

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

29th March 2011
SINGAPORE

Synopsis

The workshop is the second regional meeting co-hosted by the United Nations Environment Programme - Sustainable Buildings and Climate Initiative (UNEP-SBCI) and the Building and Construction Authority (BCA) of Singapore towards the completion 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.

SUMMARY

The First UNEP SBCI - BCA Regional Workshop on Sustainable Building Policies in Southeast Asia took place, concurrently with the World Green Building Council (WGBC) International Congress 2010 and the inaugural Singapore Green Building Council (SGBC) 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 Second UNEP SBCI - BCA Regional Workshop on Sustainable Building Policies in Southeast Asia took place on 29 March 2011 at the BCA Academy in Singapore. Regional delegates from the 8 participating Southeast Asian countries were present: **Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, The Philippines, Singapore and Thailand.**

The Second Regional Workshop programme included three key sessions besides the opening and closing sessions, namely: (1) status report/ country presentations, (2) roundtable dialogues and (3) plenary wrap-up. The first session encompassed 8 country presentations on each country's status report on sustainable building policies. The second session convened 4 roundtable dialogues held concurrently with 2 countries per table. The early results of the Regional Status Report were also tabled in the workshop.

The first overall survey on sustainable building policies in Southeast Asia (SEA) presented a total of 260 initiatives in four main categories of policy instruments, namely, (1) voluntary instruments, (2) fiscal instruments, (3) regulatory instruments and (4) market-based instruments. One of the main conclusions drawn from the initial survey indicated that most of the initiatives are implemented as voluntary instruments, covering 47%, followed by regulatory instruments with 32%.

The format of the regional status reporting on sustainable building policies contains the following structuring:

- Four main categories of policy instruments: (1) voluntary instruments, (2) fiscal instruments, (3) regulatory instruments, and (4) market-based instruments.
- Four main groups of policy tools: (1) product and building standards, (2) public initiatives, (3) private and private-public initiatives, and (4) education and awareness raising initiatives.
- Four sustainable themes of policies: (1) energy-efficiency, (2) water efficiency, (3) material efficiency and (4) indoor/ outdoor environmental quality.
- Six main types of buildings: (1) industrial (i), (2) residential (r), (3) commercial (c), (4) others, such as public and school buildings (o), (5) geographical (g), (6) all, except geographical (a).

OPENING

Mr Ang Kian Seng, Director, Research, Building and Construction Authority (BCA), Singapore

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

INTRODUCTION

Dr Peter Graham, Technical Advisor, UNEP-SBCI / Main Facilitator of the Regional Workshop

SESSION 1 – STATUS REPORTS / COUNTRY PRESENTATIONS

Main Facilitator: Dr Peter Graham, Technical Advisor, UNEP-SBCI

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

BRUNEI DARUSSALAM

The status report of Brunei Darussalam started with the types of development plans for Sustainable Buildings such as:

- Brunei Vision 2035 (or Wawasan Brunei 2035)
- Brunei's National Development Plan (NDP) (or Racangan Kemajuan Negara (RKN))
 - currently 9th NDP (2007 - 2012)
- National Land Use Master Plan 2006 - 2025

The main organisation concerning sustainable building policies in Brunei is the Authority for Building Control & Construction Industry (ABCI) under the Ministry of Development. Other organisations include the Energy Division of the Prime Minister's Office (PMO) and the Brunei Economic Development Board (BEDB). Besides having no fiscal instruments in place at the current moment, initiatives under the other three categories of policy instruments were presented, with most of the initiatives voluntary in nature. The Knowledge Hub building was also introduced as a best practice project in Brunei.

Brunei Darussalam indicated that the government is still in the starting phase on the development of sustainable building policies. It is in the process of gathering stakeholders to work in this field and hopes to progress further in time.

CAMBODIA

The status report of Cambodia started with the statement that Cambodia is in a very early phase of developing its construction law, construction code, urban regulation, and building standards. Due to industrialisation and globalisation, Cambodia would soon be faced with challenges such as carbon dioxide emissions due to high-rise buildings in the near future.

The types of development plans for Sustainable Buildings in Cambodia include:

- Draft National Construction Law
- Draft National Building Code
- Draft National Spatial Plan
- Draft National Urban Development Strategy
- Implementation of National Integrated Coastal Development Strategy
- Draft National Housing Policy
- Draft National Comprehensive Land Policy

The status report also stated the key organisations concerning sustainable building policies in Cambodia, besides the private sector:

- Ministry of Land Management, Urban Planning and Construction
- Council of Land Policy
- Ministry of Economic and Finance
- Ministry of Public Work and Transportation
- Ministry of Interior (Local authorities)

INDONESIA

Indonesia's energy consumption by buildings per year is 7%, compared to the world's average energy consumption of 1.2% per year. Indonesia thus hopes to reduce the consumption of energy by buildings through energy efficiency. Indonesia launched the Green Building Policy, which includes the road map and guidelines for improvement of the energy technology in Indonesia. It also includes the regulatory instruments to maximise energy utilisation in buildings.

A Green Building Rating Tool Certification scheme, *Greenship*, is currently being developed by the Green Building Council Indonesia (GBCI) and will be launched later this year. The rating tool will include key elements such as: sustainable site, energy, water and waste management, material resources, indoor quality, innovation, transportation, and socio-economy.

The key organisations concerning sustainable building policies in Indonesia are:

- Ministry of Environment
- Ministry of Energy and Mineral Resources
 - Directorate General of New Renewable Energy and Energy Conservation
 - Directorate of Energy Conservation
 - Directorate General of Electricity
- Ministry of Public Works
- National Energy Council
- National Electric Company (PLN)
- Provincial Government
- Green Building Council Indonesia

MALAYSIA

The status report of Malaysia started with the country's key plans, including the establishment of the Sustainable Energy Development Authority of Malaysia (SEDA Malaysia) in May 2011. SEDA Malaysia is a centralised agency for Energy Efficiency and Renewable Energy. The agency would help to measure the performance of Malaysia in these two key areas.

The importance of green technology as an economic driver was highlighted in the budget speech made by Malaysia's Honorable Prime Minister, Najib Razak, in 2009. He had also announced in the speech that Putrajaya and Cyberjaya of Malaysia have been selected to be developed as pioneer townships in green technology.

The Green Building Index (GBI) of Malaysia has a total of 137 projects registered until 15 March 2011. Certified buildings under the GBI include Non-Residential New Construction (NRNC), Residential New construction (RNC), government and commercial buildings.

There is a Building Sector Energy Efficiency Project (BSEEP), which is an international collaborative project between the United Nations Development Programme (UNDP) and the Public Works Department of Malaysia (or Jabatan Kerja Raya Malaysia (JKR)). The goal of the project is to reduce the annual growth rate of Greenhouse Gas (GHG) emissions from Malaysia's building sector.

Malaysia also plans to:

- Introduce an Energy Efficiency and Conservation (EE&C) Policy and Master Plan to implement the Action Plan through key initiatives under each strategic action, and
- Introduce and enforce the Energy Efficiency and Conservation Act in 2013.

MYANMAR

Myanmar has various key plans on sustainable building policies, such as:

- National Environment Policy of Myanmar 1994
- Agenda 21
- National Sustainable Development Strategies

The Ministry of Energy is the main focal point of the Myanmar Energy Sector. Other key ministries are:

- Ministry of Electric Power (1) & (2)
- Ministry of Forestry
- Ministry of Science & Technology
- Ministry of Construction

In addition, the key organisations concerning sustainable building policies in Myanmar are:

- Association of Myanmar Architects (AMA)

- Myanmar Engineering Society (MES)
- Myanmar Construction Entrepreneurs Associations (MCEA)

The Energy Policy of Myanmar has four basic policies, and the 3rd policy on promoting Energy Efficiency and Conservation would be applicable to sustainable buildings. One of the four goals under this policy is the effective use of energy. Myanmar plans to achieve this goal by promoting EE&C activities in all sectors through public awareness.

THE PHILIPPINES

The status report of Philippines started with an overview of its sustainable framework that shows the various laws, programmes and policies related to sustainable buildings, such as the National Building Code, Solid Waste Management Act, Clean Water Act and Clean Air Act, Framework on Adaptation Strategies on Climate Change, Government Energy Programme, etc.

Besides the key organisations concerning sustainable building policies, The Philippines also presented its initiatives under the four categories of policy instruments and its best practices on sustainable buildings. A number of the initiatives were voluntary instruments, including:

- Energy efficiency standards for electrical appliances
- BERDE building rating system
- Eco-label/ Green materials rating system
- Recognition scheme and awards for eco-friendly government offices
- The Philippines International Eco-show Award
- Illumination Engineering Design in Electrical Engineering Curricula
- Building Green Conference series
- The Philippine Realty TV show on “Project Green Home”

SINGAPORE

Sustainable building is considered as one of the key aspects of sustainable development in Singapore. Since the introduction of the 1st Green Building Masterplan in 2005, the Building and Construction Authority (BCA) of Singapore launched its 2nd Green Building Masterplan in April 2009, which places special emphasis on greening the existing building stock.

The key organisations concerning sustainable building policies in Singapore include:

- Building and Construction Authority (BCA)
- Energy Market Authority (EMA)
- National Environment Agency (NEA)
- Singapore Green Building Council (SGBC)
- Economic Development Board (EDB)
- Singapore Environment Council (SEC)
- Singapore Institute of Architects (SIA)
- Institution of Engineers Singapore (IES)
- Association of Consulting Engineers Singapore (ACES)

To drive the green building industry forward, BCA developed a comprehensive training and educational framework (Master degree, specialist diploma, diploma certificate courses and specialist program like Green Mark Manager course) to build capabilities for a ‘Green Collar’ workforce comprising of Professional, Managerial, Executive & Technician (PMET)s. Recognising the fact that demand for high quality green buildings has to be consumer-driven, Singapore also has a series of awareness-raising and education programmes (e.g. outdoor campaigns, competitions, exhibitions, info portal) in place to engage consumers, public and the industry on the benefits of green buildings.

Since the launch of its green building rating scheme, the BCA Green Mark, in 2005, Singapore has continually revised the assessment criteria to make the standards more rigorous and robust. The main objective is to translate the requirements into actual savings for the country. The Green Mark version 4 took effect in December 2010.

THAILAND

The status report of Thailand commenced with the country's key sustainable development policy:

- The 10th National Economic and Social Development Plan (2007-2011):
- Energy Conservation Promotion Act 1992 (2007 Amendment)
 - The Energy Conservation Fund was established to provide financial support

The main focus of sustainable buildings in Thailand is on energy efficiency as it can achieve more than 40% in savings.

The key organisations concerning sustainable building policies in Thailand are:

- Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy
- Energy Policy and Planning Office (EPPO), Ministry of Energy
- Department of Public Works and Town & Country Planning (DPT), Ministry of Interior
- Pollution Control Department (PCD), Ministry of Natural Resources and Environment
- Department of City Planning (CDP), Bangkok Metropolitan Administration

Under the four categories of policy instruments, one of the initiatives highlighted was the certification for hotel buildings by the Green Leaf Foundation. The Green Leaf hotels are recognised for their commitment to environmental conservation. The certified hotels have been able to cut their energy use by 20% while water use, paper use and garbage output have also been lowered by 5%, 10% and 20% respectively.

One of Thailand's future plans include the development of the Thai's Rating of Energy and Environmental Sustainability for New Construction (TREES-NC) and a major renovation led by the Thai Green Building Institute (TGBI).

SESSION 2 ROUNDTABLE DIALOGUES

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

Format: Roundtable 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: Brunei Darussalam and Singapore:

Ms Tan Li Sirh and Mr Stephen Mok

Table 2: Cambodia and Myanmar:

Ms Oesha Thakoerdin and Dr Peter Graham

Table 3: Malaysia and Philippines:

Ms Jocelyn Chua and Mr Low Giau Leong

Table 4: Thailand and Indonesia:

Ms Connie Look and Dr Edward Anggadajaja

In general, the following main questions were tabled during the roundtable dialogues:

- Are the status reports on sustainable building policies up-to-date? Which policy initiatives are not highlighted yet? Which initiatives are not included yet, and perhaps which initiatives are anticipated in the future and which can be included in the status report?
- Are there any specific topics for sustainable building policies in your country that is not included in the status reports and which should be highlighted?
- Are there any specific topics the Regional Status Report should highlight - topics as in specific for the sustainable building policies in Southeast Asia Region which are not included yet?

The five questions below were discussed at the country roundtable dialogues:

1. Voluntary instruments are effective to the extent that the building sector has the awareness, knowledge, willingness and capacity to participate. Are voluntary measures being found effective? What gaps in knowledge, willingness and capacity exist? How can they be addressed?
2. UNEP research has shown that sustainable building policy is most effective when regulatory, voluntary, and incentive-based instruments are combined. Are the policy instruments identified in the first phase research implemented as part of a package of measures or independently?
3. How effective are the policies identified in addressing sustainability issues? Where have you had wins, where have you found barriers, where can they be improved?
4. What issues are being covered by your policy settings? Is there a major focus on one particular issue and/or one particular life-cycle phase (e.g. operational energy efficiency)?
5. What issues are not being addressed? Aside from the four issues noted previously – how much of the building sector is covered by policy? What building types? How much of the supply chain?

CLOSING

Mr Niclas Svenningsen, Head of the SUN, UNEP / UNEP-SBCI Secretariat

Ms Oesha Thakoerdin, Regional Policy Coordinator, BCA

OUTCOMES

In the closing session of the workshop, the process for further completion of the status report per country was supported by all delegates. The delegates requested to review the country profiles of all participating countries and the regional status report, in order to be involved in the complete package of the project.

Most of the delegates identified the need to involve stakeholders on national level, for example, through national workshops on sustainable building policies. The workshop was largely well received as a useful platform and forum for learning, discussions and networking. The delegates were also encouraged by the participation and progress made in the status report, which would allow for better understanding of the region's efforts on sustainable buildings and propel action from the building sector in Southeast Asia.

ANNEX 1 PROGRAMME

Date:	Tuesday 29 March 2011
Time:	08:30 - 18:30
Venue:	BCA Academy (BCAA), Function Hall
08:30-09:00	Transport from Hotel to BCAA
09:00-09:30	Registration at BCAA
09:30-10:00	OPENING SESSION by UNEP-SBCI and BCA
09:30-09:40	Opening by Mr Ang Kian Seng, Director, Research Division, Building and Construction Authority
09:40-09:50	Opening by Mr Niclas Svenningsen, Head, Sustainable United Nations (SUN), UNEP / UNEP-SBCI Secretariat
09:50-10:00	Presentation Draft Regional Status Report by Dr Peter Graham, Main Facilitator of the Regional Workshop/ Technical Advisor, UNEP-SBCI
10:00-11:00	SESSION 1: REGIONAL STATUS REPORT PART 1
10:00-10:10	BRUNEI DARUSSALAM: Ms Li Mei Hua, Engineer, Authority for Building Control & Construction Industry (ABCI)
10:10-10:20	CAMBODIA: Mr Beng Hong Socheat Khemro, Senior Minister's Cabinet / Deputy Director General / Deputy Secretary General, Ministry of Land Management, Urban Planning and Construction
10:20-10:30	INDONESIA: Ms Liana Bratasida, Assistant Minister for Global Environment Affairs and International Cooperation, Ministry of Environment
10:30-10:40	MALAYSIA: Mr Zaini Abdul Wahab, Head, Entry Point Project 9: Oil Gas and Energy, Suruhanjaya Tenaga, Energy Commission (<i>on behalf of the Ministry of Energy, Green Technology and Water</i>)
10:40-10:45	Q&A
10:45-11:00	Tea Break
11:00-12:00	SESSION 1: REGIONAL STATUS REPORT PART 2
11:00-11:10	MYANMAR: Mr Sun Oo, Vice President, Association of Myanmar Architects
11:10-11:20	PHILIPPINES: Mr Emmanuel Pamittan Cuntapay, Executive Director, National Building Code in the Development Office, Department of Public Works and Highways
11:20-11:30	SINGAPORE: Mr Ang Kian Seng, Director, Research Division, Building and Construction Authority
11:30-11:40	THAILAND: Ms Sirinthorn Vongsoasup, Director, Energy Efficiency Promotion for People and Business, Bureau of Energy Efficiency Promotion, Department of Alternative Energy and Efficiency (DEDE), Ministry of Energy
11:40-12:00	Q&A
12:00-13:00	Lunch
13:00-15:00	SESSION 2: REVIEW AND ANALYSIS
13:00-13:10	Introduction of session 2 by Dr Peter Graham (UNEP-SBCI)
13:10-15:00	Round Table Dialogues facilitated by table facilitators
15:00-15:30	Tea Break
15:30-17:00	SESSION 3: DIALOGUE
15:30-17:00	Report back facilitated by Dr Peter Graham (UNEP-SBCI)
15:30-15:45	Report Back Table 1 by delegates per country
15:45-16:00	Report Back Table 2 by delegates per country
16:00-16:15	Report Back Table 3 by delegates per country
16:15-16:45	Report Back Table 4 by delegates per country
16:45-17:00	Wrap-up by Dr Peter Graham (UNEP-SBCI)
17:00-17:30	CLOSING SESSION by UNEP-SBCI and BCA
17:00-17:30	Closing by Mr Niclas Svenningsen (UNEP-SBCI)
17:30-18:00	Zero Energy Building (ZEB) Tour
18:00-18:30	Transport from BCAA to Dinner Venue
18:30-20:30	Dinner

ANNEX 2 PARTICIPANTS LIST

Participants

1	BRUNEI DARUSSALAM Ms LI Mei Hua	Engineer, Authority for Building and Construction Industry, Ministry of Development
2	Ms Faridah Hendriani Binti Hj HISHAM	Architect, Public Works Department, Ministry of Development
3	CAMBODIA Mr BENG Hong Socheat Khemro	Senior Minister's Cabinet / Deputy Director General / Deputy Secretary General, Ministry of Land Management, Urban Planning and Construction
4	INDONESIA Ms Liana BRATASIDA	Assistant Minister for Global Environment Affairs and International Cooperation, Ministry of Environment
5	MALAYSIA Mr Zaini Abdul WAHAB	Head, Entry Point Project 9: Oil Gas and Energy, Suruhanjaya Tenaga - Energy Commission (on behalf on Ministry of Energy, Green Technology and Water (KTTHA))
6	Mr Mohd Quyyum Bin Ab RAHMAN	Assistant Secretary, Sustainable Energy Division, Ministry of Energy, Green Technology and Water (KTTHA)
7	Mr Mohd Farid B. Mohd SALLEH	Ministry of Energy, Green Technology and Water (KTTHA)
8	MYANMAR Mr Sun OO	Vice-President, Association of Myanmar Architects
9	PHILIPPINES Mr Emmanuel Pamittan CUNTAPAY	Executive Director, National Building Code in the Development Office, Department of Public Works and Highways
10	SINGAPORE Mr ANG Kian Seng	Director, Research Division, Building and Construction Authority, Ministry of National Development
11	Mr Jeffery NENG	Deputy Director, Green Mark Department(New Development), Technology Development Division, Building and Construction Authority, Ministry of National Development
12	THAILAND Mrs Sirinthorn VONGSOASUP	Director, Energy Efficiency Promotion for People and Business, Bureau of Energy Efficiency Promotion, Department of Alternative Energy and Efficiency, Ministry of Energy
13	Ang & Ong Consultants Ms Yvonne SOH	Associate
14	Building and Construction Authority Ms Su Ming LEONG-KOK	Principal, Training & Professional Development / School of Graduate & Management Development, BCA Academy
15	Mr Jayapaul APPAVOO CHELLIAH	Senior Executive Development Officer, South Asia & Middle East Department, International Development Division
16	Building System and Diagnostics Pte Ltd Mr TAN Phay Ping	Managing Director
17	Mr Nicolas Mike MOOSSA	Director
18	Davis Langdon & Seah S'pore Pte Ltd Mr Eugene SEAH	Joint Managing Director
19	Ms Nancy LIM Yu Ying	Executive Senior Quantity Surveyor (QS)
20	Energy Market Authority Ms Sharon TAN	Deputy Director, External relations, Energy Market Authority
21	Ms Latha GANESH	Senior Principal Analyst, External Relations Department, Energy Policy and Development Division
22	EnGro Corporation Ms YU Jing	Business Development Executive Knowledge Management Department



23	Green Dot Consulting Ms Gayle TAN	Consultant
24	IE Singapore Edlyn KHOO	Manager, Southeast Asia Division, International Operations Group
25	Nanyang Technological University Mr TIONG Lee Kong, Robert	Associate Professor, Division of Infrastructure Systems and Maritime Studies / School of Civil and Environmental Engineering
26	National Environment Agency Mr LIM Tian Kuay	Deputy Director (Climate Studies)
27	SIMTech A*Star Dr Fatida RUGRUNGUANG	Assistant research scientist, Sustainability & Technology Assessment
28	Singapore Green Building Council Mr LEE Chuan Seng	President, Singapore Green Building Council
29	Mr Niclas SVENNINGSEN	Head, Sustainable United Nations, United Nations Environment Programme / UNEP-SBCI Secretariat
30	Dr Peter GRAHAM	Technical Advisor
31	Dr Edward ANGGADAJA	Assistant Director, Centre for Sustainable Buildings and Construction, Research Division
32	Ms Oesha THAKOERDIN	Regional Policy Coordinator, Centre for Sustainable Buildings and Construction, Research Division
33	Ms Connie LOOK	Senior Technical Officer, Centre for Sustainable Buildings and Construction, Research Division
34	Ms Jocelyn CHUA	Senior Research Officer, Centre for Sustainable Buildings and Construction, Research Division
35	Mr Stephen MOK	Senior Executive Research Officer, Centre for Sustainable Buildings and Construction, Research Division
36	Mr LOW Giau Leong	Senior Research Officer, Centre for Sustainable Buildings and Construction, Research Division
37	Mr Jonathan CHENG	Senior Research Officer, Centre for Sustainable Buildings and Construction, Research Division
38	Ms TAN Li Sirh	Senior Development Officer, R&D Programmes, , Research Division