



World Day to Combat Desertification 2015



REPORT

Ministry of Environment, Forest & Climate Change Government of India

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I. About World Day to Combat Desertification 2015

The World Day to Combat Desertification (WDCD) is observed worldwide every year on 17th June, since 1995. In 1994, the United Nations General Assembly declared June 17 the "World Day to Combat Desertification and Drought" (General Assembly Resolution A/RES/49/115) to promote public awareness of the issue relating to international cooperation to combat desertification and effects of drought. Since then, Parties to the Convention, organizations of the United Nations System, international and non-governmental organizations and other interested stakeholders have marked this particular day with a series of outreach activities worldwide. This is a unique occasion to remind everybody that desertification can be effectively tackled through strengthened community participation and cooperation at all levels.

The theme for this year's celebration is "Attainment of food security for all through sustainable food systems" and the slogan for 2015 WDCD 'No such thing as a free lunch. Invest in healthy soil advocates a multi-faceted approach for tackling hunger - from economic development, nutritional intake to managing natural disasters.

No such thing as a free lunch Invest in healthy soils

The objectives of the WDCD 2015 are:

- i. A change in our land use practices through smart agriculture and adaptation to changing climate, especially in the dry fragile parts of the world where food shortages are becoming more and more severe,
- ii. Access to technology and land rights for small holder farmers who safeguard the environment and meet the food needs of millions of households, especially among the poorest households,
- iii. A balance in the land use for ecology and consumption, drawing on the best practices,
- iv. More investments in sustainable land practices so that sustainable food systems become the normal practice and
- v. More effective action on desertification whose effects on security, peace and stability are invisible yet real for the affected countries due especially to food and water scarcity and environmentally forced migration.

II. Observance in India

On the occasion of WDCD 2015, the Ministry of Environment, Forest and Climate Change (MoEFCC) organized a series of events involving schools children, practitioners, multi-lateral & bi-lateral agencies and private sector at the Indira Paryavaran Bhawan, New Delhi.

MoEFCC announced on its website and issued an advertisement is the newspapers inviting entries, from interested individuals/agencies, in the form of:

- 1. 'Innovative ideas for making India Land Degradation Neutral by 2030' (max 1000 words)
- 2. Concept along with painting/designs/ posters and captions etc.



Children were invited to participate in an on-the-spot painting competition to be organized in MoEFCC premises on 17th June.

MoEFCC had also invited GEF Small Grants India program (SGP) partners and UN Food and Agriculture Organization (FAO) to display their knowledge products in Ministry's campus on 17th June.

In addition, three round table dialogues were organized on the following themes:

- 1. Role of Multi-lateral/Bilateral Agencies in addressing Desertification, Land Degradation and Drought
- 2. Experiences from the Field: Best practices for addressing the issue of land degradation
- 3. Role of private sector in addressing Desertification Land Degradation and Drought in the Country

(a) Round Table Dialogues on addressing Desertification, Land Degradation and Drought

Three roundtable discussions were organized as a part of the celebration of the WDCD 2015 on 17 June 2015 in the premises of Indira Paryavaran Bhawan at New Delhi. The objective was to bring different together various stakeholders from multi-lateral and bilateral agencies, private sector, civil society organizations and the government to understand their vision, priorities, current activities and future plans to address the issues of Desertification, Land Degradation and Drought (DLDD).

i. Round Table Dialogue I: Role of Multi-lateral/Bilateral Agencies in addressing Desertification, Land Degradation and Drought

Chair: Mr. Arun Kumar Mehta, Joint Secretary, MoEFCC and India's National Focal Point for UNCCD

Co-chair: Dr. C M Pandey, Additional Commissioner, Department of Agriculture and Cooperation, Ministry of Agriculture



The roundtable with Multilateral and Bilateral agencies was chaired by Mr. Arun Kumar Mehta, and co-chaired by Dr. C M Pandev and was attended by senior officials from United Nations Development Program (UNDP), the World Bank (WB), **Swiss** Agency for Development and Cooperation (SDC). German International Cooperation (GiZ), KfW Development Bank, UN Food and Agriculture Organization (FAO), International Fund for Agriculture

Development (IFAD) and Japan International Cooperation Agency (JICA).

While welcoming the participants, Mr. Mehta said that while earth's fertile land is limited, the vast majority of food comes from the land which is increasing getting degraded. In India, about 105 million hectare (mha) area [32% of total geographical area (TGA)] is affected by land degradation and approximately 81 mha (25% of TGA) affected by desertification. Mr. Mehta informed that this roundtable discussion is the first step and aims at understanding the vision and the work being done by donor agencies on desertification and land degradation issues in India. The recommendations of this group will be translated into a roadmap for action towards building stronger and mutually beneficial working partnership between

Ministry being the National Focal Point for UNCCD and donor agencies in addressing Desertification, Land Degradation and Drought (DLDD) issues.

Ms. Janine Kunger, Director Cooperation (SDC) presented about SDC's engagement on DLDD in India through climate change adaptation perspective. She informed that SDC has been a technical cooperation partner of India for more than fifty years and since 2011, SDC's Global Programme on Climate Change (GPCC) has been supporting innovative climate mitigation and adaption projects with focus on generation, dissemination of



knowledge, contributing to policy processes. Ms. Kunger also shared SDC initiative on "Promotion of Climate Change Adaptation in Semi-Arid Areas and Rainfed Regions" in three India states namely Madhya Pradesh, Maharashtra and Andhra Pradesh which aimed at enhancing the capacities of rural communities to adapt to the impact of climate change through agro-advisory services to framers, promoting integrated watershed management practices and integration of traditional and scientific knowledge. This project was implemented by NABARD, WOTR and WRI. It benefitted 47,000 people in these three States as the project was able to bring 20-40% cost reduction due to adoption of climate resilient NRM practices, 38 villages adopted water budgeting plans, 29% of distress migration reduced, 37% reduction of children malnutrition, 13% reduction of anemia among women. In semi-arid Maharashtra, in particular, there was 30–80 % increase in crop yields and 4 to 12 feet rise in groundwater levels. Now the best practices are being scaled up in semi-arid regions by SDC. Ms. Kunger also spoke about another Indo-Swiss collaboration in Biotechnology wherein successful development of a bio-fertilizer prototype resulted in about 40% of increase in wheat production under marginal conditions, establishment of pest resistant chickpea plant and institutional/capacity building activities to ensure better access and adoption of new technologies. Mr. Mehta urged that it is important to understand the measures that were adopted on-ground which resulted in 30-80% increase in yields and more importantly reduction in distress migration by 29%. This would help to ensure that such practices are widely disseminated and scaled-up. Ms. Kunger informed the house that there were series of field tested practices were adopted related to integrated watershed management and SDC proposes to organize an international workshop with Asian and African countries participating for knowledge exchange and learning in the month of August.

Dr Rajeev Sharma, Program Officer (NRM-GIZ) said that Germany has been closely and actively linked to UNCCD work since 1980. On behalf of the BMZ, the GIZ supports the partner countries in the implementation of UNCCD through its "Convention Project to

Combat Desertification (CCD project)". Today, GiZ has over 1,000 projects across the globe on sustainable resource management in dryland regions with the aim to improve the institutional framework for the implementation of UNCCD. He shared seven initiatives from across the world. From 2003-9, GIZ implemented "Brining the UNCCD Down to Earth" in Dominican Republic, Haiti and Honduras to bring clarity on cause effect relation of the concept of desertification/land degradation and to integrated national process/strategies with local land use measures. There is an ongoing project in Central Asia where the focus is on better management of pastures, forest and wildlife resources. In Tajikistan, GIZ is focusing on introduction of joint forest management approach for rehabilitating the degraded forests improving the lives of the indigenous resource dependent people. In Mali, GIZ is supporting an initiative for integrating climate change into local planning. GIZ is working in Peru to develop economic valuation approaches showcasing positive impacts on food security, biodiversity conservation and climate change mitigation for policy recommendation. Dr. Sharma also mentioned German global initiatives in "Soil Conservation and Rehabilitation in Degraded Lands for Food Security" involving India. The initiative incorporates use of vegetation to stabilize sand dunes in desert regions of Rajasthan. In conclusion, he said that GIZ focus is to create awareness of economics of land degradation and promote sustainable land management practices. Mr. Mehta said that the Ministry has also undertaken a study on economics of DLDD and the learnings from the GIZ study would contribute and add value to the process. Mr. Mehta also suggested that many techniques and practices have been developed for promoting sustainable land management across the country it would therefore be useful if GIZ could take a lead in organizing a national workshop for cross-learning and develop a compendium of best techniques and practices.

Dr. Preeti Soni, Team Leader (EEU-UNDP) shared the experiences of two UNDP/ GEF Sustainable Land Ecosystem Management (SLEM) projects being implemented in Nagaland and Madhya Pradesh. *Jhum* or shifting cultivation is the main form of agriculture in Nagaland, the project which started in 2009 aims at optimizing *jhum* land use to enhance

primary productivity. Sharing the project progress, Dr. Soni said that 40 villages have developed innovative participatory land use plans (PLUP) which have led to informed decision making by village committees. Land use decisions are now being codified. These plans have helped in addressing conservation challenges, including rampant burning of *jhum* fields and deforestation. For the first time



in Nagaland, the women have also been actively involved in Land Use Committees. Dr Soni emphasized that the project partnership with traditional institutions helped to gain

community acceptance. About 2,085 ha fallow *jhum* area has been set aside by communities as reserve forests. Soil erosion rate has decreased from 50 to 26 million ton/ha/year, vegetative cover has improved in over 34,000 ha, *jhum* cropping phase has increased from 2 to 3 years, about 800 HH have benefited, average household income has increased by 20 to 25% due to improved yields, sale of organic produce and revolving fund set by the communities. Now, the Government of Nagaland is supporting scale up. In Madhya Pradesh, the UNDP/ GEF project aims to demonstrate the potential of bamboo regeneration for the local ecosystem services and livelihoods. Dr. Soni said that the project has led to a reduction in unsustainable dependency on forests and pasture lands, about 16,280 ha of degraded bamboo forest areas rehabilitated and about 789 poor households benefitted from forest produce in regenerated bamboo forest areas among several other positive impacts. Mr. Mehta said that both these models should be well documented and disseminated for wider replication.

Dr Anupam Joshi, Senior Environment Specialist (WB) said that India losses about ₹ 285.51 billion annually due to land degradation. About 69% of dryland with almost 25% undergoing desertification and just over 32% is affected by land degradation. He shared experience of the Bank from the across the world on DLDD related issues. In Colombia, the WB is supporting a climate smart agriculture project by mainstreaming sustainable cattle ranching practices. Under TerrAfrica partnership, the WB has been working with 26 African countries supporting innovative solutions to sustain landscapes, address land and water degradation and adapt to changing climate. This is a long-term partnership from 2005-2020. Speaking about the achievements of the completed WB/GEF projects under SLEM partnership, he informed that about 8371 ha agriculture land brought under SLEM practices, 17,702 farmers and 16,200 fishers adopted climate variability coping mechanism, 382 water harvesting structures with 222,377 cu m capacity added, 26 community seed banks of 15-20 quintal storage capacity each established, over 20 SLEM best practices documented, monitoring and evaluation indicator framework for UNCCD-DLDD development for India. Dr Joshi also spoke about the "Land Governance Assessment Framework", a scorecard based self-assessment tool on land governance developed by Bank with the Department of Land Resources. He informed that this has been piloted in Andhra Pradesh, Bihar, Jharkhand, Karnataka, Odisha and West Bengal following a participatory and technically rigorous process. Dr Joshi concluded by highlighting five major SLEM issues which India needs to take into account to address DLDD challenges and opportunities namely a) absence of an Integrated National Land Use Policy for DLDD areas, b) policy vacuum on Common Property Resources affecting land and livelihoods, c) inadequate inclusion of SLEM approaches in extension system, d) interrupted flow of ecological goods and services, and, e) garnering adequate financing for DLDD measures. Mr. Mehta acknowledged that the issues highlighted by the Bank were relevant and there was a need to improve resource use efficiency by bringing traditional and modern knowledge systems together. He emphasized on the urgent need to document and scale up SLEM best practices to address at least 1 mha of degraded lands per year.

Dr. Prem Sharma, Senior Advisor (FAO) focused his presentation on the theme of WCCD and UN International Year on Soils. He informed that 52% global land is degrading 30 to 35 times

faster at a rate of 12 million ha/year affecting 1.5 billion people, 75% of whom are poor. While sharing data on India, he said that degradation of land has severe implications for the livelihood and food security. He spoke about how soil is formed and in some places soils being lost at 100 times the rate of formation. He explained in detail the functions which soil performs to deliver various essential ecosystem services. About 99.7% of food calories come from soils/land, but desertification due to water/ wind erosion, vegetal cover removal, intensive farming, mass soil movement, alkalization/salinization, frost heaving/shattering is transforming degraded, mostly drylands, into deserts - which Dr Sharma said could be changed through concerted actions and adoption of hybrid knowledge, as also concluded by the 3rd UNCCD Scientific Conference in March 2015. He shared examples on hybrid techniques and practices which have produced visible results which have revived the Yatir forest in Negev desert, Israel; controlled desertification by using anti sand shields in Thar Desert, Rajasthan; and, controlled grazing to revive highland pastures. Dr Sharma said that there is a need to focus on hybrid knowledge and good governance to protect rural livelihoods, improve resilience to climate and market volatility. Mr. Mehta said that issues and examples shared by FAO are relevant and need further attention.

Ms. Meera Mishra, Country Coordinator (IFAD) said that the multilateral agencies bring in technical ideas, experiences and small funds to develop proof of concept based on their core



priorities which if successful needs to be scaled up for visible impact. The focus on IFAD work is on rural poverty and food security. These issues are directly related to land degradation and desertification issues. She shared the diverse portfolio of IFAD in the country wherein they are working broad on thematic like areas

livelihood improvement, agriculture, women empowerment, natural resource management and integrated tribal development in various states of India. Ms. Mishra shared few examples like soil and water conservation in Vidarbha region, promoting hardy crops in Madhya Pradesh among others. She concluded the presentation with three key lesions viz., a) simple and effective techniques can make a difference, b) engagement of communities and their institutions ensure sustainability, and, c) desertification is often the result of human activity and can therefore be prevented or controlled by human effort. Mr. Mehta appreciated the work being done by IFAD and said that desertification and land degradation processes could be arrested by undertaking appropriate measures and engaging local communities.

Mr. Vineet Sarin, Principal Development Specialist (JICA) said that JICA has been working since 1991 on forestry, agricultural and wasteland development issues. 23 projects have been supported to date, one more is in pipeline. 22 of these projects are state specific, covering 13 states namely Rajasthan (5), Tamil Nadu (3), Gujarat (2), Karnataka (2), Punjab (2), Haryana, Orissa, Himachal Pradesh, Tripura, Uttar Pradesh, Sikkim, West Bengal and Uttarakhand. He informed that the cumulative commitment of JICA stands at JPY 224.8 billion (Rs 11,800 crores). The new project for Nagaland worth Rs 620 crores is expected to be signed during FY 2015. Mr. Sarin said that their first generation projects (1991-1997) focused addressing core areas (Afforestation/ soil and water conservation) and basic issues lack of community participation, traditional mindsets etc. The second generation projects (2002-2012) were well structured in terms of approach, strategy and content with effective blending with ecological restoration and community development initiatives. He informed that JICA has covered over 2 million hectares of land in India through plantation and regeneration activities, another 0.5 million ha is expected in next 5 to 7 years plus 16,000 + JFM committees formed/functioning and 24,000 SHG are operational. Mr. Sarin said that the third generation of JICA projects under development are aligned with the 12th five year plan strategy of Government of India and are addressing the emerging trends in the forestry sector with specific focus on livelihood development, inter-sectoral convergence, capacity building, technology-based monitoring, climate adaptation etc. Mr. Mehta acknowledged a long-term association of JICA with the Ministry on forestry-related initiatives and hoped to further strengthen this association in future.

Ms. Sangeeta Agarwal, Program Officer (KfW) said that KfW Development Bank complements the technical assistance provided by GIZ through provision of capital and advisory services. The Indo-German financial cooperation under implementation is worth 3.6 billion € of which 580 million € is in the environment sector. She informed that there are about 9 ongoing projects worth 180 million € under NRM sector and another 4 are under preparation worth 200 million € KfW is working on agricultural sector with NABARD, sustainable forestry and climate adaptation issues in Tripura and Himachal Pradesh. Ms. Agarwal said that the learning so far has been that a) long term engagement and large scale approaches work, b) the focus should be on implementation and not just on piloting, c) mainstreaming the process of developing village development plans worked in Tripura, and, d) 3-tier plantation model as appropriate technology for treatment of land and shifting cultivation affected lands in Tripura was achieved. Mr. Mehta said that the work of KfW offers many interesting learnings which needs to be documented and scaled up. He agreed that the successful pilots should be scaled up on a massive scale to achieve transformational impacts.

Mr. C M Pandey presented the initiatives undertaken by Department of Agriculture and Cooperation (DAC) to address DLDD issues. He said that the major programs are National Watershed Development projects for Rainfed Areas (NWDPRA), River Valley project and Flood Prone River (RVP & FPR), Watershed Development projects for Shifting Cultivation (WDPSCA), Reclamation and Development of Alkali and Acid Soils (RADAS) and Integrated

Watershed Management Programme (IWDP). These programs have cumulatively treated 104.89 m ha with an investment of Rs 44,710 crores in FY 2013. Mr.Pandey further said that the percentage of degraded land treated under these schemes up to March 2013 was 40.64 m ha or 65% under IWMP, 11.03 m ha or 17% under NWDPRA and 7.9 m ha or 13% under RVP & FPR program. He informed that DAC along with Department of Land Resources proposes to cover the entire leftover degraded land by 2030 with an investment amounting to USD 36,129.03 million. Mr. Pandey also talked about the new practices being promoted by DAC which are also eco-friendly.

Key interventions recommended:

- Formulate an Integrated National Land Use Policy for DLDD
- Establish incentives and guidelines for rejuvenation and sustainable use of Common Property Resources
- Land degradation is a cross-cutting problem, need to go beyond pilot demonstrations towards massive scale up
- Scale up SLEM best practices through integration with extension system
- Promote community managed corridors program for ensuring habitat connectivity and proactively take up restoration of degraded forests
- Promotion of hybrid knowledge and institutions
- Institutionalize capacity development initiatives
- Organize workshop and document traditional and modern techniques and practices on SLEM
- The World Bank offered to take a lead on developing a knowledge sharing platform on DLDD issues
- FAO offered assistance on sand dune stabilization program
- Opportunities to work with GIZ, WB and other agencies on the economic valuation of DLDD
- Closer coordination on DLDD issues

ii. Round Table II: Experiences from the Field: Best Practices for addressing the issues of Land Degradation

Chair: Shri. R.B Sinha, Joint Secretary, Ministry of Agriculture

Co-chair: Dr. Vivek Saxena, Officer on Special Duty, Government of Haryana

The purpose of the round table dialogue on 'Experiences from the Field: Best practices

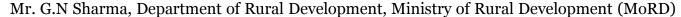
for addressing the issues of Land Degradation' was to bring different constituencies of stakeholders together, from the realms of policy and practice, to share policy insights and practical experiences for addressing the critical issues of DLDD.

The discussion was chaired by Mr. R.B Sinha. Mr. Sinha set the scene by highlighting issues surrounding up-scaling and out-



scaling pilot projects. He mentioned that while pilot projects are mostly successful, replicating the success stories on a larger scale often do not deliver the anticipated outcomes. This, he said, requires due deliberation. Mr.Sinha also stressed upon the need for harmonizing the policy objectives to achieve the desired outcome on the ground. He cited the case of free electricity for farmers, subsidized urea etc as counter-productive for achieving the DLDD goals.

Thereafter, he invited participants to present their experiences while implementing programmes and projects for addressing DLDD.





presented the public works, relating to natural resource management being undertaken under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). Dr. Sharma said that the activities under MNREGS significantly contribute towards addressing DLDD. Mr. Sharma cited best practices on watershed

management such as Dhara Vikas to rejuvenate springs in Sikkim, multi arch check dam construction in Karnataka and geo-membrane/geo-textile lining of farm ponds in Jammu and Kashmir. These and activities such as watershed management works, micro and minor irrigation, renovation of traditional water bodies, afforestation, tree plantation and horticulture in common and forest lands, road margins, canal bunds, tank foreshores and coastal belts, land development works in common lands among others have resulted in rise in ground water, improvement in soil quality, improved irrigation & change in cropping pattern and other benefits.



The presentation by Dr.Jeevan Kumar from NavJagriti, Bihar titled 'Promotion of Sustainable through Livelihood Water *Management* and Land Reclamation' provided an overview the of challenges resulting from water logging which impacts 17% of the total land area Dr. Kumar said that in Bihar. Flood plains and other wetlands, locally known as chaurs and Mauns, are the discarded loops of

meandering rivers which got cut off from the main rivers. These water bodies with proper water management services can serve as lifeline of the region by providing livelihood, maintaining the ground water table and meeting the requirements of drinking and irrigation water.

Dr. C.P Reddy, Department of Land Resources, MoRD presented the salient features of the Integrated Watershed Management Programme and its implementation. The programmes has

a strong focus on capacity building and awareness generation, people's participation and democratic decentralization in decision making to address the land degradation, drought and poverty nexus.

Ms. Pratiti Priyadarshini from Foundation of Ecological Security (FES), Gujarat spoke about the work being done on ecological restoration of land and water resources, by establishing processes of coordinated human effort to improve the



livelihoods of poor. She presented a case study on 'Strengthening Conservation and Local Livelihoods in Forest and Tribal Dominated Landscape of the Kumbhalgarh Wildlife Sanctuary' and stressed the need for building robust community institutions, capable of effectively participating in the formal management mechanisms and strengthening the livelihoods of the dependent communities, as key to efficient land use management and planning.

Dr. Vivek Saxena shared the experiences of the Government of Haryana with agro-forestry based sustainable land management. Dr. Saxena mentioned that Haryana has achieved remarkable success with Eucalyptus and Poplar based agroforestry and said that promoting agro-forestry is vital for sustainable livelihood generation and also achieving land degradation neutrality.

Mr. Drag Pal Singh from Gramin Vigyan Seva Sansthan, Rajasthan presented a case study "Promotion and Conservation of Agro-Biodiversity **Impacting** Community Livelihoods and Sustainable Development in Rural Areas of Dausa District in Rajasthan". The project objective was to conserve and enhanced biodiversity, by



encouraging use of biomass and better agro-practices resulting in less use of chemicals. This not only led to improved soil health but also improved the quality of life of the poor and marginalized farmers by adopting a community based approach resulting in livelihoods enhancement. Mr. Singh mentioned that adoption of soil and moisture conservation measures to check erosion resulted in reduced chemical use in agriculture, 25% increase in food grains, 30% increase in fodder and reduction in cost of production. In additional, 150 hectare land was reclaimed under fodder and dry land farming among other benefits to the local communities and marginalized groups particularly women and small farmers.

Dr. C.M Pandey, Ministry of Agriculture (MoA) highlighted the achievements under of the programmes of Ministry of Agriculture that have helped in prevention of soil erosion and land degradation while also resulting in improvement of soil fertility and productivity for ensuring higher income. Dr. Pandey mentioned that MoA is promoting Rainfed Area Development and soil health management under the National Mission on Sustainable Agriculture besides promoting on farm water management through micro irrigation systems. Department of Agriculture and Cooperation, MoA is also targeted to provide soil health cards to 12 million farmers in couple of years to ensure judicious use of fertilizers and pesticides to address issues of DLDD.

The presentation by Mr. Sarang Pande, Lokpanchayat was on 'Sustainable Practices in Agriculture in Risk Prone Area'. Mr. Pande stressed that by organizing small farmers to initiate economically and ecologically sustainable agriculture practices the challenges relating to DLDD can be effectively tackled.

Key interventions recommended:

- Sericulture, horticulture, plantation and farm forestry for livelihood improvement
- · Watershed approach with water budgeting
- Participatory water management
- Command area approach in irrigated areas to mitigate water logging and salinity and efficient use of water
- In-situ moisture conservation
- Agro-forestry systems including conservation and management of agroforestry on bunds/wastelands
- Resource conservation technologies
- Rainfed area development
- Creation of water resources/bodies, and augmentation of ground water
- Increasing cropped area and cropping intensity, besides crop diversification; and
- Improved irrigation and change in cropping pattern
- Soil health management and soil health card
- Soil Resource Data Bank creation
- Organic village/cluster and participatory organic certification

iii. Round Table Dialogue III: Role of Private Sector in addressing Desertification, Land Degradation and Drought in the Country

Chair: Dr Ajay Pradhan, Chairman, IWE India & Managing Director, CH2M India, Delhi

Co-chair: Mr. Suneel Pandey, Vice President, ITC Ltd, Hyderabad

The third round table dialogue was organized on 'Role of Private Sector in addressing Desertification, Land Degradation and Drought in the Country'. The purpose of the

dialogue was to bring private sector player to share their experiences, challenges faced, relevance of government policies, financing aspects in meeting their overall corporate and business objectives while addressing the critical issues of DLDD.

The session started with a brief background of the theme of the session by Mr. A K Mehta, Joint Secretary, MoEF&CC. This was followed by a brief introduction of



the chair, co-chair and other participants and the presentations.

The first presentation was made by Mr. Sachin Shridhar, a former Indian Police Service officer and Founder and Chairman of Starlit Group. Mr. Shridhar share his company' vision and especially the infrastructure development in Hill Region of Himachal Pradesh where he is developing a 400 acres of hill area which are degraded or land degraded due to geology, hill slope without direct sunlight, rocks etc. He advocated on creating new smart cluster in the hill region with a population of 10-20 thousand and self-sustaining cities to promote economic and social development. The policy makers including Urban Development Ministry must consider this aspect while promoting smart cities. Such clusters will have balanced development with agriculture, horticulture, orchards and destination tourism besides industries like pharma, packaging, food processing etc.

The second presentation was made by Mr Sunil Pandey, a former Indian Forest Service officer and Vice President of ITC Ltd. ITC is one of the major players in India involved directly with farmers for direct procurement of agricultural produces like maize, tobacco, corn, soya, etc. ITC has heavily invested in land development especially in AP, Telengana, MP, Gujarat, etc. for increasing high yield crops by providing integrated water supply, training and technical knowhow including support and supply of seeds. ITC has brought in about 150,000 hectares of dry land into active and intensive farming. They have provided assured water, seeds and

financial support under special arrangements. Some of the significant innovative projects are

also demonstrated like intercropping maize and corn with forestry, in which 75% of land cultivated under crops and forestry. Integrated 25% for Watershed schemes are also integrated to improve the source of water and sustainability not only for agriculture but also for drinking water. ITC is one of the companies working actively on integrated agriculture and taking stewardships in management natural resources. ITC has also



championed in working closely with community and government on watershed development schemes.

The third presentation was made by Dr Rajeev Vijay, Director of Urban Environment Services of CH2M India. CH2M is a large consulting, engineering, design, and program management



and construction company based out of US. The presentation was on sustainable urban development in which focus must be given on Land and Water Management. He highlighted on land development based on purposeful and thoughtful manner with clear policy guidelines. He also advocated for sustainable and compact city where in precious land could protected be

conserved for future uses. Rajeev

shared his experiences of developing a new green field Dholera Industrial Investment Region under DMICDC project. Dholera has been planned and being executed currently under sustainable smart city model. Almost 85% of the 900 square km of Dholera Invest Region is a waste and saline land which have to be reclaimed and developed. He also advocated that there must be a limit or boundary for City to stop further sprawl.

The fourth presentation was made by Mr. Pradeep Joshi, Head of Strategic Business Division of L&T. L&T has been a pioneer in the construction and development of large infrastructure projects in India. L&T has been always the champion of the cause for stewardships in sustainable infrastructure development and managing natural resources which include land, water and environment. L&T has been recycling and using the construction and demolition Waste in various development projects. Training and capacity building are some of their major initiatives to create the workforce for delivering projects. L&T has taken stewardships

for using less water and treated or recycled water for construction work. Most of their large projects which involves mining and quarrying for construction activities are properly closed with creation of a bio-diversity park and green environment. They have taken a conscious decision not to leave any mine abandoned.

The fifth presentation was made by Mr. N Vijayananda, Director Projects of Kudremukh Iron Ore Corporation Ltd (KIOCL) Bangalore, Karnataka. KIOCL is a public sector company under the Ministry of Mines, Government of India. Mr. Vijayananad shared the experiences of various steps and action taken by the company in dealing with closure of mines and ecological restoration of the whole area. The company used to produce low grade of Iron Ore for 100% export with a total through put of 22 million metric tonnes per annum until closed during 2006 by the order of Supreme Court of India. KIOCL has commissioned this project with the technical collaboration from Canada with highest standard to protect environment by adopting innovative transportation of ore through pipeline in slurry form to New Mangalore Port. They tackled all the pollution arising out of mining activities like; noise, water, air and environment by carefully adopting best practices. The company used various developmental organisations and National Institutes in preservation and development of green coverage, forest coverage, managing tailing water and reuse of sediments trapped in tailing pond for construction activities.

The last presentation was made by Mr. S Roy Choudhry, Head of Health Safety and Environment, Adani Group and former Additional Chief Secretary, Gujarat. Adani is a large private sector company with business interest in Minerals and Mines, Ports, Power and Real



Estate. Mr. Roy Choudhry shares his rich experiences mostly related to policy matters and how a private sector like Adani utilised unproductive waste and saline land for the development various infrastructure. He advocated that PPP is a wrong connotation and instead must Government, use Community and Private party in developing waste or degraded land and stop desertification. He suggested that most of the waste land or degraded land are with either panchayat or with

government and must be given to private sector under a framework for development with long lease where in some CSR funding can be made available. He also suggested having top soil bank for further trading and conservation. Government should also use CAMPA fund for such purposes.

There were number of questions and clarification sought from participants. There was also interaction amongst panel members as to what should be a joint effort of Pvt Sector in shaping

a policy and intervention of industry bodies like CII, FICCI, ASSOCHAM, etc. Also, to convene a meeting with apex industry bodies in which there should be participants from various ministries to come out with a framework and guidelines including subsidy, financial support, institutional supports, etc.

The chair summed up the session by giving few remarks on each presentation and thanked all speakers and audience for their contribution to the session. The chair also thanked the Ministry for inviting private sectors for these opportunities.

Key interventions recommended:

- Integrated Agriculture and Natural Resources Management aiming an integrated land use policy
- Watershed approach with water Audit
- Strong coordination of all development programs like NREGS, DPAP, HADP, etc.
- To have better Integrated Watershed and Natural Resources Management
- Define the City Boundary in order to stop haphazard and unorganised development of sprawl
- Compact City Development to preserve precious land in the city
- Align all departmental development works on Watershed Development with a nodal person or organisation
- Frequent change of staff, no alignment of various departments like Department of Land Resources, Soil Conservation, Water Resources and Environment &Forest in implementing projects
- Soil Resource Data Bank creation
- Transfer degraded land adjacent to the Private sector project to develop and manage
- Need to focus on promotion of hybrid knowledge and institutions to develop community ownership and sustainability of the initiatives undertaken

(b) Activities involving College and School Students and open for public

i. On-the-Spot Painting Competition

An on-the-spot painting competition on the WDCD 2015 theme was organized in the Indira Paryavaran Bhawan, Jor bagh on 17 June, 2015 by the Desertification Cell, Ministry of Environment, Forest and Climate change in collaboration with the National Museum of Natural History, Tansen Marg, New Delhi. 118 students (age group 12 to 16 years) of class 6th to 10th from various schools of Delhi participated in the activity and made paintings on the given theme.

Paintings were judged instantly by a panel of judges which included renowned artists Mr. Josh P. S., Mr. Anant Mishra and Mr. Kirpal Singh (Asst. Prof, Delhi College of Art) and internal experts of subject. As the competition was over, students were provided delightful lunch. Student who took part in on the spot painting competition had a very keen look on the poster exhibition which was raised in the premises.









ii. Poster Making Competition

Invitation based Poster Making Competition was organized in collaboration with the National Museum of Natural History, New Delhi for the students from class 11th to Graduation final year (17 to 21 years) and was based on theme "Attainment of Food Security for All through Sustainable Food Systems" and using the slogan 'No such thing as a free lunch. Invest in healthy soil'. 63 entries were received from students from across the country before the deadline for this competition i.e. 12 June, 2015.



Received entries were judged on 15 June, 2015 by a panel of judges which included renowned artists i.e. Mr. Josh P.S., Mr. Anant Mishra and Mr. Kirpal Singh (Asst. Prof, Delhi College of Art) and internal experts of subject. All entries including winner entries were displayed on panels for two days i.e. 17-18 June 2015 in the same hall where the on-the-spot painting competition was held and



was open for all after the painting event was over.





iii. Innovative Ideas Competition

A third competition in form of invitation to innovative ideas was also organized for which 57 valid entries in form of essay/innovative ideas were received by the ministry. Theme for this competition was "Making India land degradation neutral by 2030". Received entries were judged by a panel of judges which included Dr. T. P. Singh, Assistant Director General Biodiversity and Climate Change, Indian Council of Forestry Research and Education Dehradun; Dr. Ruchi Pant, Programme Analyst (Biodiversity and Natural Resource Management), Energy and Environment Unit, UNDP India and Mrs. Bharati, Director (Desertification Cell).

iv. Exhibition

MoEF&CC had invited GEF Small Grants India program (SGP) partners and UN Food and

Agriculture Organization (FAO) to display their knowledge products in Ministry's campus on 17 June. Four SGP partners from Lok Panchayat (Maharashtra), PHD chambers (Rajasthan), Nav Jagriti (Bihar) and Grameen Sansthan (Rajasthan) had put up stalls displaying and distributing the information material and also selling products like honey, organic cereals, spices, soaps, creams etc developed under their GEF/ SGP projects.

Besides, Centre of Environment Education





(CEE) being the national host institution also displayed and distributed information material and sold products of other SGP India partners who could not participate. The total sale of products was over Rs 15,000. The FAO displayed and distributed the information material developed for UN

International Year of Soil (2015).





(c) Plenary Session

The Plenary Session of the WDCD program was organized at Ganga Auditorium, Indira



Paryavaran Bhawan, Jor Bagh where Mr. Susheel Kumar. Additional Secretary, MoEF&CC was the Chief Guest. This session was attended participants of three round table dialogues, officers & officials of Ministry, school children & their parents and media persons. The session was inaugurated by lighting of lamps by the Chief Guest and other distinguished guests on dais. Afterwards, Mr. Mehta, Joint Secretary welcomed the Chief Guest and the participants. Mr. Mehta further informed the august gathering that the World Day to Combat Desertification provides a unique occasion to remind everybody that the

challenge of desertification can be effectively tackled, that solutions are possible, and that key

tools to this aim lie in strengthened community participation and cooperation at all levels. Our country has around 47% of land under cultivation and about 70% population depend on agriculture. Around one-third of the total area of the country is affected by land degradation and the major causes unsustainable are water management, poor agricultural



practices, human and livestock pressure on land, deforestation, climate change and industrialization. With improved land management practices, the problem of land degradation can significantly be reduced. He also presented the outcomes of the first round table dialogue on 'Role of Multi-lateral/Bilateral Agencies in addressing Desertification, Land Degradation and Drought' which are mentioned below:

- Land degradation is a problem which cuts across sectors. Thus concerted actions with
 mission mode approach could effectively address this issue. An Integrated National
 Land Use Policy for DLDD areas should be framed to ensure effective mainstreaming of
 SLEM approaches and practices.
- Incentives and guidelines for rejuvenation and sustainable use of Common Property Resources should be established.

- There is a need to go beyond pilot demonstrations towards significant scale up of available SLEM best practices through integration with extension system so that land based productivity is improved.
- Promote community managed corridors program for ensuring habitat connectivity and proactively take up restoration of degraded forests covering at least 1 m ha annually
- There is need to focus on promotion of hybrid knowledge and institutions to develop community ownership and sustainability of the initiatives undertaken.
- Capacity development initiatives on SLEM need to be institutionalized.
- Organize a national experience sharing workshop on traditional and modern techniques and practices on SLEM. These should be documented as a easy to read/hands on compendium for mainstreaming and wider replication across the country.
- The World Bank offered to take a lead on developing a knowledge sharing platform on DLDD issues.
- FAO offered assistance on sand dune stabilization program.
- There are opportunities to work with GIZ, WB and other agencies on the economic valuation of DLDD. Thus, providing adequate/ appropriate cost -benefit analysis for mainstreaming DLDD concerns in GoI, State Government, donor agencies and private sector programs and operations.
- A knowledge management system on DLDD would be established
- The Ministry and agencies expressed the interest and need to closely work on DLDD issues.

Dr. Vivek Saxena elaborated the recommendations of the second round table dialogue which



was on Experiences from the Field and discussed some of the Best Practices for addressing the issues of Land Degradation.

- Policies that are in contradiction with meeting the DLDD objectives need appropriate corrections.
- All policies and programmes of relevant ministries and departments

have integral component related to DLDD. Convergence, awareness, project formulation are the key issues/constraints for appropriate site specific implementation.

• Watershed management approach is the solution that is low cost to combat desertification; therefore, it should be considered as a tool for addressing DLDD.

- Challenges of up scaling-up, such as sustainability and replicability need to be addressed. Pilot projects are generally successful due to focused approach and assured financial support. Appropriate landscape based best practices on watershed approach need to be up-scaled and supported appropriately.
- Developing a package of sustainable livelihood practices will help address the DLDD challenge.
- Need to develop synergies with various programmes and engage relevant stakeholders.

The third round table dialogue was on the role of Private Sector in addressing DLDD in the Country. Some of the key private sector players shared their experiences, challenges faced, relevance of government policies, financing aspects in meeting their overall corporate and business objectives while addressing the critical issues of DLDD. Dr. Ajay Pradhan summed



up the recommendations of this dialogue and the key learnings are:

 Align all watershed development projects of various ministries under a single department or nodal agency. It is observed

that Watershed development is being done by Department of Land Resources, Department of Agriculture, and Department of Public Health Engineering for recharging of ground water, Department of Water Resources, Department of Environment and various regional development authorities. In this way program can be more focused and impactful.

- Land and soil being excavated for various infrastructure project must be stored in a soil bank and may be traded for sustainable ecological conservation.
- PPP must be relooked where in Government, Community and Private work together with a mind-set for the government that a reasonable profit by Private must be accepted.
- A policy to reuse all Construction and Demolition Waste (C&DW) for appropriate infrastructure development projects as per suitability.
- All construction activities must use recycle water from industry or municipality.
- There must be consistency in policy framework for Industrial Development by all states.

- There must be policy framework for use of technology using CSR funding for land reclamation for degraded and waste land.
- Policy for use of Compensatory Afforestation Fund Management and Planning Authority (CAMPA) for degraded and waste land. Such fund has been lying with government as part of development projects including industrial development

Mr. Susheel Kumar in his address highlighted that Desertification and Land degradation are critical environmental issues and at the Rio+20 Conference in 2012, world leaders recognized



DLDD as a serious global challenge impeding sustainable development globally and agreed towards an aspirational goal for achieving a land-degradation neutral world. Goal 15 of the final report of the Open Working Group on 2015 Sustainable Development Goals specifically includes a priority target on achieving a land degradation neutral world by 2020. India is taking measures to achieve the aspirational goal of land Degradation Neutrality by 2030.

After the address of the Chief Guest, names of winners for the on the spot painting competition and poster making competition were announced. The prizes include First Prize for Rs. 15000/-, Second prize for Rs. 12000/-, Third prize for Rs. 10000/- and five encouragement prizes for Rs. 2000/- each.





The program was wrapped up by the vote of thanks by Ms. Bharati, Director (Desertification Cell). She thanked all participants for making the program successful.

III. Annexes

(a) Advertisement







National Museum of Natural History (Ministry of Environment, Forest & Climate Change)

Government of India

The National Museum of Natural History (NMNH), a subordinate office of the Ministry of Environment, Forest and Climate Change is organizing following Competitions, as part of World Day to Combat Desertification.

Theme: "Attainment of food security for all through sustainable food systems" Slogan: No such thing as a free lunch. Invest in healthy soils

ON THE SPOT PAINTING **COMPETITION**

Eligibility: Class 6th to 10th or between

age 12 to 16 years.

Venue: Indira Paryavaran Bhawan,

Jor Bagh Road, New Delhi

Date: 17th June 2015

Timing: 10:00 am to 12:00 noon

POSTER MAKING COMPETITION

Eligibility: 11th to Graduation final year or 17 to 21 years.

Mode of Competition: By inviting

entries.

Last date of submission of Poster: 12th

June 2015

INNOVATIVE IDEAS COMPETITION

Entries are invited in the form of "Innovative ideas for making India Land **Degradation Neutral by 2030"** (word limit: 1000 words)

Eligibility: Open to all individuals, agencies, NGOs, CEOs, autonomous institutions etc.

Last Date of submission: 10th June, 2015 on E-mail ID: naazrizvi@yahoo.co.in

Prizes (all three competitions):

Ist Prize Rs.15000:

IInd Prize Rs.12000; IIIrd Prize Rs.10000

Additional Five Encouragement Prizes of Rs. 2000/- each for Painting and Poster Making Competitions only.

Registration forms can be downloaded from NMNH website or may be collected personally from Education Division of NMNH

For queries and details please contact:

Education Division. National Museum of Natural History,

Tansen Marg, New Delhi-110001 Ph. 011-23753235, 23320739; E-mail: nmnh.edu5678@gmail.com

Website: www.nmnh.nic.in

(b) Programme Agenda



World Day to Combat Desertification 2015

Theme: "Attainment of food security for all through sustainable food systems." Slogan: No such thing as a free lunch. Invest in healthy soils

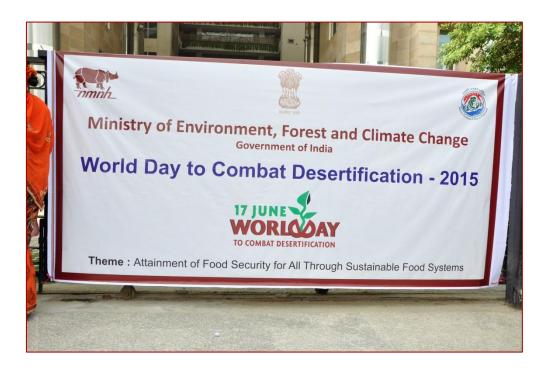




Indira Paryavaran Bhawan Ministry of Environment, Forest and Climate Change Jor Bagh, New Delhi

09:30-11:30 hrs	On-the spot painting competition (12-16 years age group)
	Display of entries of poster making competition (17-21 years age
	group)
	Venue: Dining Hall, 4th Floor, Vayu Block
09:30-11:30 hrs	Round Table Dialogue I: Role of multilateral/bilateral agencies
	in addressing Desertification, Land Degradation and Drought
	in India
	Venue: Narmada Auditorium, Ground Floor, Jal Block
09:30-11:30 hrs	Round Table Dialogue II: Experiences from the field: best
	practices on addressing the issues of Land degradation
	Venue: Sutlej Auditorium, Ground Floor, Jal Block
09:30-11:40 hrs	Round Table Dialogue III: Role of the Private Sector in
	addressing Desertification, Land Degradation and Drought in
	the country
	Venue: Indus Auditorium, Ground Floor, Jal Block
11:30-11:45 hrs	Tea/Coffee break
12:00-13:15 hrs	Plenary Session
	Venue: Ganga Auditorium, Ground Floor, Vayu Block
12:00-12:05 hrs	Lighting of the lamp and presenting saplings/bouquets
12:05-12:15 hrs	Welcome Address
12:15-12:30 hrs	Presentation of outcomes from Round-table Dialogues
12:30-12:45 hrs	Address by the Chief Guest
12:45-13:10 hrs	Distribution of prizes for the best creative entries
13:10-13:15 hrs	Vote of Thanks

(c) Banners





(d) Certificate Template



(e) List of Participants of three round table dialogues

Round Table Dialogue One

- 1. Mr. Arun Kumar Mehta, Joint Secretary, MoEFCC and India's National Focal Point for UNCCD (Chair)
- 2. Dr. C M Pandey, Additional Commissioner (NRM), Department of Agriculture and Cooperation (Co-Chair)
- 3. Dr. Anupam Joshi, Senior Environment Specialist, World Bank
- 4. Dr. Preeti Soni, Team Leader, EEU, UNDP
- 5. Ms. Lianchawii, Program Officer, EEU, UNDP
- 6. Mr. Shyam Khadka, Representative, FAO
- 7. Mr. Sunder Subramanian, Advisor, FAO
- 8. Mr. Bhaskar Goswami, Policy Specialist, FAO
- 9. Ms. Janine Kunger, Director Cooperation, SDC
- 10. Dr. Rajeev Sharma, Program Manager, GIZ
- 11. Ms. Sangeeta Agarwal, Sector Specialist (NRM), kfW
- 12. Ms. Meera Mishra, Country Coordinator, IFAD
- 13. Ms. Ai Tachikawa, Representative, JICA
- 14. Mr. Vineet Sarin, Principal Development Specialist, JICA
- 15. Dr. Nayanika Singh, GEF Consultant, MoEFCC
- 16. Ms. Neha Pai, Consultant, MoEFCC
- 17. Mr. C N Jaisi, Assistant, MoEFCC

Round Table Dialogue Two

- 1. Mr. R. B. Sinha, Joint Secretary, Ministry of Agriculture, Government of India (Chair)
- 2. Dr. Vivek Saxena, OSD, HFDC, Govt. of Haryana, Haryana Forest Deptt. (Co-Chair)
- 3. Mr. G. N. Sharma, Irrigation & Soil Engg. Expert MGNERGA, Ministry of Rural Development
- 4. Mr. Biju Abraham, PE, Horticulture & Afforestation MGNEREGA, Ministry of Rural Development
- 5. Mr. Sarang Pande, Program Director, Lok Panchayat, Maharashtra
- 6. Mr. Vijay Sambare, Project Coordinator, Lokpanchayat, Maharashtra

- 7. Ms. Pratiti Priyadarshini, Senior Project Officer, Foundation for Ecological Security (FES)
- 8. Dr. Jeevan Kumar, Programme Manager, Nav Jagriti, Bihar
- 9. Ms. Bharati, Director (Desertification Cell), MoEFCC
- 10. Mr. Drag Pal Singh, Secretary/Director, Gramin Vigyan Seva Sansthan-Rajasthan
- 11. Mr. C.M. Pandey, Additional Commissioner, DAC, Ministry of Agriculture.
- 12. Dr. C.P. Reddy, Dy. Commissioner, DOLR, Ministry of Rural Development.
- 13. Mr. Anil Arora, Senior Project Officer, GEF/UNDP Small Grants Program
- 14. Ms. Ridhima Sud, Consultant (Desertification Cell), MoEFCC

Round Table Dialogue Three

- 1. Dr. Ajay Pradhan, Institution of Water and Environment (India), New Delhi (Chair)
- 2. Mr. Sunil Pandey, Vice President (Raw Material and Plantation) ITC Limited, Secunderabad (Co-Chair)
- 3. Mr. Sachin Shridhar, Founder and Chairman, Starlit Group, New Delhi
- 4. Dr Rajeev Vijay, Director (Urban Environment Services), CH2M and Halcrow India, Noida
- 5. Mr. Pradeep Joshi, Head (Strategic Business Division), Larson & Tubro Ltd., Kolkata
- 6. Mr. N Vijayananda, Director, Projects of Kudremukh Iron Ore Corporation Ltd, Bangalore
- 7. Mr. S Roy Choudhry, Head of Health Safety and Environment, Adani Group, Ahmedabad
- 8. Mr. A K Mehta, Joint Secretary, MoEF&CC
- 9. Dr. Vivek Singh, Secretary, IWE (India), New Delhi
- 10. Ms. Bharati, Director (Desertification Cell), MoEFCC
- 11. Dr. Pratibha D'Souza, Consultant (Green India Mission), MoEFCC
- 12. Mr. Tarun Kathula, Consultant (Wildlife Division), MoEFCC

(f) Names of winners of On-the-spot painting, Poster making and Innovative Ideas competitions

On-the-spot painting competition

- 1. First prize Ms. Anupriya Nandy, Vishwas Bharati Public School, Noida, Uttar Pradesh
- 2. Second prize Ms. Somoshree Mahapatra, St. Anthony's Sr. Sec. School, Delhi
- 3. Third prize Ms. Sharadha Cambridge School, Noida, Uttar Pradesh
- 4. Encouragement prize-1 Ms. Shreya Bhatia, Convent of Jesus & Mary, New Delhi
- 5. Encouragement prize-2 Mr. Puru Mehra, Khaitan Public School, Sahibabad, Uttar Pradesh
- 6. Encouragement prize-3 Mr. Rohit Gupta, G.B.S.S. School, Delhi
- 7. Encouragement prize-4 Ms. Shubhangi Das, Summer Fields School, Delhi
- 8. Encouragement prize-5 Mr. Anesh Gupta, Good Day Public School, Delhi

Poster making competition

- 1. First prize Mr. Tarun Sharma, College of Arts, Delhi University
- 2. Second prize Mr. Deepak Kumar, College of Arts, Delhi University
- 3. Third prize Mr. Ravi Kant, Sunder Deep College of Architecture, Ghaziabad
- 4. Encouragement prize-1 Ms. Sanjana, Government Girls Secondary Senior School, Nangloi, Dehi
- 5. Encouragement prize-2 Ms. Vidisha Madan, Chandra Parbhu Jain College, IP University, Delhi
- 6. Encouragement prize-3 Ms. Nikki Kumari, College of Arts, Delhi University
- 7. Encouragement prize-4 Mr. Sanjay, College of Arts, Delhi University
- 8. Encouragement prize-5 Mr. Vikas, Delhi University

Innovative ideas competition

- 1. First prize Dr. Ruma Bhargava, Indian Institute of Public Health, Delhi
- 2. Second prize Mr. Dharmik Shah, dharmik.innovation@gmail.com
- 3. Third prize Ms. Aditika Agarwal, Doctoral Student (Foods and Nutrition), New Delhi





No such thing as a free lunch Invest in healthy soils

Ministry of Environment, Forest & Climate Change

Government of India Indira Paryavaran Bhawan, Jor Bagh New Delhi-110 003 Website: www.moef.nic.in