

GREEN INSTITUTE FOR RESEARCH & DEVELOPMENT

ANNUAL REPORT 2015-2016

REPORT FROM THE SECRETARY

Dear Members,

In the year 2015-16, Green Institute for Research & Development (GIRD) engaged in various successful action and campaign programmes focusing the organisation's motto of Protecting the Earth and Advancing Life. We carried on regular activities in the field of environment protection, clean energy promotion, environment education, nutrition enhancement for children of weaker sections, health promotion of disadvantaged families.

The main thrust of this year's programme has been promotion of green buildings. We continued our campaign in different States to promote green building ideas. We also held National Workshop on the subject of "Green Buildings in India: Present Practices and Future Prospects" on the 27th August 2015 at Jamia Millia University.

In the human development area, we gave importance to promotion of girls' education. For this we leveraged the Governmental programme of Beti Bachao, Beti Padhao.

our usual focus activities of environment action and work for human development started in the previous years, but could not initiate new programmes because of constraints in financial resources.

On the environmental action front, our campaign activities for promotion of new and renewable energy through popularizing LED technology and bio-gas energy were received with enthusiasm by the target people in the States of Delhi, Haryana, Rajasthan, Bihar and Kerala. We shall continue with this programme in the coming years covering large areas and more people, attracting them to the idea of adopting clean energy in the place of traditional fossil-fuel based energy sources.

The Seminar organized by us on the Gandhi Jayanthi Day (2nd October 2014) on energy generation from urban waste was inspiring and educative to the participants, most of whom were directly concerned with a proper system for urban waste management that is both environment-friendly and energy-generating.

As in the past years since 2007, we made our contribution felt in the Clean up the World programme in Dubai, UAE where about 200 Indian volunteers were mobilized by us for this UNDP-supported programme.

In the area of action for human resources development, our focus in the reporting year remained the skill development and training of the youth from the disadvantaged communities in Supaul (North Bihar) and Mewat (Haryana). 140 youth were given skills in low and middle-level technical skills.

Skill development courses were also organized by us for members of “manual-scavenging” families in Delhi with the objective of promoting the liberation of “manual-scavengers” from their traditional undignified occupation.

In our regular programme of enrolling people of the unorganized sector in the micro insurance programme, in this year we have added the enrolment of the unorganized sector families in the Jan Dhan and Atal Pension Yojana programmes, which newly launched programmes.

Other programmes that were taken up by during the reporting year are provision of quality education for the children of the socially and economically disadvantaged families Delhi and in Supaul (Bihar) and the Integrated Bridge Education Programme (IBEP) for the children of the poor migrant families in Delhi.

We hope to continue with all these programmes with greater results and start new programmes in the year 2015-16.

(SHAMSUDDEEN, A.K)

Secretary/Director

ACTION AND CAMPAIGN PROGRAMMES UNDERTAKEN BY GIRD
DURING 2014-15

The Green Institute for Research & Development (GIRD) undertook the following programmes in furtherance of its motto of Protecting the Earth and Advancing Life.

I. ENVIRONMENT-PROTECTION RELATED PROGRAMMES

NATIONAL WORKSHOP
ON
GREEN BUILDINGS IN INDIA:
PRESENT PRACTICES AND FUTURE
PROSPECTS
organized by

**The GREEN INSTITUTE FOR
RESEARCH
AND DEVELOPMENT
at
JAMIA MILLIA ISLAMIA
ON
27 AUGUST 2015
REPORT**



Vice-Chancellor, Jamia Millia, Prof. Talat Ahmad; Delhi Government Environment & Forests Department Secretary Shri Sanjeev Kumar; and GIRD Secretary Shamsuddeen, A.K. at the Inaugural Session of the Workshop

A National Workshop was organized on the subject of Green Buildings in India: Present Practices and Future Prospects on 27 August 2015 at Jamia Millia Islamia, Delhi, by the Green Institute for Research and Development in association with the Department of Civil Engineering, Jamia Millia Islamia.

The Workshop was sponsored by Housing and Urban Development Corporation Limited (HUDCO) and Delhi Pollution Control Committee, Department of

Environment and Forests, Government of the NCT of Delhi.

The Workshop began with an Inaugural Session from 10.00 AM to 10.30 PM. The Session was presided over by Prof. Talat Ahmad, Vice Chancellor, Jamia Millia. Mr Sanjeev Kumar, IAS, Secretary, Department of Environment & Forest & Chairman, Delhi Pollution Control Committee (DPCC), Government of NCT of Delhi graced the session as Guest of Honour and he inaugurated the Workshop.

Opening Remarks by Mr Shamsuddeen, A.K., Secretary/Director, Green Institute for Research & Development:-

“This is the second time we are organizing a programme on Green Buildings. In 2009, we held a National Seminar at Jawaharlal Nehru University in association with Delhi College of Engineering (which is now Delhi Technological University) with the objective of assessing the benefits of green concept and technology for residential buildings and finding ways to mainstream the concept and practice of green buildings. Subsequent to that National Seminar, we have been successful in bringing about a change in the mindset of people in different States in favour of adopting green building practices.

We have thought of the present programme with a view to influence the large construction sector in the ever expanding cities and towns of India. This urban expansion is an inescapable phenomenon accompanying the high economic growth our country has witnessed in the last two decades, i.e., after the adoption of the policy of liberalization of the economy.

There has been a boom in different sectors of the economy during the last two decades. Growth in each sector entails construction of buildings, whether it is for production units, office buildings or for big infrastructure. All these require huge energy consumption and use of natural resources. Logically, demand for energy in India has been rising continuously in tandem with the rapid economic growth. India is presently the world's fourth biggest energy consumer and it is the third biggest importer of oil. Further, India aspires to be one of the developed countries of the world. The present political leadership of India has outlined policies in conformity with this aspiration. Prime Minister Narendra Modi's Make in India programme is an important policy decision in this regard. This very idea of Make in India implies large-scale production of goods in India by the companies world over. This implies manifold increase in built-space. If traditional building practices are to be followed, the future prospect is complete concretization of our environment, especially in cities which are growing in numbers and expanse, and greater depletion of our natural resources, apart from degradation of our environment, and consequent problems for the well-being of the people arising from health hazards, climate change, depletion of essential resources like drinking water.



In this background, the idea of Green Buildings has assumed great importance in facing up the challenges. One of the benefits to be drawn from the mainstreaming of green-building practice is huge saving in energy consumption. This is of utmost importance for our country because we cannot afford to continue with fossil-fuel based development. India has earnestly embarked on the quest for harnessing new and renewable energy sources. But so far, capacity development in the production and distribution of renewable energy has been limited though, of lately, higher targets have been set for strengthening the capacity in solar, wind, and biomass based energy generation. 100 GW solar energy capacities and 60 GW wind energy capacity are the targets aimed to be achieved by 2022. But these ambitious targets are not easy to be achieved. There are many constraints. Large-scale production and distribution of new and renewable energy like solar require huge capital investment which makes it not much affordable, at least for the present and in the immediate future. Green practice in the construction sector can therefore go a long way in reducing the demand on energy. I hope, how this can happen will be explained in the present workshop.

The concept of “green buildings” has emerged as a part but significant solution in meeting the challenges of energy deficiency and environmental damages. A green building is a “sustainable building” that makes minimal impact on the environment throughout its life. Construction of a green building would mean minimal and efficient use of energy and other resources in almost all the aspects, namely, production of building materials, the design, use, maintenance and, also the eventual demolition, of a building in any sector, i.e., commercial, industrial, residential or public purpose buildings.

The energy saving advantages of green buildings can be gauged from the fact that buildings are responsible for about 40% of the energy use in every country. Building and other construction not only consume the precious energy sources but also contribute to the environment degradation and pollution as well as depletion of precious natural resources.

The construction sector accounts for 30% of electricity consumption in India; and about 24% of India's Green House Gas (GHS) emissions, mainly due to thermal power generation. Consumption of electricity for lighting, air conditioners, water heaters etc. accounts for about 10% of total electricity consumption. Use of green technologies for lighting, heating and other electrical appliances in residential and commercial buildings can save electric energy in considerable quantity of megawatts (MW). Solar photovoltaic (PV) and solar thermal systems would reduce a building's energy-related emissions. Building a house or any other built structure will have its impact also on the scarce water resources as almost all stages of construction require water.

The green building as a sustainable model of national endeavour has already been introduced and is being promoted in India. But, notwithstanding these efforts, green building concept, practice and technologies involved are yet to be made popular at the all-India level. There is a wide gap in the knowledge of green building practices at various levels within the country. We are organizing the present workshop to think about how the knowledge can be spread and made acceptable to and actionable by various stakeholders, mainly those concerned with construction industry as well as those who make decisions in building the structures.

I hope that the workshop will benefit the students and the academic community in general by way of insights into different research needs for furthering the acceptance of green buildings. For organizations like ours, i.e. NGOs working directly with the people, the present Workshop can give new ideas which we can take to the field level for campaign and advocacy programmes."



TECHNICAL SESSIONS

- Technical Session 1 : Concept of Green Building Practices**
Technical Session 2: Architectural Design Philosophy for Green

	Buildings
Technical Session 3:	Green Building Materials
Technical Session 4:	Green Affordable Housing: Myth or Reality
Technical Session 5:	Green Retrofitting of Buildings
Technical Session 6:	Scoring Methodology for Green Building Certification



Main speakers in the different technical sessions were:

Mr. Gaurav Shorey

Team Member, Psi Energy and visiting Guest Faculty in School of Planning and Architecture, New Delhi.

Mr. Rishi Dev

a New Delhi based Architect.

Mr. Deepak Bansal

DGM (Projects), HUDCO.

Dr. Hina Zia

Architect and urban and rural planner with specialization in green buildings, energy management, and waste management.

Mr. Parvnav Gosain

Mechanical Engineer, Haryana College of Engineering.

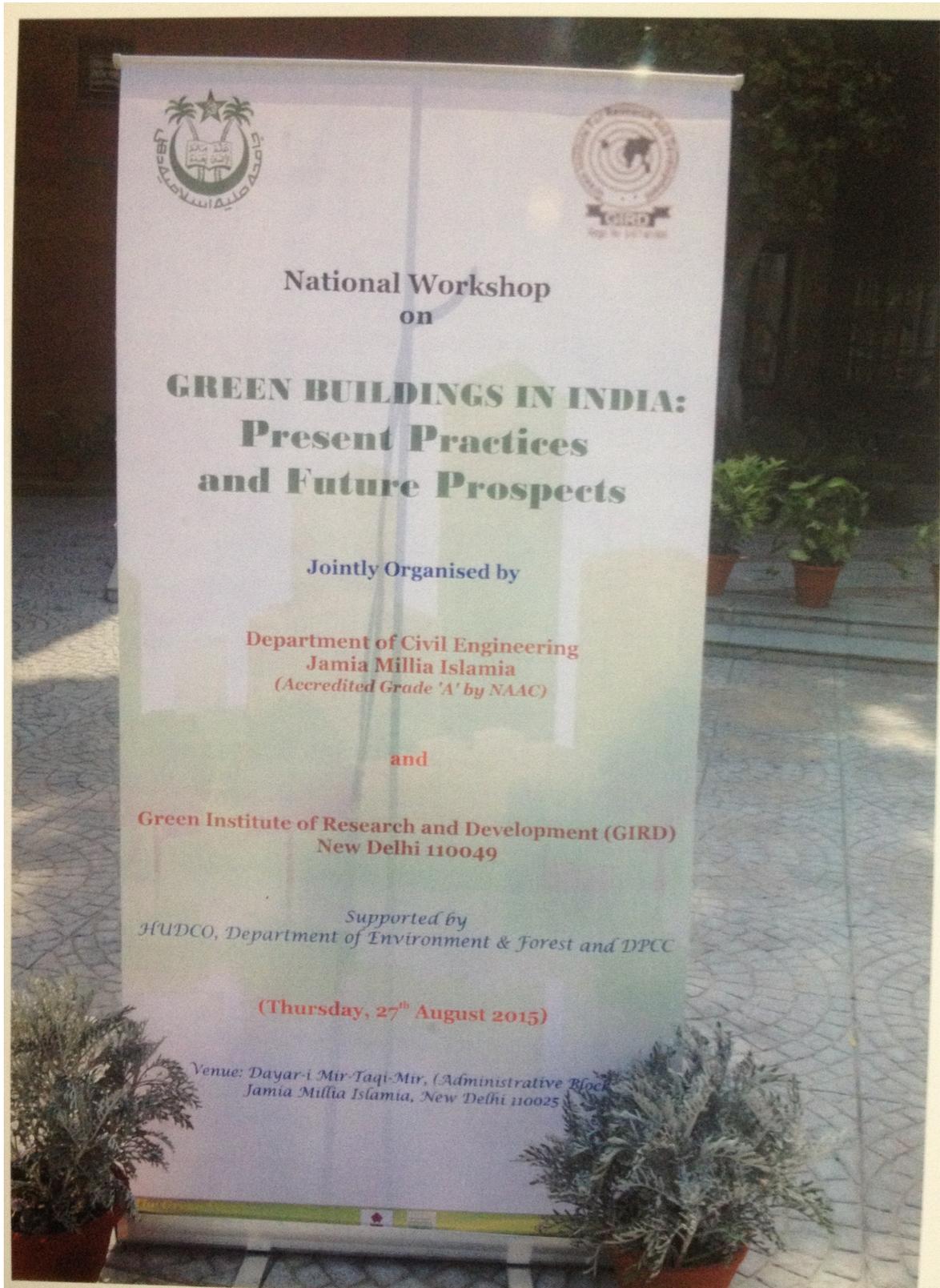
The speakers emphasized that green buildings can be practically achieved by an integrated approach of architects, engineers from various disciplines viz. Civil, Electrical and Mechanical as well as urban planners and other professionals. Implementation of carbon positive, water positive, water & solid waste recycling positive, eco-friendly chilling plants/refrigerants, solar PV panels, China bone mosaic roof tiling and mud phuska roof layering can considerably reduce the energy consumptions. It was concluded that the buildings if designed aesthetically in accordance to the National Green Building Code can conserve more energy with fewer additional measures thereby rendering cost effective and sustainable construction.

The workshop was concluded by concluding remarks by Mr Anil Kumar, Director, Department of Environment and Forest, Govt. of NCT, Delhi and distributing certificates to the participants.



Shri Anil Kumar, Director, Department of Environment and Forests, Govt. of NCT of Delhi at the Concluding Session.





Promotion of New and Renewable Energy

GIRD undertook awareness campaign for creating awareness about the need for conserving energy and promotion of new and renewable energy sources in Delhi, Haryana, Bihar, Rajasthan and Kerala. In the areas of our campaign we promoted LED technology for lighting and heating and bio-gas plants to replace the traditional wood and coal based hearths and ovens in order to reduce the use of fossil fuels and environmental pollution. Our volunteers educated the people about the environmental and health benefits of the using renewable energy sources.

Seminar on Energy Generation from Urban Waste

GIRD organized a Seminar on Energy Generation from Urban Waste in Jamia Millia Islamia on October 2 (Gandhi Jayanthi Day), 2014. The Seminar was focused on the problems of urban waste management in the National Capital Territory of Delhi and suburban cities of Gurgaon, Faridabad and Ghaziabad. Therefore, the audience in the Seminar was mostly constituted of representatives of associations of commercial establishments and of residential housing societies; social organisations and different NGOs working in Delhi and nearby areas. Academicians, both faculty members and students, participated in the Seminar. The Seminar discussed the requirements for setting up a comprehensive system of urban waste management directed towards energy generation from waste.

SKILL DEVELOPMENT PROGRAMME FOR THE UNDER-PRIVILEGED YOUTH

Initiated in the previous years, this programme was continued in the present year also in Supaul (Bihar) and Mewat (Haryana) where middle and low level vocations skills and training were imparted to undereducated youth, with the objective of empowering with remunerative skills. The total beneficiaries under this skill development programme were 140, 85 in Supaul and 55 in Mewat, under this programme, we could organize imparting of skill development and training for the youth of the disadvantaged social groups in Mewat (Haryana), Supaul (Bihar), Kasaragod (Kerala) and in Delhi. The skills imparted include plumbing, AC-repair, mobile-repair, welding, cycle-repair for boys and art and craft work for young adolescent girls. In Delhi, we could provide driving skills for

8 adolescent girls from economically poor families, all of them have been able to get remunerative employment, though in most case the employment has been part-time in private homes where the employers have been responsible women professionals or entrepreneurs.

REHABILITATION OF ‘MANUAL SCAVENGERS’

GIRD continued the programme of Support for Rehabilitation of Manual Scavengers which we initiated last year after the passing of the Prohibition of Employment of Manual Scavengers and their Rehabilitation Act, 2013. This Act provided for the liberation of manual scavengers from the age-old inhuman practice of manual scavenging and their rehabilitation in dignified employment unconnected with manual scavenging, sweeping and other sanitation work. While for those manual scavengers who are already working with the Municipalities, Panchayats, Cantonment Boards and other Governmental authorities, the Government is bound to provide alternative employment, there are also privately engaged manual scavengers. It is with the objective of providing some employable skills to the family members of manual scavengers that we have started this project in the last year. As in the last year, we have provided employable skills such as in plumping, electrical work for men, and tailoring, computer basics and data entry operation for young girls, of traditional manual-scavenging families in the NCT of Delhi (Mehrauli and Mongolpuri, Trilokpuri, Karol Bagh).

Promotion of Quality Education of Children of Poor Families in Supaul District, Bihar

GIRD continued with the project of promoting quality education for the children of disadvantaged sections of people in Supaul district, Bihar by mobilising qualified and trained teachers for conducting special classes for primary and upper primary class children studying in Government and Government-Aided schools in this district. We have also provided orientation courses for teachers in these schools.

Integrated Bridge Education Programme (IBEP) for Out-of-School Children

The six IBEP centres that we have started last year in Delhi (Mongolpuri, Trilokpuri, Madangir and Narela) for providing primary level education to out of school children with the aim of ultimately bringing these children into the fold of formal education has continued in this year also, providing primary-level education to 340 students very low income families, mostly of migrants living in juggi-jhopris.

Nutrition Enhancement for Poor Children

This programme was started by GIRD in the year 2007. We continued this programme in this year also, benefitting about 1500 children of poor families studying in Wisdom Public School run by the Indian Society for Literacy Development and in nursery schools and crèches being run for migrant workers by some NGOs working on children's issues.

Financial Inclusion of Weaker Sections through Micro Insurance

We have been working to enroll unorganized sector workers in the micro insurance scheme launched by LIC in 2007. This year we have also added the enrolment of unorganized sector families in the Jandhan programme and in the newly launched Atal Pension Yojana programme.



Clean up the World Programme at Dubai

We have been mobilizing Indian volunteers for the UNEP-supported "Clean up the World" programme activities organized by the Dubai Municipality every year since 2007. We participated in this programme in the year 2014 also by mobilizing more than 200 Indian volunteers. Our contribution to the success of the programme was acknowledged by the Dubai Municipality with a certificate.