

Proceedings of UNCCD COP 14 Side Event on: Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals

Date: 12th September, 2019

Submitted to
NAFED



For more information

Dr. J. V. Sharma

Director, Forestry and Biodiversity Division

T E R I

Darbari Seth Block

IHC Complex, Lodhi Road

New Delhi - 110 003

India

Tel. 2468 2100 or 2468 2111

E-mail jv.sharma@teri.res.in

Fax 2468 2144 or 2468 2145

Web www.teriin.org

India +91 • Delhi (0)11

Table of Contents

INTRODUCTION	1
PANEL DISCUSSION	1
RECOMMENDATIONS	5
ANNEXURE 1. AGENDA OF THE SIDE EVENT.....	7
ANNEXURE 2. FLYER OF THE EVENT	9
ANNEXURE 3. LIST OF PARTICIPANTS.....	13
ANNEXURE 4. PHOTOGRAPHS	19

Proceedings of UNCCD COP 14 Side Event on “Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals” held on 12th September, 2019

Introduction

Desertification/land degradation and drought (DLDD) are challenges of a global dimension and are directly addressed by UNCCD. Land degradation and desertification contribute to and aggravate economic, social and environmental problems such as poverty, poor health, lack of food security, biodiversity loss, water scarcity, reduced resilience to climate change and forced migration. They continue to pose serious challenges to the sustainable development of all countries, particularly affected countries. To overcome these problems and also to work towards achieving Sustainable Development Goals, UNCCD has launched Land Degradation Neutrality (LDN) Programme.

The Energy and Resources Institute (TERI) in collaboration with National Agricultural Cooperative Marketing Federation of India (NAFED) had organised a Side Event on Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals” on 12th September 2019 at the UNCCD COP 14.

Panel Discussion

The panel session was chaired by **Shri SS Negi, Vice Chairman, Uttarkhand Rajya Gramin Evam Palayan Ayog**, who in his opening remarks emphasised upon the importance of community participation in order to achieve the ambitious goal of land degradation neutrality by 2030. Dignitaries across various sectors were present on the panel and were welcomed by Shri Negi.

The session started with an introduction by **Dr Yogesh Gokhale, Senior Fellow, Forestry and Biodiversity Division, TERI**, who introduced the topic among the audience. He portrayed the chronology of Watershed Schemes in India followed by the mapping of various sustainable development goals that could be achieved through the watershed approach of Land Management.

Shri Sanjeev Chaddha, Managing Director, National Agricultural Cooperative Marketing Federation of India provided his remarks on NAFED’s role in providing market linkage to small and marginalised farmers. He emphasised on the fact that since the last three years prices of pulses have been below 100 Rs/kg; which could be attributed due to the high volume of pulses purchased by NAFED at Minimum Support Price (MSP). He also threw light on the efficacy of Direct Benefit Transfer (DBT) in the long term as that would benefit the rural economy and reduce the dependence on middlemen. NAFED’s role in organic farming was also highlighted. Moreover, he also talked about the difficulties faced while horticulture enhancement because of the issue of perishability involved in it. Further, he showcased a sustainable agricultural model adopted by NAFED that aggregated the agricultural waste, which was provided to the industries which in turn used it as a raw

material for synthesising various products such as purified methane sold at the rate of 41 Rs/kg. The carbon credits generated were also being sold to the various industries, thus establishing a zero discharge; circular economy model.

Dr. Rajiv Kumar Garg (IFS), PCCF and Principal Advisor, Coal India Limited, highlighted the thermal sector perspective. He talked about the effect of coal mining on forest degradation. He pointed out that despite of a huge reserve of more than 300 billion tons of coal in India; we still spend a staggering amount on the import of coal to fulfill the energy needs in our country. Coal India Lmt is mandated to reduce the import of coal by increasing the productivity of coal from India itself. The current scenario depicts around 75,000 Ha of forest land and 2, 40,000 Ha of non forest land is degraded due to the mining activities and in order to achieve the productivity of 102 billion tons of coal by 2030; an estimated 1, 90,000 Ha of forest land and 5, 16,000 Ha of non forest land would be under the threat of land degradation due to mining in future. Therefore, the onus lies on the mining industry to achieve the land degradation neutrality so as to balance the ill effects of mining on the land. He emphasized upon the initiatives of the coal sector in order to arrest the forest degradation. Measures such as ban on coal mining in Eco-sensitive areas, National parks and corridors and mapping of coal blocks to assess the forest cover, hydrology, calorific value, amount of coal, its linkage to thermal power plants, so that the mining could be carried out in least affected area. Coal India Limited further has reclaimed around 5,000 hectares of degraded land in various coal block areas which could be returned to the state government. His concluding remarks highlighted the need of a smooth and sustainable transition from coal based power generation towards non conventional energy sources.

Shri Umakant, Joint Secretary, Department of Land Resources, Ministry of Agriculture, Cooperation and Farmers Welfare briefly introduced the the theme through the case studies of Andhra Pradesh and Maharashtra. He talked about the evolution of WDC-PMKSY in ensuring watershed development approach to achieve land degradation neutrality. WDC-PMKSY is implemented in a decentralized manner with the Steering Committee at the central level, State Level Nodal Agency at the state level, Watershed Cell cum Data Centre at the district level and Project Implementing Agency at the project level. A total of 8214 projects have been sanctioned till 2015 in 28 states of the country. He talked about the financial as well as physical progress of the PMKSY. In the state of Andhra Pradesh, parameters such as water table, cultivated area, crop productivity, vegetation cover and milk production have considerably gone up. Likewise, in the state of Maharashtra, these parameters have also shown an increasing trend. Ministry has further partnered with the NRSC to monitor the program through “Shrishti geo-portal” and “Drishti Mobile App” which aids in geo tagging of work and real time monitoring. He also emphasized on the fact that the water collected after post monsoon is usually used grow plants such as drumstick. He concluded by highlighting on how PMKSY has effectively been put to use in order to achieve land degradation neutrality.

Dr Ashok Kumar Jain, Principle Advisor, Niti Aayog initially, talked about the link between water scarcity and land degradation. He laid emphasis on the fact that 65% of agriculture is still rainfed and scarcity of water highly affects the food productivity. By citing the example of Anantapur, a district in Andhra Pradesh, he showcased how the watershed approach could be put to use to achieve land degradation neutrality. He discussed on how drought prone as well as flood prone areas needs to be managed in order to reduce land degradation. In a country like India, the climatic conditions are variable thus there is a huge disparity in the rainfall pattern among the states. We are steadily moving from water sufficient towards water scarce where initially the availability of water was 5000 cubic meter

per capita to the present 1500 cubic meter per capita. He discussed on how 85% of rural India still depends upon the groundwater for various purposes and the role of watershed management to ensure groundwater availability. He highlighted the fact that the problem arises when there is excess tapping of the groundwater. For example, in Andhra Pradesh’s hard rock areas which are traditionally water deficient areas, 59% of the ground water available is drawn into the hard rock areas and another 21% of groundwater is available in the command area. But due to the construction of canals, the command areas are prone to water logging and the hard rock areas are water deficit thus escalating the need for conjunctive use of water to avoid land degradation. He also highlighted the issue of sea water ingress prevalent in coastal areas. Moreover, he emphasized on the importance of traditional water tanks and the role of community in maintaining those. He concluded by suggesting how low cost water harvesting systems could be effectively used. Techniques such as ploughing against the contour so as to retain the moisture and choosing of agricultural crop such as groundnut which require less water were some of the significant suggestions made by him in his concluding remarks.

Mr. Ravidra Kulkarni, Soil Survey Officer, Soil and Land Use Survey of India highlighted the role of Soil and Land Use Survey of India in implementing the concept of watershed. He elaborated the initiatives carried on by SLUSI such as delineation and codification of watersheds with unique codes of various Hydrologic Units, prioritization of watersheds through rapid inventory of the catchment area for macro level planning, detailed soil inventory of very high and high priority watersheds in the catchment for micro level planning and development of Geo-spatial database on watershed, soils and land information for Web services. He further emphasised on the development of “Watershed Atlas of India”. He talked about the achievements of SLUSI and how the database maintained by SLUSI is put to use by various departments and ministries. He concluded by elaborating how concept of watershed could be put to use to generate employment.

Mr. Sushil Kumar Awasthi, Additional Director, IGNFA, Dehradun, talked about the various issues faced to achieve land degradation neutrality. He highlighted the fact that the last two decades has faced a tremendous increase in land degradation and the initiatives taken to achieve land degradation neutrality are still under capitalised. He briefed about the National Commission on Agriculture Report, 1976. He concluded by emphasising on the need of appropriate funding mechanism to achieve the aspirational goal of land degradation neutrality by 2030.

Dr. Jitendra Vir Sharma, Director, Forestry and Biodiversity, TERI, elaborated the concept by talking about the drivers of land degradation that directly or indirectly impacts the health and productivity of the land. He quoted that land degradation has already had a pronounced impact on ecosystem functions worldwide amounting to a 5 % reduction in total global net primary productivity. He briefed about how in between 2000 and 2009, land degradation was responsible for annual global emissions of 3.6–4.4 billion tonnes of CO₂. He further stated that over the past two centuries, soil organic carbon, an indicator of soil health, has seen an estimated 8% loss globally from land conversion and unsustainable land management practices (176 Gigatonnes of Carbon) and projections to 2050 predict further losses of 36 Gt C from soils. The annual global cost of land degradation due to land use change and reduced cropland and rangeland productivity has been estimated at roughly USD 300 billion. The loss of ecosystem services due to land degradation cost between USD 6.3 and 10.6 trillion annually, representing 10-17% of the world’s GDP. He discussed about the study conducted by TERI, on the economics of land degradation, where the annual economic loss due to degraded land and change in land use in India was valued at Rs 3.17

lakh crore (\$46.90 billion) in 2014-15 i.e. 2.5% of the country's gross domestic product (GDP) in 2014-15. Almost 82% of the estimated cost is on account of land degradation and only 18% due to land use change. He further briefed about how the degraded land could be restored through the watershed approach. Watershed is a geo-hydrological unit draining to a common point by a system of drains. Watershed development refers to the conservation; regeneration and the judicious use of all the natural resources particularly land, water, vegetation and animals and human development within the watershed. He highlighted that to make a watershed approach of land management a success, it is very important for the community to come together and participate in planning, initiation and execution of location-specific watersheds development activities such as soil, water and biomass conservation measures. People's participation is the key to managing and sustaining the assets created under the watershed development program for community development. He also emphasised on the Gram Sabha based approach which is being implemented with respect to forest resource which covers around one fourth land of the country, the forest governance is based on people's participation as mandated in the National forest Policy, 1988. He further elaborated the role of Joint Forest Management Committees in forest governance. He illustrated on how a governance model could be adopted for effective forest governance through:

1. CFR which must be maintained for meeting the ecological need of the people
2. Economic benefit from forest resource under sustainable use principle
3. GS must take advantage of the experience of Existing JFM institution with respect to SFM
4. Management of CFRR must be on the basis of micro plan prepared based on working Plan of the respective division
5. Implementation of the activities for SFM should be done by GS
6. Regulatory Mechanism and Monitoring of the activities by SFD
7. Payment Mechanism for Ecosystem service and Biodiversity conservation such as value of the carbon and other services should be developed.

He concluded by citing that people centric good forest governance might help in the checking forest degradation and improving quality of forests.

The panel session was then followed by closing remarks of **Shri SS Negi** who culminated the session's discussion into various aspects. He summarised on how watershed approach is a tested tool to achieve Land Degradation Neutrality. Sustainable Development Goals could be achieved through the watershed approach and all the speakers emphasized on the various aspects of implementation, impacts and other issues related to watershed programmes in India. He highlighted that the key issues for the success is good governance, local level institutional strengthening, inclusive participation and involvement of weaker section and women. Community Participation is a necessity to ensure effective implementation of watershed approach. He further added that provision of market linkage to small and marginalised farmers is a prerequisite to ensure long term viability of watershed approach and its contribution towards attaining food security. He enunciated various Sustainable Land Management practices as cited by the various panellists. He concluded by highlighting the linkage between the SDGs and achievements of watershed programmes in India.

Recommendations

Based upon the deliberations amongst experts, researchers and participants following recommendations have emerged from the panel session:

- Watershed Approach is a participatory way to treat catchment areas, enhance land productivity management and develop livelihood options. Thus, it is a tested approach to achieve land degradation neutrality.
- Adoption of watershed approach directly contributes to achievement of Sustainable Development Goals
- The supremacy of the Gram Sabha must be maintained in the forest governance model but with the exclusion of any government official in the committee as mandated by FRA. Therefore, the solution is to maintain this supremacy of Gram Sabha without compromising the technical and regulatory aspect of forest management.
- Food productivity can be increased in parallel to achieving land degradation neutrality, if Sustainable Land Management practices are implemented.
- There is a need to have “Carbon Neutrality Policy of India”

Annexure 1. Agenda of the Side Event

UNCCD COP 14 Side Event Watershed Approach of Land Resource Management is tool to achieve Sustainable Development Goals (SDGs)

at

India Expo Centre & Mart
Plot No. 23 -25 & 27- 29
Knowledge Park – II, Gautam Budh Nagar
Greater Noida – 201306
Tel.: 91-120-2328011

Date: 12 September, 2019 | **Time:** 18:00 -20:00

Venue: MET – 06

Time	Programme (Tentative)
18:00 -20:00	<p>Panel Discussion</p> <p>Chairperson : Shri S S Negi, Vice Chairman, Uttarkhand Rajya Gramin Evam Palayan Ayog</p> <p>Theme Setting by Dr Yogesh Gokhale;, Senior Fellow, Forestry and Biodiversity Division, TERI</p> <p>Shri Sanjeev Chaddha, Managing Director, National Agricultural Cooperative Marketing Federation of India</p> <p>Dr. Rajiv Kumar Garg (IFS), PCCF and Principal Advisor, Coal India Limited</p> <p>Shri Umakant, Joint Secretary, Department of Land Resources, Ministry of Agriculture, Cooperation and Farmers Welfare</p> <p>Dr Ashok Kumar Jain, Senior Adviser, NITI Ayog, Government of India</p> <p>Mr Ravindra Kulkarni, Soil Survey Officer, Soil and Land Use Survey of India</p> <p>Mr. Sushil Kumar Awasthi, Additional Director, IGNFA, Dehradun</p> <p>Dr J V Sharma, Director, Forestry and Biodiversity Division, TERI</p>

Annexure 2. Flyer of the Event



nafed
A Farmers' Cooperative
60 years in Service



THE ENERGY AND RESOURCES INSTITUTE
Creating Innovative Solutions for a Sustainable Future

UNCCD COP-14 Side Event “Watershed Approach of Land Resource Management is tool to achieve Sustainable Development Goals (SDGs)”

India Expo Centre & Mart
Plot No. 23 –25 & 27- 29
Knowledge Park – II, Gautam Budh Nagar
Greater Noida – 201306
Tel.: 91-120-2328011

Date: 12th September, 2019
Time: 18:00 -20:00 hrs
Venue: MET – 06

ABSTRACT

United Nations Convention to Combat Desertification (UNCCD), an international convention agreed in 1994 at Earth Summit in Rio is the sole legally binding international agreement linking environment and development to sustainable land management. The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found.

Desertification/land degradation and drought (DLDD) are challenges of a global dimension and are directly addressed by UNCCD. Land degradation and desertification contribute to and aggravate economic, social and environmental problems such as poverty, poor health, lack of food security, biodiversity loss, water scarcity, reduced resilience to climate change and forced migration. They continue to pose serious challenges to the sustainable development of all countries, particularly affected countries. To overcome these problems and also to work towards achieving Sustainable Development Goals, UNCCD has launched Land Degradation Neutrality (LDN) Programme.

Time

Programme

18:00 –20:00 hrs

Panel Discussion

Chairperson : Shri S S Negi, Vice Chairman, Uttarkhand Rajya Gramin Evam Palayan Ayog

Theme Setting by Dr Yogesh Gokhale, Senior Fellow, Forestry and Biodiversity Division, TERI

Shri Sanjeev Chaddha, Managing Director, National Agricultural Cooperative Marketing Federation of India

Dr. Rajiv Kumar Garg (IFS), PCCF and Principal Advisor, Coal India Limited

Shri Umakant, Joint Secretary, Department of Land Resources, Ministry of Agriculture, Cooperation and Farmers Welfare

Dr Ashok Kumar Jain, Adviser, NITI Ayog, Government of India

Ms A Neeraja, Joint Secretary, Integrated Nutrient Management, Ministry of Agriculture, Cooperation and Farmers Welfare

Dr Ashish Chaturvedi, Director, Climate Change, GIZ

Dr J V Sharma, Director, Forestry and Biodiversity Division, TERI



Sustainable Development Goal (SDG) target 15.3 states: “By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.”

The LDN targets globally and also nationally address SDG target 15.3. In process it also achieves and many other SDGs in a synergistic and cost-effective manner. These targets also strengthen the implementation of the countries' UNCCD National Action Programmes.

In India, through watershed management programmes since 1970s at national level enormous efforts have been carried out to reduce water scarcity, enhance food security, promote land improvement, reduce poverty, take up afforestation as well as build climate resilience at the Micro-Watershed level. It has led to improved land management and several social indicators of development intended under SDGs and LDN.

The watershed management programmes in India are directly contributing to the following Sustainable Development Goals –

SDG 1 - End poverty in all its forms everywhere – Support to the Self Help Groups (SHGs) and promotion of alternative livelihood programmes at the village levels are directly contributing to reduce poverty in the project areas.

SDG 2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture – Through enhanced water availability, Integrated Pest Management and distribution of improved crop varieties efforts have been made to enhance food security and nutrition at the local levels across India.

SDG 5 - Achieve gender equality and empower all women and girls – Through promotion of women SHGs and a range of alternative livelihood activities and alternative cooking energy options for women, watershed programmes have been directly addressing the gender equality and women empowerment.

SDG 6 - Ensure availability and sustainable management of water and sanitation for all – Specific efforts have been made to provide piped drinking water, rejuvenate the drinking water sources and construction of sewage canals watershed programmes have been addressing the water and sanitation issues at local levels in the country.

SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all – Through distribution of Improved Cook Stoves, solar based cooking devices, lighting equipments efforts have been made to ensure access to affordable, reliable, sustainable and modern energy for all.

SDG 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment



and decent work for all – Construction activities like water harvesting structures, improved land productivity, asset building activities like rural roads and foot paths watershed management programmes have been successful in creating local employment opportunities.

SDG 10 - Reduce inequality within and among countries – Local Communities Below Poverty Line (BPL), Scheduled Castes and Tribes (SCs and STs), Nomadic tribes (NTs) have been the target beneficiaries of watershed management programmes in the country through which social equity has been addressed at the local levels.

SDG 13 - Take urgent action to combat climate change and its impacts – All the components of watershed management programmes are directly enhancing the capacities of the ecosystems and the associated local communities to tackle the impacts of the climate change and also help in adaptation programmes.

SDG 15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss – Through afforestation, Assisted Natural Regeneration and Plantations watershed management programmes are contributing to restoration and protection of terrestrial ecosystems and sustainable forest management.

SDG 16 - Promote peaceful and inclusive societies for sustainable development, provide access to justice



for all and build effective, accountable and inclusive institutions at all levels – Watershed programmes have developed local level institutions which have been accountable, transparent and formed on gender and equity basis to implement the activities.

Under the recent scheme Pradhan Mantri Krishi Sinchayi Yojana (PMKSY) over 11032 crores have been spent to generate water holding capacity over 12,25,17,333.63 cum of land, and irrigation potential is created for over 4,35,195 ha. Similarly, 27,507 lakh hectares of land has been treated between 1970 till 2009 under various watershed management programmes. But there do remain gaps in terms of continuation of the institutions created, maintenance of the infrastructure created, etc. which need to be addressed in order to continue with the requisite benefits from the investments.

The strengths, gaps and opportunities of the watershed programmes of India will be discussed in the proposed Side Event on **Watershed Approach of Land Resource Management is tool to achieve Sustainable Development Goals(SDGs)** at 14th Conference of Party meeting of UNCCD at New Delhi jointly organised by **TERI** (The Energy and Resources Institute), New Delhi and **NAFED** (National Agricultural Cooperative Marketing Federation of India).



Dr S S Negi, Vice Chairman, Uttarkhand Rajya Gramin Evam Palayan Ayog

Former Director General Forest and Special Secretary to Govt of India Dr Sharad Singh Negi has been appointed chairman of Uttarkhand Rajya Gramin Evam Palayan Ayog, the commission is meant to check continuous migration from hilly areas to plain areas. He was Director FRI Dehradun and Director Environment and Climate Change of HP govt. At present Dr Negi is Forestry Advisor of the World Bank for South Asia.



Shri Sanjeev Chaddha, Managing Director, National Agricultural Cooperative Marketing Federation of India

Has assumed charge of the office of the Managing Director, National Agricultural Cooperative Marketing Federation of India Ltd (NAFED). He introduced hi-tech horticulture in Odisha and extensively worked with small and marginal farmers and introduced new crops like banana, guava, vegetables, etc., besides working on strengthening the Agri-value chain to increase the returns for the farmers.



Dr. Rajiv Kumar Garg (IFS), PCCF and Principal Advisor, Coal India Limited

Indian Forest Service (IFS) officer of UP cadre in the rank of Principal Chief Conservator of Forests to Government of India. Presently working as Principal Advisor with Coal India Limited (CIL). Responsible for reviewing existing policy & regulatory framework and related issues of coal mining.



Mr Umakant, Joint Secretary, Ministry of Agriculture, Cooperation and Farmers Welfare

Mr Umakant is the Joint Secretary, Department of Land Resources, Ministry of Agriculture, Cooperation and Farmers Welfare



Dr Ashok Kumar Jain, Adviser, NITI Ayog, Government of India

Dr. Ashok Jain belongs to 1983 batch of Indian Forest Service, Telangana cadre. He is presently working as Adviser (Rural Development, Drinking Water & Sanitation, Housing, and Sustainable Development Goals) in NITI Aayog, Government of India.



Ms A Neeraja, Joint Secretary, Ministry of Agriculture, Cooperation and Farmers Welfare

Ms A Neeraja is the Joint Secretary, Integrated Nutrient Management, Ministry of Agriculture, Cooperation and Farmers Welfare



Dr Ashish Chaturvedi, Director, Climate Change, GIZ

Experienced International cooperation expert with a demonstrated history of working in research institutions. Skilled in Climate Change, Circular Economy, Resource Efficiency, Government, and Environmental Awareness.



Dr J V Sharma, Director, Forestry and Biodiversity Division, TERI

Dr. Jitendra Vir Sharma is a retired officer of Indian Forest Service with 35 years of experience of forest management and policy making. Currently, he is the Director of Forestry & Biodiversity division at TERI.



Dr Yogesh Gokhale, Senior Fellow, Forestry and Biodiversity Division, TERI

Dr. Gokhale working on diverse aspects of natural resource management, monitoring, and evaluation of watershed projects and ecological assessments of various ecosystems in different parts of India.

Annexure 3. List of participants

S.No.	Name	Designation	Contacts	Email
1	Mr Dhananjai Mohan	APCCF (PFM), Uttarakhand Forest Department	9410393913	dhananjaim@gmail.com
2	Mr Anirban Ganguly	Research Specialist, DFID, India	9810331479	a-ganguly@dfid.gov.uk
3	K Sasikumar	IFS 2003 BATCH TRIPURA Cadre	9436168611	sasiifs@gmail.com
4	Prasada Rao Vaddarapu	Managing Director, TRPC	9402307944	rao61980@yahoo.com / trpcltd83@gmail.com
5	Ajoy Deuri Bharali	Deputy Conservator of Forest	9435073610	manishadeuri@gmail.com
6	Manoj Mahapatra	General Manager	9437050310	manojmahapatra14@gmail.com
7	Rajen Choudhury	Deputy Conservator of Forest	9435026385	raj_gty@rediffmail.com
8	Ramesh Ganawa	Divisional Forest Officer	8989612761	rganawa1965@rediffmail.com
9	Arvind Pratap Singh Sengar	Divisional Forest Officer	7999691830	arvind.ifs07@mp.gov.in
10	Rajesh Kumar Rai	Divisional Forest Officer	9425405596	rajeshkrai008@gmail.com
11	Sedu Ram Yadav	Deputy Conservator of Forest	9414681136	yadavseduram@gmail.com
12	Deep Chandra Arya	Deputy Conservator of Forest	9411113414	dcarya2012@gmail.com
13	Arun Kumar Mukhopadhyay	Divisional Forest Officer	9832042165	arun4202@gmail.com
14	Saurabh Sharma	Deputy Conservator of Forest	8729981933	saurabh.kgp@gmail.com
15	Amit Anand	Deputy Conservator of Forest	7870096733	phoruamit@gmail.com
16	Indhu Vijayan N.	Deputy Conservator of Forest	9599035975	indhuvijayan09@gmail.com
17	Nabanita Ganguly	Deputy Conservator of Forest	9531905303	ganguly.nabanita@gmail.com
18	Damodhar A. T.	Secretary, Environment & Forest	9449770058	damodharnaik@gmail.com
19	Naveen Kumar P.	Deputy Conservator of Forest	9436249601	nkforu@gmail.com

Proceedings of UNCCD COP 14 Side Event on: “Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals

S.No.	Name	Designation	Contacts	Email
20	Satovisha Samajdar	Divisional Forest Officer	9407648100	satovisha@gmail.com
21	R. Dhanapal	Deputy Conservator of Forest	8238861705	dcfsfdbd82@gmail.com
22	Puneet Nayyar	Deputy Conservator of Forest	9737918010	mailtonayyar@gmail.com
23	Ganga Sharan Singh	Deputy Conservator of Forest	9429303341	gsvishen2007@gmail.com dcfgodhra@gmail.com
24	Jitendra Kumar Singh	Deputy Conservator of Forest	9906099583	jitendrag2@yahoo.com
25	Vivek Verma	Additional CEO, SMVDSB	9797728585	marsplanet128@gmail.com addl_ceo@maavaishnodevi.net
26	Sat Paul	Conservator of Forest	9419962563	cfchenab@gmail.com satpaulpakhru@gmail.com
27	Mamta Priyadarshi	Deputy Conservator of Forest	8292708053	priyadarshimamta@gmail.com
28	Mahaling	Divisional Forest Officer	9631777676	mahalingifs@gmail.com
29	Sivasankar Sengottuvel	Deputy Conservator of Forest	7019668223	sivaforester@gmail.com
30	Suneel Pamidi	Deputy Conservator of Forest	8281625134	pamidisuneel@gmail.com
31	Anjana Suchita Tirkey	Deputy Director	7642250760	anjana_forestflame@yahoo.com
32	Ripudaman Singh Bhadoria	District Forest Officer	9826998198	ripu.sb@gmail.com
33	Ravindra Mani Tripathi	Divisional Forest Officer	8989189933	ravindramtripathi@gmail.com
34	Pramod Chand Lakra	Deputy Conservator of Forest	7350293334	pramodchandlakra@gmail.com
35	Patil Anita Jayasing	Deputy Conservator of Forest	9403056777	anitaifs10@gmail.com
36	Mamilla Adarsh Reddy	Deputy Conservator of Forest	9403011415	mail2adarsh01@gmail.com
37	Umesh Udal Verma	Deputy Conservator of Forest	6393766586	uverma1982@gmail.com

Proceedings of UNCCD COP 14 Side Event on: “Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals

S.No.	Name	Designation	Contacts	Email
38	N. Maya	Divisional Forest Officer	9496544787	nmaya09@gmail.com
39	Ramasamy P.	Deputy Conservator of Forest	8280146664	iamramsifs@gmail.com
40	Santosh Joshi	Divisional Forest Officer	9178170568	seesantu@gmail.com
41	Supongsashi	Deputy Conservator of Forest	9468764368	sashifri@gmail.com
42	Anita	Deputy Conservator of Forest	9462243450	anita.ifs2010@gmail.com
43	Bijo Joy	Deputy Conservator of Forest	9414017879	joybijo@gmail.com
44	Sudeep Kaur	Deputy Conservator of Forest	9414029622	sudeepkaursharma@gmail.com
45	Vikram Kesharee Pradhan	Deputy Conservator of Forest	8764233373	vikram_ifs@yahoo.com
46	Kirubashankkar R	Deputy Conservator of Forest	9042042153	tn206@ifs.nic.in
47	Kanchana R.	District Forest Officer	9442358205	drkanchanaraju98@yahoo.co.in
48	Shantharam	District Forest Officer	9440810109	shantharam001@gmail.com
49	Shakti Kant Singh	Deputy Conservator of Forest	8414942600	shakti684@gmail.com
50	Dr. Anil Kumar Patel	Divisional Forest Officer	7376439902	anilkpatel23@gmail.com
51	Mahaveer Koujalagi	Divisional Forest Officer	9411255515	mahaveeruas@gmail.com
52	Nitish Mani Tripathi	Divisional Forest Officer	8954299999	nitishifs@gmail.com
53	Neethu Lakshmi Moni	Deputy Conservator of Forest	8755288785	nitulakshmi@gmail.com
54	Mayank Shekhar Jha	Divisional Forest Officer	9536931685	mayankshekhar426@gmail.com
55	Dr. Koko Rose	Divisional Forest Officer	9639422628	kokorose1982@gmail.com
56	Harikrishnan	Divisional Forest Officer	9051849854	harikrishnan180@gmail.com
57	Deepika Chaudhary	Divisional Forest Officer & Director Assam Forest School	8402976939	deepika.cchaudhary@gmail.com
58	Vijaya Ratre	Deputy Conservator of Forest	9424202322	ratrevijaya@gmail.com

Proceedings of UNCCD COP 14 Side Event on: "Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals

S.No.	Name	Designation	Contacts	Email
59	Stylo Mandavi	Divisional Forest Officer	7781252228	stylomandavi80@gmail.com
60	Shobhita Agarwal	Deputy Conservator of Forest	7574950053	shobhita.rini@gmail.com
61	R. Anand	Deputy Conservator of Forest	9466104386	hr100@ifs.nic.in
62	Neeraj Kumar	Divisional Forest Officer	9418491433	dr.neeraj121@gmail.com
63	Abhishek Kumar	Divisional Forest Officer	9973762128	drabhishek2@gmail.com
64	Sandhya	Deputy Conservator of Forest	7999621168	sandhyaifs03@gmail.com
65	Devanshu Shekhar	Deputy Conservator of Forest	9424794401	devanshuifs@gmail.com
66	Hemant Kumar Meena	Assistant Inspector General of Forests	9405888582	hkmeena@gmail.com
67	Debala Leiphrakpam	Divisional Forest Officer	9862384552	deleim3@gmail.com
68	Dr. Sentitula	Divisional Forest Officer	8575209378	vetsenti@gmail.com
69	Shalabh Kumar	Deputy Conservator of Forest & TA to APCCF WL	7073472945	drshalabhkumar@yahoo.co.in
70	P. Muhammed Shabab	Wildlife Warden	7598285593	shababcof@gmail.com
71	Harshakumar Chikkanaragund	Deputy Conservator of Forest	9485150092	harshavcifs@gmail.com
72	Dr. Rengaraju T.	Deputy Conservator of Forest	9554186591	dfosantkabirnagar@gmail.com vetrajupara@gmail.com
73	Mr Supongnukshi Aier	CCF and Member Secretary		supong_1@yahoo.co.in
74	Mr Shailesh Tembhurnikar	APCCF, Maharashtra	9823142052	Shaile642000@gmail.com
75	Mr Sanjeev Chadha	Managing Director, National Agricultural Cooperative Marketing Federation Of India Ltd. (NAFED)	011-26340019, 26341810	sanjeev64@gmail.com
76	Dr J V Sharma	Director, Forestry &	981192258	Jv.sharma@teri.res.in

Proceedings of UNCCD COP 14 Side Event on: “Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals

S.No.	Name	Designation	Contacts	Email
		Biodiversity Division, TERI		
77	Dr Pia Sethi	Area Convenor & Senior Fellow, TERI	9811222321	pias@teri.res.in
78	Dr. Rajiv Kumar Garg, IFS	Principal Advisor, Coal India Limited, New Delhi	9717466448	advisor.cil@gmail.com
79	Mr Umakant	Joint Secretary, Watershed Management, Department of Land Resources, Ministry of Rural Development	9868492206	jswm-dolr@nic.in
80	Mr Ashok Kumar Jain	Principal Consultant, NITI Aayog		jainifs@rediffmail.com
81	Mr Ravindra Kulkarni	Soil Survey Officer, Soil and Land Use Survey of India, MoA		
82	Mr. Sushil Kumar	Awasthi, Additional Director, IGNFA, Dehradun		Sushilifs@gmail.com
83	Dr Yogesh Gokhale	Area Convenor & Senior Fellow, TERI	9891836486	yogeshg@teri.res.in
84	Dr Syed Arif Wali	Fellow, TERI	8826280073	syed@teri.res.in
85	Mr Siddharth Edake	Associate Fellow, TERI	9711109963	siddharth.edake@teri.res.in
86	Mr Yatish Lele	Associate Fellow, TERI	9766037493	yatish.lele@teri.res.in
87	Ms Aparna Tyagi	Research Associate, TERI	9899475648	aparna.tyagi@teri.res.in
88	Ms Priyanka	Research Associate, TERI	9971877081	priyanka@teri.res.in
89	Ms Mahima Jain	Research Associate, TERI	9999466171	mahima.jain@teri.res.in
90	Ms Priya Sharma	Research Associate, TERI	9205502477	priya.sharma@teri.res.in
91	Ms Arpna Arora	Executive Coordinator, TERI	9818377427	arpnaa@teri.res.in
92	Ms Shruti Sharma	APCCF, NTFP, Rajasthan	9413344907	apccf.ntfp.forest@rajasthan.gov.in
93	Mr B K P Sinha	Advisor, Amity School of Natural Resources and		

Proceedings of UNCCD COP 14 Side Event on: “Watershed Approach of Land Resource Management; a tool to achieve Sustainable Development Goals

S.No.	Name	Designation	Contacts	Email
Sustainable Development				
94	Mr Vivek Saxena	Country Representative, IUCN, India		vivek.saxena@iucn.org®
95	Dr Sonam Binjola	Assistant Field Officer, MoA		
96	Ms Kusuma Patil	Assistant Field Officer, MoA		
97	Dr Ranga Rao	Senior System Analyst, MoA		
98	Mr Vijay Sherawat	ZIFNITY	9210119377	vijay@zifnity.com
99	Unnikrishna Kurup R.	General Manager - NAFED	7045427243	ukurup@nafed-india.com
100	Sharat Chander Singh	Consultant - NAFED	8447189427	scsingh@nafed-india.com
101	Maninder Singh	Director – CEF international Pvt. Ltd	9897014320	msn@manindersingh.co.in
102	Ritika Singh	Director – CEF international Pvt. Ltd	8800557283	ritika@cefgroup.in
103	S P Ganeshan	Director – CEF international Pvt. Ltd	9823184455	spg@cefgroup.in

Annexure 4. Photographs



Photo 1. Shri SS Negi during opening remarks



Photo 2. Shri Sanjeev Chaddha during his remarks



Photo 3. Dr Rajiv Kumar Garg during his remarks



Photo 4. Shri Umakant during his remarks



Photo 5. Dr Ashok Kumar Jain during his remarks



Photo 6. Dr Jitendra Vir Sharma during his remarks