

FIRST UNEP SBCI-BCA REGIONAL WORKSHOP ON SUSTAINABLE BUILDING POLICIES IN SOUTHEAST ASIA

14th SEPTEMBER 2010
SINGAPORE

Synopsis: The workshop is the first regional meeting co-hosted by UNEP-SBCI and BCA towards the development of the Regional Status Report on Sustainable Building Policies in Southeast Asia. The aim of the workshop is to review and collate the sustainable building policies and initiatives in the Southeast Asia Region.

Hosts: Building and Construction Authority (BCA) Singapore and United Nations Environment Programme – Sustainable Buildings and Climate Initiative (UNEP-SBCI)

Co-sponsors: Singapore Green Building Council (SGBC) and United Nations Environment Programme (UNEP) Regional Office for Asia and the Pacific Region (UNEP ROAP)

This meeting report is prepared by: Ms Oesha Thakoerdin, Ms Connie Look, Ms Jocelyn Chua, Mr Low Giau Leong, Ms Li Sirh Tan and Mr Stephen Mok

SUMMARY

The First UNEP SBCI-BCA Regional Workshop on Sustainable Building Policies in Southeast Asia took place, concurrently with the World Green Building Council International Congress 2010 and the Inaugural Singapore Green Building Council Green Building Conference, on 14 September 2010, at the BCA Academy in Singapore. At the workshop, the preliminary drafts of the Quick View on Sustainable Building Policies of eight participating Southeast Asian countries were tabled.

The programme of the workshop included opening and closing speeches by BCA and UNEP SBCI, a first session with eight country presentations and a second session with four round table dialogues comprising of two countries per table. The eight country presentations included: **Brunei Darussalam, Indonesia, Malaysia, Myanmar, The Philippines, Singapore, Thailand and Vietnam**. The country presentations highlighted the various sustainable building policies in the four categories of policy instruments, as well as the sustainable development frameworks, rating systems and best practices. In general, the emphasis on the state of play in the region is on energy efficient building policies.

Most country presentations shared a comprehensive overview of the four categories of policy instruments: (1) Voluntary Instruments, (2) Fiscal Instruments, (3) Regulatory Instruments and (4) Market-based Instruments; which UNEP-SBCI referred to as, sticks (regulations), carrots (incentives) and tambourines (educational and awareness activities). Examples of green building rating systems available in the region are: Greenship [Indonesia], Green Building Index [Malaysia], Green Mark [Singapore], BERDE Rating System and the Green Building Index (GBI) [Philippines] and LOTUS VN Green Rating Tool [Vietnam].

OPENING

Mr Choo Whatt Bin, Executive Director, Services, Building and Construction Authority (BCA)

Mr Niclas Sverningsen, Head of the Sustainable United Nations (SUN), United Nations Environment Programme (UNEP) / UNEP-SBCI Secretariat (UNEP SBCI)

INTRODUCTION

Dr Peter Graham, Technical Advisor (UNEP-SBCI)

SESSION 1 COUNTRY PRESENTATIONS

Main Facilitator: Dr Peter Graham, Technical Advisor (UNEP SBCI)

Format: Plenary Discussion - introduced and led by the Main Facilitator

BRUNEI DARUSSALAM

The country presentation of Brunei Darussalam started with the introduction of the recently formed Authority for Building Control and Construction Industry (ABCI). The Authority for Building Control and Construction Industry is responsible for:

- The Building Control including issuing of Occupation Permit (OP);
- The Construction Development including standards, safety and quality relating to the construction industry.

Brunei Darussalam currently adopts the ISO 15392:2008 [Sustainability in building construction - General Principles] as a National Standard PBD. It will adopt the ISO 50001 [Energy Management Standard] once the standard is published by ISO. Moving forward, the National Standard PBD12: 2008 [Building Guidelines and Requirements] is being reviewed for incorporation into the country's sustainable building policies.

INDONESIA

The country presentation of Indonesia started with Indonesia's pledge for Emissions Reduction of 26% by 2020 and the energy conservation policy that gives an overall view on climate change issues especially focusing on the energy sector.

Further on, Indonesia presented a two-tier approach of buildings: the approach of traditional and modern buildings. Kampung Naga in West Java was cited to exemplify traditional green buildings. These traditional green buildings are designed to fully develop according to local climate, using passive design and local potential, to create indoor comfort quality (without using mechanical tools) in buildings. The main characteristics of these tropical buildings are:

- North-South building orientation;
- Cross ventilation;
- Shading from sunlight and rain;
- Use of vegetation to improve air quality, sun shade and noise buffer;
- Process of air humidity for Dry Tropic;
- Absorb and heat isolation for Dry Tropic.

Indonesia highlighted the important role of the Green Building Council Indonesia (GBCI). The Green Building Council Indonesia is currently developing its first rating tools for Indonesia, Greenship.

MALAYSIA

Malaysia presented its sustainable framework that is being implemented through:

- The National Energy Policy 1979 with the utilization objective: to promote efficient use of energy and discourage wasteful and non-productive patterns of energy consumption.
- The 10th Malaysia Plan including a five-year plan development plan and a development budget allocation for Energy Efficiency.
- The National Energy Efficiency Master Plan: a long term plan for Malaysia energy efficiency roadmap, focused on three electrical energy intensive sectors (industrial, commercial & residential) which is in the final stage of preparation.

The country presentation of Malaysia further included Malaysia's sustainable building policies in the four categories of policy instruments. The presentation highlighted the Green Building Index (GBI), with its criteria, the rating system, as well as the best practices in Malaysia in the category of government buildings and private buildings. Examples of government buildings are:

- Low Energy Office (LEO) - Ministry of Energy, Green Technology and Water;
- Green Energy Office - Malaysia Green Technology Corporation;
- Diamond Building - Energy Commission.

MYANMAR

Myanmar's presentation starts with the indication that the Ministry of Energy is the focal point of Myanmar Energy Sector. The four goals of the energy policy in Myanmar are:

- To maintain the status of energy independence;
- To promote wider use of new and renewable sources of energy;
- To promote energy efficiency and conservation;
- To promote use of alternative fuels in household.

The majority of the people in Myanmar live in green building in rural areas. Myanmar has a few (less than ten) Qualified Persons (QPs) to conduct energy audits. Myanmar has planning and building regulations but none including sustainable or energy efficiency aspects as yet. The Association of Myanmar Architects (AMA) is now in preparation of building codes which include some requirements for green building considerations as reference for the Registered Architects (not mandatory).

Myanmar presented a series of buildings which won the ASEAN Energy Award and the ASEAN Best Practices in Energy Efficiency & Conservation in Buildings as best practices on national and international level.

THE PHILIPPINES

The country presentation of The Philippines started with the sustainable development framework. The overview of laws:

- National Building Code;
- Solid Waste Management Act;
- Clean Water Act;
- Clean Air Act.

An overview of the following policies was also presented:

- National Sustainable Development;
- Framework on Adaptation Strategies on climate Change;
- Green Procurement Program;
- Eco-Friendly Government Offices Program;
- Government Energy Program.

The country presentation of The Philippines included sustainable building policies in the four categories of policy instruments. The presentation highlighted the rating system, BERDE, developed by the Philippine Green Building Council (PGBC) and the Green Building Index (GBI), developed by the United Architect of the Philippines (UAP). The Philippines also has a Green Materials Rating System developed by the Green Choice Philippines.

The Philippines presented various best practices from green buildings, the realty tv program 'Green Home', sustainable building materials and sustainable construction methods.

SINGAPORE

Singapore presented Singapore's sustainable building policies in the four categories of policy instruments.

Singapore highlighted their rating system. The BCA Green Mark Scheme consists of five key criteria: energy efficiency, water efficiency, environmental protection, indoor environmental quality and other green and innovative features, that help to achieve better building performance. Version 4 of the BCA Green Mark Scheme will be launched end of this year.

The Zero Energy Building (ZEB) at the BCA Academy was presented as a best practice. The ZEB is an existing building retrofitted to achieve net zero energy through passive low energy design technologies and active solutions. The ZEB serves as a good showcase of energy saving design, clean energy and green building technologies in retrofitting an existing building. The building is also used to demonstrate and test-bed these new and innovative ideas before full scale industry adoption. More importantly, it will provide training and educational opportunities for the industry in developing and pioneering new Green Building Technologies.

Another best practice presented is the Ocean Financial Centre. The Ocean Financial Centre is slated to complete by next year and is an example of a Green Mark Platinum Commercial Building with only close to 4% green cost premium and 8.9 years payback period.

THAILAND

Thailand started with the paradigm shift that the Ministry of Energy went through from regulator (self-implementing) to facilitator (network-implementing).

The country presentation of Thailand included Thailand's sustainable building policies in the four categories of policy instruments. The presentation highlighted Thailand's labels:

- Number 5 Label for electrical home appliance;
- High efficiency Label for non electrical home appliance/equipment and constructional material;
- Building Label for residential and non-residential building;
- Green Leaf Label for hotel;
- Carbon Reduction Label.

As best practice, Thailand presented the Thai Cement International Trade Limited Company Building. This building includes the following measures:

- Reducing heat transfer (using polyurethane foam insulation with ceramic tiles for roof and using fiber glass insulation for wall);
- Double doors (vestibule) for reducing air leaking out;
- Control system for air conditioners;
- Variable Speed Drive (VSD) technology for cool water pump;
- Using rain water storage;
- Water-saving toilet and faucet.

VIETNAM

Vietnam presented its sustainable framework that is being implemented through:

- Strategic orientation on sustainable development in Vietnam (Vietnam Agenda 21, on national level as well as a in programs of 21 provinces/cities);
- Strategic orientation on sustainable development in the building sector (and other sectors as well: industry, natural resources and environment, maritime products sectors)
 - Energy efficiency framework through the Vietnam National Energy Efficiency Program (VNEEP);
 - Climate change adaptation framework through (1) the National Target Program on climate change (NTP) and (2) the Program on climate change adaptation of building sector and action plan; and the,
- Law on Energy Efficiency and Conservation.

The country presentation of Vietnam further included Vietnam's sustainable building policies in the four categories of policy instruments. The presentation highlighted the LOTUS VN Green Rating Tool as the rating system. The LOTUS VN Green Rating Tool is a market-based green adaptation system, which is being modeled on existing international green building systems (such as LEED, BREEAM, Green Star). The rating system of Vietnam currently comprise of two categories: (1) LOTUS Non-Residential and (2) LOTUS Residential.

Main Facilitator: Dr Peter Graham, Technical Advisor (UNEP SBCI)

Format: Round Table Dialogues - introduced and led by the Main Facilitator and the round table dialogues (with two countries at each table) conducted by the table facilitators.

Table Facilitators (BCA):

Table 1: Indonesia and Thailand: Ms Oesha Thakoerdin and Ms Connie Look

Table 2: The Philippines and Vietnam: Ms Jocelyn Chua

Table 3: Malaysia and Myanmar: Mr Low Giau Leong and Ms Li Sirh Tan

Table 4: Brunei Darussalam and Singapore: Mr Stephen Mok

The three main questions at the country round table dialogues were:

- Is the country profile on sustainable building policies of your country up-to-date? Which policy initiatives are not highlighted (more details needed), which initiatives are not included and perhaps which initiatives are anticipated in the future and which can be included in the status report as in the making?
- What are the barriers of policy development and implementation in your country?
- Which initiatives are needed to encourage policy development and implementation in your country?

CLOSING

Mr Niclas Svenningsen, Head of the Sustainable United Nations (SUN), United Nations Environment Programme (UNEP) / UNEP-SBCI Secretariat (UNEP SBCI)

Dr Peter Graham, Technical Advisor (UNEP SBCI)

CONCLUSION

The workshop concluded similar challenges and opportunities among SEA countries in developing and implementing sustainable building policies, such as awareness by stakeholders, funding, initial investments, coordination among the different ministries involved, participation of the private sector, collaboration between private and public sector, technical know-how and political will.

Many country representatives highlighted the great complexity of various stakeholders involved in the building and construction sector, in the development of sustainable building policies. Hence, a snapshot of stakeholders in developing sustainable building policies, “who is involved” will be included in the Draft Report on Sustainable Building Policies in Southeast Asia. It is also important to capture the traditional knowledge and wisdom in achieving sustainable buildings, particularly in the Southeast Asia Region, where both vernacular sustainable buildings (emphasis in using local knowledge and local environmental characteristics, and creating employment) and green sustainable buildings (as in maintaining regulations in energy efficiency and achieving targets) are equally important to deliver a sustainable built environment. In reporting on Sustainable Building Policies in Southeast Asia best practices of vernacular sustainable buildings should be included.

The Quick Views, presented by the country representatives, provide very useful insights in understanding how to develop a complete policy package with a mix of all necessary policy tools of regulations and incentives, including awareness and educational activities. In the coming months these Quick Views will be completed into Country Profiles on Sustainable Building Policies and these profiles will become a useful resource for policy makers in the region.

In the First UNEP SBCI-BCA Regional Workshop, the need for regional coordination was also emphasized, especially in setting up regional studies, workshops, seminars and trainings. The regional workshop has established a platform for the sharing of Sustainable Building initiatives amongst the various Southeast Asian countries, as well as the exchange of ideas on the promotion and development of sustainable buildings in the region.

ANNEX 1 PROGRAMME

Programme UNEP SBCI-BCA Regional Workshop on Sustainable Building Policies in Southeast Asia	
Date:	Tuesday 14 September 2010
Time:	14:00-18:00
Venue:	Building and Construction Authority Academy (BCAA) Function Hall
14:00-14:30 OPENING SESSION	
14:00	Opening by Mr Choo Whatt Bin, Executive Director, Services, Building and Construction Authority (BCA) / UNEP SBCI Board Member 2010-2011
14:10	Opening by Mr Niclas Svenningsen, Head of the Sustainable United Nations (SUN), United Nations Environment Programme (UNEP) / UNEP-SBCI Secretariat (UNEP SBCI)
14:20	Introduction Regional Status Report by Dr Peter Graham, Technical Advisor of UNEP-SBCI
14:30-16:15 SESSION 1: COUNTRIES PRESENTATIONS	
14:30	BRUNEI DARUSSALAM by Ms Li Mei Hua, Engineer, Authority for Building and Construction Industry, Ministry of Development
14:40	INDONESIA by Ms Liana Bratasida, Assistant Minister for Global Environment Affairs and International Cooperation, Ministry of Environment
14:50	MALAYSIA by Ms Badriyah Abdul Malek, Under Secretary Sustainable Energy Division, Ministry of Energy, Green Technology and Water
15:00	MYANMAR by Mr Sun Oo, Vice-President, Association of Myanmar Architects
15:10	Q&A facilitated by Dr Peter Graham (UNEP SBCI)
15:15	THE PHILIPPINES by Ms Criste Navida, Director, Environmental and Social Services Office, Department of Public Works and Highway
15:25	SINGAPORE by Mr Ang Kian Seng, Director Research, Buildings and Construction Authority, Ministry of National Development
15:35	THAILAND by Ms Sirinthorn Vongsoasup, Director, Energy Efficiency Promotion for People and Business, Bureau of Energy Efficiency Promotion, Department of Alternative Energy and Efficiency, Ministry of Energy
15:45	VIETNAM by Ms Tran Thi Thu Huong, Official, Vietnam Agenda 21 Office, Department of Science, Education, Natural Resources and Environment, Ministry of Planning and Investment
15:55	Q&A facilitated by Dr Peter Graham (UNEP SBCI)
16:00 GROUP PHOTO SESSION 1	
16:00-16:15 TEA BREAK	
16:15-17:30 SESSION 2: ROUND TABLE DIALOGUES	
16:15	Introduction of the session 2 by Dr Peter Graham (UNEP SBCI)
16:30	Round Table Dialogues facilitated by table facilitators
17:30-17.45 TEA BREAK	
17:45-18:15 CLOSING SESSION	
17:45	Report back facilitated by Dr Peter Graham (UNEP SBCI)
18:00	Closing by Mr Niclas Svenningsen, Head of the Sustainable United Nations (SUN), United Nations Environment Programme (UNEP) / UNEP-SBCI Secretariat (UNEP SBCI)
18:10	ZEB TOUR
18:15	TRANSPORT TO DINNER VENUE
19:00-21:00 SGBC FIRST ANNIVERSARY DINNER RECEPTION	
Venue:	Marina Bay Sands Ballroom

ANNEX 2 PARTICIPANT LIST

PARTICIPANT LIST FIRST UNEP SBCI-BCA REGIONAL WORKSHOP ON SUSTAINABLE BUILDING POLICIES IN SOUTHEAST ASIA

Participants

1	BRUNEI DARUSSALAM Ms LI Mei Hua	Engineer, Authority for Building and Construction Industry, Ministry of Development
2	Ms CHUA Swee Ting	Architect, Public Works Department, Ministry of Development
3	Mr Eliazar Bin SABTU	Special Duties Officer, Authority for Building and Construction Industry, Ministry of Development
4	INDONESIA Ms Liana BRATASIDA	Assistant Minister for Global Environment Affairs and International Cooperation, Ministry of Environment
5	MALAYSIA Ms Badriyah Hj. Abd. MALEK	Under Secretary Sustainable Energy Division, Ministry of Energy, Green Technology and Water
6	MYANMAR Mr SUN Oo	Vice-President, Association of Myanmar Architects
7	THE PHILIPPINES Ms Criste NAVIDA	Director, Environmental and Social Services Office, Department of Public Works and Highways
8	Mr Miguel Guerrero	Managing Partner, Asian Architects
9	SINGAPORE Mr ANG Kian Seng	Director, Research, Building and Construction Authority
10	Mr Jeffery NENG	Deputy Director, Green Mark Department (New Development), Building and Construction Authority
11	THAILAND Ms Sirinthorn VONGSOASUP	Director, Energy Efficiency Promotion for People and Business, Bureau of Energy Efficiency Promotion, Department of Alternative Energy and Efficiency, Ministry of Energy
12	VIETNAM Ms TRAN Thi Thu Huong	Official, Vietnam Agenda 21 Office, Department of Science, Education, Natural Resources and Environment, Ministry of Planning and Investment
13	Mr TAI Lee Siang	1st Vice President/President Elect, Singapore Green Building Council
14	Energy Market Authority Ms Sharon TAN	Deputy Director, External relations, Energy Market Authority
15	City Development Ltd Mr Allen ANG	Assistant General Manager
16	Ms CHUA Boon Bee	Senior Manager (Environment, Health & Safety)
17	Ms Christina LIM	Senior Manager (Projects)
18	EnGro Corporation Mr TAN Cheng Gay	Chairman
19	Mr Vincent LOH	Assistant Manager
20	Holcim (Singapore) Pte Ltd Ms Devina RADITYA	Project Manager (Sustainable Development)
21	CarbonNeutral Ms Rani VIRDEE	Managing Director, Asia Pacific
22	Davis Langdon & Seah (Singapore) Mr Eugene SEAH	Executive Director
23	SIMTech Dr SONG Bin	Director, Sustainable Manufacturing Centre
24	Waste Management and Recycling Association of Singapore (WMRAS) Mr GUAH Eng Hock	WMRAS Secretary
25	Mr Niclas SVENNINGSEN	Head, Sustainable United Nations, United Nations Environment Programme / UNEP-SBCI Secretariat

26	Mr Peter GRAHAM	Technical Advisor / UNEP-SBCI Secretariat
27	Mr CHOO Whatt Bin	Executive Director, Services, Building and Construction Authority / UNEP SBCI Board Member 2010-2011
28	Dr Edward ANGGADJAJA	Senior Executive Research Officer, Centre for Sustainable Buildings and Construction
29	Ms Oesha THAKOERDIN	Regional Policy Coordinator, Centre for Sustainable Buildings and Construction
30	Ms Connie LOOK	Senior Technical Officer, Centre for Sustainable Buildings and Construction
31	Ms Jocelyn CHUA	Senior Research Officer, Centre for Sustainable Buildings and Construction
32	Mr Stephen MOK	Senior Executive Research Officer , Centre for Sustainable Buildings and Construction
33	Mr LOW Giau Leong	Senior Research Officer, Centre for Sustainable Buildings and Construction
34	Ms TAN Li Sirh	Senior Development Officer, Research
35	Mr LEOW Yock Keng	Senior Development Officer Green Mark Department (New Development)