

The Fifth Asia Pacific Urban Forum, Bangkok, Thailand

Session: Bazaar of Ideas and Practices

Summary of discussion

Theme: Green Infrastructure and Buildings: Ensuring Sustainability of Small and Medium Scale Cities

Organised by: Asian Institute of Technology (AIT), Thailand

Date: 22nd June 2011

Time: 3.50 – 5.20 pm

Venue: Meeting Room A, UNCC, Bangkok

Participants: 55 persons

The session started with a brief introduction by *Prof. C. Visvanathan* (of AIT). *Dr. Ranjith Perera* (of AIT) introduced the topic, “*Green Infrastructure and Buildings*”. This was followed by three presentations (see Annex):

- “Environmentally Sustainable Transportation” by *Mr. Gamini Senanayake*, Chairman/ Managing Director, M/s Gamini Senanayake Associates Private Limited, Sri Lanka,
- “Integrated Waste Management: Experience of the Rayong Municipality in Thailand” by *Mr. Thanit Angkawinijwong*, Vice Mayor, Rayong Municipality, Thailand, and
- “Green and Ecologically Efficient Buildings” by *Dr. Atch Sreshthaputra*, Chulalongkorn University, Thailand.

Following the presentations, the panel discussion with three panelists from the government sector, local government sector, and the private sector gave their comments and this was followed by discussions, and Q/A with the participants. A summary of the discussion is given below.

Panel discussion

1. Mr. Panya Warapetcharayut of Pollution Control Department (PCD), Thailand:

- PCD has set up the green building standard for government buildings as the first target because there are a number of large government buildings all over the country. The government agencies should take a leading role in constructing and maintaining their buildings as energy efficient buildings. That can give inspiration for the private sector. PCD developed the standard by taking 3 considerations. The first one was the comprehensibility of the standard by the building owners so that it is easy to follow. The second is the standard type which is voluntary not mandatory. Lastly, the standard targets new constructions.
- There are many assessment tools for evaluating buildings in Thailand because there are different types of buildings and functions (e.g., different tools for government buildings, houses, and industrial buildings). However, in the near future the Ministry of Natural Resources and Environment will integrate each of these tools and enforce it as part of a law.
- Travelling in inner city (case of Sri Lankan city) is limited so the cost of energy consumption is not so high when compared with inter-city transportation. He agreed that a small city should have its own measures and should be differentiated from measures taken in big cities to reduce carbon emissions. Moreover, the cost of implementation should not require high budget. He recommended long term measures but implemented part by part as short term strategies.

2. Ms. Pornsri Kiccham of Nonthaburi Municipality, Thailand:

- If the definition of a big city is that it has population of more than 500,000, it means that many municipal areas in Thailand will be categorized as small and medium cities. Should all of them need to be green cities?
- Starting the Low-Carbon City project at small and medium scale will be easier than in a big city due to the potential for high level of local participation.

- Regarding the new concepts or tools such as low carbon cities and Bilan Carbone, they need to have simple definitions which ordinary people can easily understand. Then transferring knowledge to the officers and local people will be more effective in order to motivate them to participate in the project.
 - Nonthaburi municipality has some activities to reduce greenhouse gas emissions. The city provides bicycle parking for the people who commute to the city. It can save about 10 or 20 baht per day in case of riding the bicycle to the parking and then take a bus. This saving is valuable for the poor.
 - Nonthaburi Municipality has many big buildings so it will be useful for the city if the “green building code” project of AIT is completed by 2012 and shared with the local authority.
3. Mr. Veravit Sattayanon of Pruksa Real Estate Public Company Limited, Thailand, tried to answer the question; “How the private sector looks specially for the green building?”
- The green building code is not much effective in the real estate market because it increases the cost of construction. The issue is “Who will pay that extra cost?”, and this was the reason why the private sector talks critically about the green building code.
 - However, the private sector still concerns with the global warming issues. For example, use of prefabrication system can reduce the concrete consumption and it also reduces wastes and dusts during construction (by around 50%) when compared with the conventional system.

Floor discussion

1. Mr. Phisit Rojanovanich, former President of the Association of Siamese Architects:

- The tourism sector has already implemented green activities in resorts and hotels. That gives them a competitive advantage over the standard hotels and resorts. Some of these hotels were designed and built according to green building principles to serve the tourists from Europe and America who patronize eco-friendly goods and services. The rooms in such hotels can be sold at premium prices.
- The traditional mud houses also reflect the concept of eco-friendly buildings. They were built in small clusters in many parts of Thailand. Some are used for meditation purposes. These clusters of houses created by ordinary people can be good example for the professionals to study and further develop. They are also sources of inspiration for the private sector, instead of following western examples.

2. Ms. Santivipa Phanichkul has a business of turning plastic waste into crude oil.

- Private enterprises should not consider only the economic benefits of their ventures. She noted that in their landfill-mining project they analyze the life cycle of petroleum based plastics. The company considers the whole process from the upstream of plastic production, middle-stream of packaging and downstream when plastic becomes waste and goes to landfill sites.
- The company considers the waste management to minimize waste to the landfill because waste is the major source of methane, a high global warming potential gas. Thus, methane is captured and turned into the renewable energy such as oil, organic fertilizer, bio gas (which can be converted to electricity), etc.
- She also commented on the scale of small and medium city that is defined as less than one million. Although it may be appropriate for Thailand, it may not be appropriate for the cities in China, India, and the Philippines. These countries have many cities with more than one million people even in the metropolitan areas. These are the big cities which have to be concerned

about sustainable development because they face globalization issues. However, the small and medium cities also face the problems of urbanization.

Concluding remarks

The three presentations from three sectors (buildings, transportation and waste) are important for the small and medium cities. For example, waste management by the private sector is not only a concern for the business profit but also has social and environmental benefits. In addition, the case of local authority, such Nonthaburi that takes concern of the green issues through specific projects serves the people to live in a green and clean environment. These are some of the lessons learnt from small and medium cities that aim for low carbon society development.