

Major Recommendations

- 'Energy Conservation Building Code' (ECBC) norms to be made compulsory for all govt. and private properties in the state of Haryana after consulting all stakeholders.
- 'Green' Technologies should become the main choice for the society to protect environment and achieve sustainable environment
- Dissemination of the techniques, materials, methodologies for the Green building should be on a wider scale.
- Strong operational relationship and close networking between premier R&D, standardization and academic institutions and technology promotion organizations.
- Development of technologies having potential for commercialization and transfer of technologies for large-scale field applications should be undertaken.
- To undertake Rainwater Harvesting in Haryana on a large scale with nodal centers created at Panchkula and Gurgaon and sub-nodal centers in various cities to spread the technology to the masses.
- Regulatory Mechanism should be instituted to inculcate the concepts of Green Building and more of 'Habitat Green' than only building 'Green', in the development phase of Haryana.
- Change in life style and awareness about the "Building" is required for growth of "Green Building" concept.
- Assisting building materials enterprises in their up-gradation and modernization plans in the state of Haryana.
- Improving the policy environment for sustained growth of cost-effective building materials, production and availability.
- Promotion of production units of building materials/components based on fly-ash, red-mud, phosphor-gypsum, agricultural residues and other wastes and by-products.
- Modernization of small scale and village level building materials production units in rural and semi-urban areas of Haryana.
- Setting up institutional framework for CDM investments promotion and relevant promotion activities in the State of Haryana.
- The full commercial potential of renewable energy resources should be realized through enactment of a law that provides a clear legal mandate for renewable energy.
- An Integrated Energy Policy should be adopted at the earliest to ensure that renewable energy plays its rightful role in the country's energy security.
- Public awareness should be raised to modify life-styles to conserve resources of water and produce less waste, and to support and promote policies and strategies for implementation in the State of Haryana.
- To bring effective awareness among the public (stakeholders), NGOs, Media, Scientific Community and policy makers and facilitate that they work together.
- The Green Manures to be made more popular by public-private partnership, making it compulsory over a period of time.
- Such national level workshops should be organized in other states to popularize the concepts of "Green Buildings" for adaptation and implementation, to ensure sustainable development of the country.

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Govt. of Haryana



SEARCH Foundation

Brief Report on

SECOND NATIONAL WORKSHOP-CUM-CONFERENCE IN THE SERIES ON

"GREEN BUILDINGS: FOSTERING SUSTAINABLE DEVELOPMENT & ENVIRONMENTAL CLEARANCE"

In association with Department of Environment, Government of Haryana

February 23, 2010
HSI IDC Auditorium, Vanijya Nikunj Complex, Udyog Vihar, Gurgaon - 122 016



"We have responsibility to look after our planet. It is our only home". The Dalai Lama



Introduction

Buildings consume huge amount of energy in construction and their maintenance. They have a very high order of adverse impact on the natural environment. Building sector is a part of infrastructure and it has been identified as being responsible for about 25-40 % of energy consumption, 30-40 % of material resource consumption, 30-40 % of waste production and 30-40 % of the greenhouse gases. Additionally, the studies have revealed that about 30 % of newly built or renovated buildings suffer from "sick building syndrome", exposing occupants to unhealthy environmental conditions. "Green building" concept is therefore being promoted as the foremost strategy to ensure the sustainable infrastructural development. Going "Green" means becoming more conscious about the roles and responsibilities of the society in mitigating the adverse impacts on natural environment.

Indian Green Building Council has established Leadership in Energy and Environmental Design (LEED) Green Building rating system. Apart from LEED, TERI has developed a tool known as "GRIHA" (Green Rating for Integrated Habitat Assessment) for measuring and rating a building's environmental performance in the context of India's varied climate and building practices.

As a sequel to our highly successful National Workshop-cum-Conference on "Green Buildings: Striding towards Environment Protection and Clearance" (held on 18-19th April, 2008), it has been planned to organize a 6 - National Workshops-cum-Conferences series to promote and popularize the concepts and implementation of such buildings on a wide scale for ensuring 'Sustainable Environment'. The first Workshop-cum-Conference was organized on 10th December, 2009 at New Delhi in association with Ministry of Environment and Forest, Government of India. This is the Second Workshop-Cum-Conference in the series held in association with Department of Environment, Govt. of Haryana and was organized at Gurgaon. The Workshop was inaugurated by Capt. Ajay Singh Yadav, Hon'ble Minister of Environment, Finance, Irrigation & Planning, Govt. of Haryana.

Objectives

- To create national, multi-stakeholders task force imbued with achieving a vision for sustainable national development.
- To support the creation of a set of principles and planning tools for green buildings.
- To set clear targets to achieve the fast adoption of green buildings in India, including high targets for carbon-neutral or net zero-energy buildings , together with effective performance monitoring to track progress towards achieving these targets.
- To garner ongoing or new support for green buildings, including efforts to promote private sector investment and proper valuation methods.
- To promote dissemination of knowledge of green buildings through R&D, capacity building, and the use of labels and disclosures on green building performance.
- To facilitate a fast track Environmental Clearance (EC) process with effective solutions to the problems faced by the clients and the authorities during EC process.

Overview of Second National Workshop-cum-Conference

Key points discussed during the Workshop were:

- To put fully coordinated and concentrated efforts to make perceptible impacts towards environmental preservation, conservation and restoration through '**Green Habitat**'.
- The Climate Change and Global Warming in the contemporary world are causing catastrophic effects and need to addressed urgently.
- Innovative energy saving building techniques like providing roof insulation with fiber glass, cavity brick wall with insulation, shading on roof, double glass for windows should be adopted.
- Green Buildings facilitate smoother and faster process of Environmental Clearance, as the Environmental Clearance accorded by the Union Ministry of Environment and Forests lays down a procedure to ensure that minimum environmental depletion takes place during the construction of large buildings.
- Carbon Trading Opportunities for Green Buildings under CDM (Clean Development Mechanism).
- Special attention to the grim situation being faced in the availability of water.
- To undertake Rainwater Harvesting in Haryana on a large scale with nodal centers created at Panchkula and Gurgaon and sub-nodal centers in other cities to spread the technology to the masses.



Participants

- Minister of Environment & Forest, Finance, Irrigation & Planning, Govt. of Haryana

- Officials of MoEF, Govt. of India

- Officials of Central Pollution Control Board

- Chairmen and Members of States SEACs and SEIAAs

- Officials of Dept. of Environment, GOI and Govt. of NCR Delhi

- Planning Commission experts, corporate bigwigs

- Chairmen and Members of BAI

- Chairmen and Members of IIA

- Builders, Architects, Contractors, Scientists, Environmentalists,

- NGOs, Research Scholars, Community Leaders, Policy Makers,

- Regulators and students from architecture colleges etc.

Technical Sessions

Session I : Sustainable Construction: Envisioning next-generation green buildings

Chaired by: Shri K. S. Bhoria, IAS, Chairman, SEIAA, Govt. of Haryana

Session II : Strategies of Green Buildings, Green Architecture, Technologies & Advantages

Chaired by: Shri R. N. Malik, Member, SEIAA, Govt. of Haryana

Session III : Valedictory Session

Chaired by: Dr. S. K. Bhargav, Chairman, SEAC, Govt. of U.P.

This event had the blessings and support of eminent authorities and luminaries actively involved in the propagation of the concepts of sustainable development and preservation of environment. We place on record our thankful gratitude to the following dignitaries:

- **Capt. Ajay Singh Yadav**, Minister of Environment & Forest, Finance, Irrigation & Planning, Govt. of Haryana
- **Shri K. S. Bhoria**, Chairman, SEIAA, Haryana
- **Dr. G. Prasanna Kumar, I.A.S.** ,Financial Commissioner & Principal Secretary, Govt. of Haryana
- **Dr. Prem C. Jain**, Chairman, Indian Green Building Council (IGBC)
- **Shri Inderjit Juneja**, Chairman, SEAC, Govt. of Haryana
- **Dr. A. S. Chahal**, Chairman, Haryana State Pollution Control Board
- **Shri S. K. Monga**, Member Secretary, HSPCB
- **Shri R. N. Malik**, Member, SEIAA, Haryana
- **Shri Paritosh Tyagi**, Former Chairman, EAC, Ministry of Environment & Forest (MoEF), GoI
- **Dr. S. K. Bhargav**, Chairman, SEAC, U.P.
- **Prof. B. Padmanabhamurty**, Vice Chairman, SEAC, Haryana
- **Shri Jaipal Singh Sangwan**, Member, SEAC, Govt. of Haryana
- **Shri Raj Singh Rana**, Member, SEAC, Govt. of Haryana
- **Prof. P. B. Rastogi**, Director, Union Ministry of Environment & Forest (MoEF)
- **Shri Sultan Singh Jatyan**, Member, SEAC, Govt. of Haryana
- **Maj. Gen. Bhoop Singh**, Ex- Chairman, Haryana Vidyut Prasaran Nigam Ltd.
- **Ar. Vivek Logani**, Chairman, Gurgaon Centre, Indian Institute of Architects
- **Shri H. S. Pasricha**, Chairman, Builders Association of India (Delhi Centre)
- **Mr. Vidur Bharadwaj**, Chairman, IGBC (Delhi Chapter)
- **Mr. Arun Kumar**, Sr. Project Engineer, Spectral Sustainability Group
- **Mr. Rohan Rawte**, Country Head, IES India
- **Mr. Avinash Kumar**, Asst. Manager (GB & Energy Services), SGS India Private Ltd.
- **Dr. Asha Sharma**, Head (EHS), IREO Management Pvt. Ltd.
- **Mr. Anand Jain**, Head (Design & Commercial), Saint Gobain Glass India Ltd.
- **Mr. Vikas Makkar**, Paharpur Business Centre
- **Mr. Rajdeep Chowdhury**, Regional Head (Sales & Marketing), Biltech Building Elements Ltd.
- **Mr. Nitin Saxena**, Sr. Manager, Osram India Pvt. Ltd.
- **Mr. Swapan Mehra**, Advisor (CDM), Grass Roots Research & Creations Pvt. Ltd.
- **Shri Sivakishan Nandyala**, CEO, GRIHA Secretariat (TERI), Delhi
- **Shri Karan Grover**, Architect, Karan Grover & Associates, Vadodara
- **Dr. Vishal Garg**, Asst. Prof. & Head, Center for IT in Building Science, IIIT, Hyderabad
- **Shri Shahrugh Mistry**, Architect, Mistry Architects, Bangalore
- **Shri Sudipta Das**, Partner, Risk Advisory Services, Ernst & Young Pvt. Ltd., Kolkata
- **Shri M. Selvarasu**, Partner, LEAD Consultancy Services, Bangalore
- **Shri Ankoor Sanghvi**, Architect, Ankoor Sanghvi & Architects, Rajkot
- **Shri Shishir Joshipura**, Exec. Vice President, Thermax Limited, Pune