

Meeting Write-up



5th International Conference on Sustainable Built Environment ICSBE-2014

SESSION ON "HOUSING FOR SUSTAINABLE BUILT ENVIRONMENT"

December 13, 2014
Earl's Regency Hotel, Kandy





International Conference on Sustainable Built Environment ICSBE-2014:

Session on “Housing for Sustainable Built Environment”

Date & Time: 13th December 2014, 1.30-3.30 pm

Venue: Earl’s Regency Hotel, Kandy

Purpose: Since COSTI is actively involved in promoting innovations in housing sector, the organizers of International Conference on Sustainable Built Environment cordially invited us to play a premier role in their 5th international conference. COSTI is already having a virtual institute relating to this topic and look out for a suitable setting to launch the VI. The presence of large numbers involved in the same trade at one location is an ideal setting to launch its VI. On the other hand COSTI could able to save considerable expenditure by collaborating with this international seminar rather than hosting a separate event. The main aim of the COSTI’s participation is to promote a dialogue among housing sector expert to disclose the different types of innovations, policies that can be incorporated to the sustainable built environment.

Head Table:

Session Chair: Prof. Ajith De Alwis, Project Director, COSTI

Facilitator: Wg. Cdr. Damith Chandrasekera, Programme Director, COSTI

Presentations Highlights:

Prof. Ajith De Alwis welcoming the Government, Non-Government representatives and university student to the session on “Housing for Sustainable Built Environment”. He explained the main objectives of the session and role of the Coordination Secretariat for Science, Technology and Innovation (COSTI) in the scientific development of the country.

Dr. Ravihansa Chandratilake from University of Moratuwa, presented the importance of science and technology for sustainable development, but he suggested that this paradigm should be expanded to encompass the concept of innovation. He defined Innovation as the means by which individuals and groups apply their creative, adaptive capacities and their social, organizational, and institutional



knowledge for the generation and application of new scientific and technical knowledge. According to him significant investment and committed partnerships for the Science, Technology and innovation field is a challenge for the country. Also he emphasized that in order to develop and achieve high level of sustainability in built environment, it is important to integrate indigenous knowledge and grassroots technological innovation into formal research and development. In his presentation, he used following local experimental research as examples to show, that how those STI can be achieved productively and economically.

- i. A study on applicability of bamboo fiber reinforced mycelium bonded sawdust cladding material for partition walls
- ii. Applicability of engine oil as a wood preservative
- iii. Pumping water with vehicle tire pressure

Mr. H. M. Dayananda, Ministry of Construction, Engineering Services, Housing and Common Amenities presented the background and objectives of National Housing Policy of Sri Lanka. He explained that the national housing policy was introduced in year 2014 with the goal of ensuring Sri Lankans to live in an adequate, stable, qualitative, affordable, sustainable, environment friendly and secure house with services for creating a high living standard. The main objectives of the housing policy are,

- Qualitative and quantities improvement of the housing stocks.
- Enhancing monetary supply in housing effectively and vibrant of the national economy.
- Encouraging vertical housing development.
- Direct involvement of the government for vulnerable group.
- Strengthening the asset based of the community.
- Enhance the public private partnership in housing.

Further he explained that, based on wide range of existing housing issues, nine trust areas were identified and strategic policy guidelines were developed to ensure the national development goals.

1. Poverty groups
2. Informal income earners
3. Middle class
4. High income groups
5. Rental Housing
6. Urban land development, private investments and planning and management of condominium properties.
7. Integrated infrastructure and service provision

8. Housing technology, standardization of building materials supply and training
9. Housing finance.



Dr. Manitha Weerasuriya Managing Director, IIDT, EML Consultants (Pvt.)Ltd.,/ Nader R. Elhadj, Frame Cad Solutions jointly presented a Spatial Solutions for Communities and Management in Plantations. Dr. Manitha mentioned that traditional plantation worker housing in general are spatially scattered isolating from general life activities and significant percentage is located in vulnerable, disaster prone areas. Closeness to the area of work is the only justification for this placement in most cases. Further he emphasized that to overcome the current

problems faced by the plantation communities due to difficulties of terrain, accessibility for medical, educational, recreational and other facilities, it is essential to relocating the workers housing with basic facilities necessary for their day to day life to a disaster safe, central location closer to the main roads and townships. Centralization will help to manage and maintain the facilities efficiently and effectively. As a partial solution to this concept they proposed an innovative low cost solution developed in New Zealand, trade marked as FRAMECAD.

Mr. Nader R. Elhadj, Frame Cad Solutions introduced the concept of light gauge steel and how light gauge steel offers a fast track solution for affordable and sustainable housing, its benefits, along with environmental advantages. FRAMECAD; its system and technology were introduced, comparing this system with traditional construction material. Further, he explained what can be built with the FRAMECAD system and the technology, production capacity of the FRAMECAD system to meet the demand for sustainable housing development.



Mr. Udula Bandara Awsadahami presented a SMART Housing Concept for Housing Sector in Sri Lanka. In his presentation he promoted the design of “Natural House” which is fully compatibility with the natural surroundings. The overall design objective is to ensure maximum energy efficiency, low construction and maintenance cost, thermal comfort without air-conditioning, high aesthetic quality and intimate contact with the natural elements. Also he pointed out that; it is worthwhile

to focus on those ways of building that minimize the use of products that require considerable embodied energy for their manufacture or transportation. Such techniques, by their very nature, have an aesthetic value that tends to blend in with the environment and "feel" natural. It will results in,

- Health for the body
- Peace for the mind
- Harmony with the environment

According to him, in order to develop the concept of “Natural House” concept, progressive designers should look into past culture to examine materials and construction methods that have proven successful over hundreds of years.



Mr. Ajantha Janaka, Deputy General Manager, NHDA presented “Affordable Housing Designs and Materials”. He explained that high price of building construction is due to the constantly rising costs of building materials. It is now widely recognized that the cost of housing can be reduced and speed and quality of construction stepped up through the use of emerging innovative building materials and technologies. In this process, the NHDA has introduced number of building materials and technologies for promotion of cost-effective, environment-friendly & energy-efficient innovative building materials and construction technologies for housing. In his presentation, he used following local experimental research to promote cost-effective building materials and techniques,

- Compressed stabilized earth blocks- CSEB
- Reduce the usage of timber
- Instead of tiling the floor & wall use titanium oxide

On behalf of the COSTI, Dr. Geetha Abeysinghe, Director-IT, also addressed the gathering and explained concept of Virtual Institute (VI) and Base Camp. Further she invited all the participants to join with COSTI through the base camp.





5TH INTERNATIONAL CONFERENCE ON SUSTAINABLE BUILT ENVIRONMENT

12th - 15th December 2014 at Earl's Regency Hotel, Kandy, Sri Lanka

The 5th International Conference on Sustainable Built Environment 2014 (ICSBE) will be held at Earl's Regency Hotel, Kandy, Sri Lanka, as the next in line of a highly successful series of conferences held since December 2010. The Conference will run over four days and features presentations by authors of all accepted papers, as well as keynote lecturers. General and plenary sessions will be accompanied by workshops and technical sessions. Accepted papers will be published in a special volume of proceedings with an international standard book number (ISBN).

Message from Chief Guest



Prof. Mohan Munasinghe

The organizers of this International Conference on Sustainable Built Environments deserve our congratulations. Sustainable development is the greatest challenge facing humanity. Urban sustainability is especially important, since cities currently produce 80% of global economic output and house 3.5 billion people (half the world's population), rising rapidly to 5 billion by 2035. Present unsustainable urban development trends pose major risks. Sustainability provides a practical framework for making urban areas more sustainable in economic, social and environmental terms. All stakeholders (government, business, civil society and academia) in Sri Lanka and abroad, must work together to ensure a safer and better future for our children and grandchildren.

Message from Guest of Honour



Eng. [Dr.] S.B. Wijelake
President IESL

I am pleased to send this message for the inauguration of the 5th International Conference on Sustainable Built Environment - ICSBE 2014. The conference will provide a platform for sharing of knowledge and discussing issues related to efforts made globally towards sustainable living. It also provides an opportunity for exchange of ideas on fine tuning techniques and methodologies to suit different cultures and countries. Built environments in the modern sense have come to mean, besides places and spaces created or modified by human including buildings, parks, transportation systems, an expanse of other elements like access to healthy food, mobility etc. as well, which encourage sustainable development and smart growth.

The Institution of Engineers, Sri Lanka (IESL) of which I am the current President, upholds the ensuring of conformity with recognized engineering standards so as not to jeopardize the health, safety and welfare of the public as part of the Code of Ethics for engineers and it covers, in spirit and substance, the objectives of the International Conference on Sustainable Built Environment. I take this opportunity to convey my appreciation to the co-organizers of the Conference for their initiatives and the healthy contributions towards sustainable development in the region.

Message from Co-Chairs



Prof. Ranjith Dissanayake
University of Peradeniya
Sri Lanka



Prof. Thishan Jayasinghe
University of Moratuwa
Sri Lanka



Prof. Priyan Mendis
University of Melbourne
Australia



Eng. Shiromal Fernando
Council on Tall Buildings
and Urban Habitat
Sri Lanka



Prof. Janaka Ruwanpura
University of Calgary
Canada

This conference represents a unique opportunity for meeting colleagues and friends, exchanging ideas, and those about research development work. We must also express our sincere thanks to all who contributed their time and great effort to make the conference possible. The Conference will deliver an awesome volume of information on sustainability initiatives in all building sectors from around the globe from a diversity of focus groups and organizations presenting their latest findings. We would like to invite participants from all sectors, private and public, to join this important conference from 12th to 14th December. This event promises to be an incredible and rewarding experience.

Keynote Speakers



Prof. Krishna Reddy
University of Illinois
USA



Prof. Thomas Froese
The University of British Columbia
Canada



Dr. Dasarath Jayasuriya
The Bureau of Meteorology
Australia



Prof. Bas Baskaran
Deakin University
Australia



Prof. Rajib B. Mallick
Worcester Polytechnic Institute
USA



Eng. Anil Hira
Council on Tall Buildings and Urban Habitat
India



Archt. Jose Alfano
Columbia University
USA



Prof. S.W. Garrity
University of Leeds
England

Organized by



In Collaboration with



Supported By



Supported By



Principal Event Partner

MELWA QST

MELWA QST RE BARS RS 500
Quality Guaranteed

Programme on 12th December

- 7.00 pm Registration
- 8.00 pm Opening Ceremony
- 8.15 pm Welcome Address
- 8.30 pm Address Dear Faculty of Engineering, University of Peradeniya
- 8.40 pm Address by Vice-Chancellor, University of Peradeniya
- 8.45 pm Introduction to the Guest of Honour by Dr. Sudhira de Silva
- 8.45 pm Address by the Guest of Honour Eng. S.B. Wijelake
- 9.00 pm Introduction to the Chief Guest by Prof. Thishan Jayasinghe
- 9.05 pm Address by the Chief Guest Prof. Mohan Munasinghe
- 9.30 pm Environmental Song by Ms. Mekala Ganage
- 9.40 pm Keynote Session, Chaired by Prof. Priyan Mendis
- 9.45 pm Keynote Lecture 1 by Prof. Krishna Reddy
- 9.55 pm Keynote Lecture 2 by Prof. Anil Hira
- 6.45 pm Presentation by the Main Sponsor
- 7.00 pm Closing Remarks by Eng. Shiromal Fernando & Dinner

Programme on 13th - 14th December

Five Parallel sessions and Three Keynotes

ANNUAL GREEN BUILDING CONFERENCE
14th DECEMBER 2014 AT EARL'S REGENCY HOTEL, KANDY, SRI LANKA
www.agbc2014.org

CONFERENCE ON SRI LANKA JAPAN COLLABORATIVE RESEARCH
15th DECEMBER 2014 AT EARL'S REGENCY HOTEL, KANDY, SRI LANKA
www.pdn.ac.lk/ic/sljcr/index.php

Contacts for Registration



Miss. Aroshi Tennekoon
Conference Secretary
Tel: +94 71 8058441
aroshi.icsecm@gmail.com



Miss. Kanchan Ratnayake
Conference Coordinator
Tel: +94 71 3168544
coordinator@icsbe.org

Fax: 081-4476797

www.icsbe.org



International Conference on Sustainable Built Environment ICSBE-2014

12-15 December, 2014

Session on “Housing for Sustainable Built Environment”

Date: December 13, 2014

Time: 01.30 pm to 03.30 pm

Earl's Regency Hotel, Kandy

Session Chair: Prof. Ajith de Alwis, Programme Director, COSTI

Facilitator: Wg. Cdr. Damith Chandrasekera, Programme Director-COSTI

Session Plan

01.30 pm– 01.35pm	Welcome and objectives Prof. Ajith De Alwis, Project Director - COSTI
01.35 pm – 01.55 pm	Incorporation of STI for Sustainable Built Environment, Dr. Ravihansa Chandratilake, University of Moratuwa
01.55 pm – 02.15 pm	National Housing Policy of Sri Lanka, Mr. Lakvijaya Palansooriya, Consultant, Janasevana Secretariat / Mr. K.A. Thilakaratne, Additional Secretary, Ministry of Construction, Engineering Services, Housing & Common Amenities, Mr. H.M. Dayananda, GM, Reel Company
02.15 pm – 02.35 pm	Spatial Solutions for Communities and Management in Plantations, Dr. Manitha Weerasuriya Managing Director, IIDT, EML Consultants(Pvt.)Ltd./ Nader R. Elhaji, Frame Cad Solutions
02.35 pm – 02.55 pm	SMART Housing Concept for Housing Sector in Sri Lanka, Mr. Udula Bandara Awsadahami
02.55 pm – 03.15 pm	Affordable Housing Designs and Materials, Mr. Ajantha Janaka, Deputy General Manager, NHDA



03.15 pm – 03.20 pm	Introduction to Virtual Institutes(VI) of “Housing for All” and Base Camp, Dr.Geetha Abeysinghe, Director- IT, COSTI
03.20 pm – 3.30 pm	Panel Discussion Prof. Ajith De Alwis, Project Director - COSTI