place this year. The remaining events will be held in Stellenbosch South Africa, Shanghai, China, Warsaw, Poland and Kuala Lumpur, Malaysia. For details, see <www.sb04.org>: Ed.



The Perspectief project

Are sustainable life styles possible?

The Perspectief project was a very interesting Dutch action research project about sustainable lifestyles. The study was carried out by a Dutch consulting firm, *Centrum Energy Advies (CEA)*, for VROM, the Netherlands Ministry of Housing, Spatial Planning and Environment. The study provides indications on what might be sustainable lifestyles in the future.

12 households were asked to participate in the experiment, which provided them with an increase of 20% in their incomes, but required them to carry out certain changes in their lifestyle. The purpose was to see whether the planned changes in lifestyle would result in reduced energy consumption, without sacrificing convenience or comfort. The project ran between 1996 and 1998, and two years later monitoring was carried out to see if the project had resulted in permanent changes in their lifestyle and behaviour.

The research question was broadly posed as whether the pattern of household consumption could be changed, and the consequent energy consumption could be reduced, based on the increased income that is assumed to emerge over the next decade. Given some advice, and even personal coaching, what would an efficient lifestyle acceptable to the households look like, and what would be the energy implications?

The participants tried for two years to reduce their direct and indirect energy use by changing their pattern of spending on products and services, assisted by personal lifestyle coaches. Indirect energy use is defined as energy used for products and services (production, storage, transport of these). This is additional to direct use of energy for gas and electricity. The goal of the project was set at a reduction 40 percent of the direct and indirect baseline energy use of that for average Dutch Households. The specific issues addressed included food, clothing, transport, recreation and personal services. The 12 households kept track of their behaviour and spending by computer, and the research team later translated this into energy expenditure equivalents.

The results were interesting. All households succeeded in reducing the energy related to their pattern of consumption. On average they saved 31%, compared with their own energy use prior to the project.

The participating families reported that there were attractive elements of the changed lifestyle, which involved the purchase of more efficient durable goods that were also more expensive and higher quality. They also reported an increase in the purchase of services, such as help for housekeeping, going out more often to restaurants rather than cooking at home and, in general, using taxis and

Table 1: Difficulty or Ease of Adopting New Lifestyles

<i>Perceived to be difficult</i>	<i>Perceived to be easy</i>
Difficulty to change behaviour at the beginning of the project	More choices in lifestyle options were allowed than participants expected
Not using or buying certain things, and looking for alternatives	Getting acquainted with the new lifestyle
Constantly having to think about choices	The ability to be creative
The need to do continuous computer reporting	A growing consciousness about the act of purchasing
Saving on personal mobility and holidays	Spending the extra income in an energy-efficient way
	An appreciation of the higher quality of the more efficient products

they still lived up to their energy-saving lifestyle in many ways. This is, as the Table shows, only partially true.

feeling comfortable with the changes in lifestyle they have adopted on a permanent basis, and give several reasons: consuming organic food is not only energy saving, but is more healthy as well. The same counts for taking a bicycle instead of a car. And they state that it gives a “good feeling” to

Table 2: Extent to which lifestyle changes were maintained

Category	Type of changes adopted during the project	Changes maintained 1.5 years after the end of the projects		
		Fully maintained	Partly maintained	Not maintained
Vegetables	11	5	5	1
Meat	9	4	4	1
Dairy products	7	0	5	2
Drinks	3	1	0	2
Dining out / take-away food, ready meals	9	2	4	3
House decoration	11	0	7	4
Purchase of (efficient) household goods	11	3	7	1
Hiring services	8	2	4	2
Personal care	10	2	7	1
Transportation	11	3	4	4
Recreation activities	11	5	4	2
Holidays	8	0	3	5

rental cars instead of driving, and making more use of personal support services. Most of the household members thought that the modified lifestyle was more comfortable than their previous pattern of living.

The main conclusion of the experiment was that increases in income could be combined with lower energy use, increased comfort and convenience.

The project evaluation

About one and a half years after ending the experiment, the households were asked to give information on what behavioural changes they had retained since the end of the project, and their views on its success. Most participants stated that

On the positive side, most of the households have maintained some form of energy-saving lifestyle when it comes to food consumption and recreation, and also for personal care and investments for running the household. They have maintained an awareness of energy efficiency and consumption.

Most of the project households are still

act in an energy and environmental conscious way when buying or doing things.” And some of these lifestyle changes save money as well.

However, changes in lifestyles related to holidays and transportation have proven harder to maintain. These aspects of the project required the participants to move against general trends, such as the use of a personal automobile and flying South for holidays. With the ending of the project, it was difficult for the participants to ‘sell’ the continuation of this kind of behaviour to their friends and family.

A problem related to the ending of the project is that the families lost access to their lifestyle coaches and this led to a certain loss of focus. Of course, the extra money disappeared as well, and this has made continuing investments in high-priced and high-quality goods or services difficult.

Other negative factors cited are the scarcity of organic food shops, and the greater expense of high-quality (and high efficiency) goods. The last negative parameter coming out of the experiment is the high price and bad quality of public transport, which makes it an unattractive alternative for private cars.

Conclusions

This is an intriguing project, and deserves to be repeated on a wider scale. We plan to obtain further details on the team that carried out the research on behalf of VROM, and to see if they have continued their work.

Ronald Rovers

Action on SB policies in the EU

As a result of the 6th environmental action programme of the EU, accepted in 2002, and the agenda for SBC developed by DG Enterprise, several EU directorates have started preparing strategies and directives related to Sustainable Building.

Resources Strategy

DG Environment is leading the way with strategies for Resources, Waste and Recycling, Urban strategies, and Product Policies. The strategies for these themes, including specific means and measures (directives), will be developed within the next year. Consultation processes are ongoing, and measures discussed so far include: Tradable certificates, Pay-As-You-Throw schemes, Incentive systems, Prescriptive instruments (bans), and “a level playing field for recycling accompanying measures”.

The Resources strategy will have a big impact on sustainable building and construction, since it material resources consume roughly 40-50 % of all resources. However, DG Environment concludes that: “with the exception of certain renewable resources, predictions about global scarcity have turned out to be unfounded”. The focus will be on improved performance of traditional materials and on land management, since this is recognised as a scarce resource. Core elements of a future thematic strategy will be “Knowledge gathering, Policy assessment, and Policy integration”.

Also included is the development of schemes for the environmental labelling of construction materials (Environmental Product Directives (EPDs), and/or EU eco-labels). A harmonised EPD (Environmental Performance Directive) and/or EU eco-label is also proposed for buildings and building services.

Ongoing within DG Environment are initiatives based on The Green paper on Integrated Product Policy which will lead to several new initiatives that have a major influence on building. One very interesting follow-up will be on Green Public Procurement. Other areas are currently being studied include environmental product declaration schemes. The general philosophy is not just to use less resources, but also to use them better.

Urban Strategy

The aim of the Urban strategy is to improve the environmental performance and quality of urban areas and to secure a healthy living environment for Europe’s urban citizens. It is also intended to reinforce the environmental contribution to sustainable urban development while taking into account the related economic and social issues. Four themes are central:

- urban environmental management,
- urban transport,
- sustainable construction and
- urban design.

Environmental Management for Cities

A strong focus is on an obligation for EU countries to adopt an appropriate environmental management system (EMS) for cities of more than 100.000 inhabitants. Issues to be treated include: energy consumption, greenhouse gas emissions, water use and treatment, waste, noise, air quality, nature and biodiversity, transport and mobility, design, natural and man-made risks, sustainable construction, related health issues and the quality of life as a whole. The development of an EMS to handle such a wide range of complex issues will present a challenge, especially for some new EU countries that may have less background in these areas. The importance of the existing building stock is recognised: "Retrofitting Europe's older building stock with insulation could reduce CO2 emissions from buildings and related energy costs by as much as 42% "

Energy

DG Transport and Energy (DG TREN) has set the tone with the recently introduced Energy Performance Directive for Buildings, which will require member countries to have Energy regulations in place by the beginning of 2006. Besides this and the on-going programme for Renewable Energy, (which includes support for a hundred communities to be using 100 % renewable energy), DG TREN is setting new ambitious targets for 2020. A target value of at least 20% of gross domestic renewable energy consumption by 2020 for the EU is seen to be achievable, as well as directives for 1% extra gross energy savings per year.

Ronald Rovers, July 2004

Holcim Foundation Establishes Award

The Holcim Foundation, established by the Large Swiss cement producer Holcim, has established a two-million USD awards program in sustainable construction.

Five of the world's leading technical universities will support the Holcim Foundation in assessing entries. The Holcim Awards competition will be organized over cycles that include five regional Holcim Awards and the global Holcim Award.

The Holcim Foundation's partner university in each region - Europe, North America, Latin America, Africa Middle East, and Asia Pacific - have been involved in defining the criteria that will be used for evaluating the entries received for the competition.

At each of the five partner universities, a leading academic will assist in preparing a jury panel for evaluating entries. Profiles of each partner university and representative academics are now available on the Holcim Foundation website:

The Universities and associated academics are:

Swiss Federal Institute of Technology (ETH), - *Prof. Dr. Hans-Rudolf Schalcher* - Head of the Department of Civil, Environmental and Geomatic Engineering,
<http://www.holcimfoundation.org/univ/eth_schalcher.html>

Massachusetts Institute of Technology (MIT), - *Prof. Dr. Leon Glicksman* - Professor of Building Technology & Mechanical Engineering
<http://www.holcimfoundation.org/univ/mit_glicksman.html>

University of São Paulo (USP), Brazil - *Prof. Dr. Vanderley John* - Associate Professor in

the Department of Construction Engineering, Polytechnic School
<http://www.holcimfoundation.org/univ/usp_john.html>

The University of the Witwatersrand (Wits), South Africa - *Dr. Daniel Irurah* - Senior Lecturer in the School of Architecture and Planning
<http://www.holcimfoundation.org/univ/wits_irurah.html>

Tongji University (TDX), China - *Prof. Dr. Zhiqiang Wu* - Dean of the College of Architecture and Planning
<http://www.holcimfoundation.org/univ/tongji_wu.html>

The entry procedure for the Holcim Awards will be totally Internet-based - enabling innovative ideas from all regions and irrespective of scale to participate in the competition. Detailed entry information will soon be available on the Internet.

For more information, visit the Holcim Foundation for Sustainable Construction website:

<<http://www.holcimfoundation.org/>> www.holcimfoundation.org

A preliminary announcement was made at the recent clACS04 conference in Sao Paolo, and it created quite a buzz amongst delegates. Ed.

Until September 15, a summer special on iISBE Associate memberships !

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Canadian GBC/SB05 Team Gears Up

The Canadian team that will represent Canada at the SB05 conference in Tokyo next September, recently held a second meeting.

Gord Shymko, who heads to project solicitation committee, has identified some 25 projects to be considered for performance assessment and display at SB05. Current discussions are focusing on whether community-scale projects can be considered, and how to give renovation projects an equal opportunity (the absence of data on operating and embodied energy would make it more expensive to assess such projects).

Fund raising will become another major area of activity as soon as Summer ends. Team leader Bob Bach believes that the work of the team will be attractive for potential sponsors, since the SB05 displays will provide coverage and promotion for the whole Canadian industry in addition to the narrower focus of performance assessment methods.

Doug Pollard will chair a small group to consider how community/building interface issues can be considered. When the actual performance assessment process begins, coordination will be provided by Woytek Kujawski, who has taken part in all previous assessments.

For information, contact Bob Bach at <bbach@energyprofiles.com>



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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>>