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Indian Council of Forestry Research and Education, Dehradun

International Centre for Integrated Mountain Development, Kathmandu, Nepal
Proceedings of the Workshop


30 August 2016

Hosted By:

Indian Council of Forestry Research and Education,
Dehradun

International Centre for Integrated Mountain Development,
Kathmandu, Nepal
Report Preparation Team:

Dr. T.P. Singh, Assistant Director General (Biodiversity and Climate Change)
Sh. V.R.S. Rawat, Scientist - F, Biodiversity and Climate Change Division
Dr. R.S. Rawat, Scientist - C, Biodiversity and Climate Change Division
Dr. Md. Shahid, Consultant, Biodiversity and Climate Change Division
Sh. Nemit Verma, Junior Consultant, Biodiversity and Climate Change Division
Foreword

Reducing emission from deforestation and forest degradation in developing countries (REDD) along with conservation and sustainable management of forests and enhancement of forest carbon stock, collectively referred as “REDD+” has been introduced as the most significant mechanism for early actions towards limiting global temperature to 2°C. REDD+ has been discussed under UNFCCC forum more than a decade. Now methodological guidance has been agreed under UNFCCC and several efforts have been taken for the implementation of REDD+ at international level.

Himalayan countries are adopting this mechanism and taking possible efforts at national and sub-national levels, but the level of implementation has been much slower as compared to other countries especially in Latin America and Indonesia, Malaysia, Vietnam and Cambodia in Asia. In India, nearly 200,000 villages are classified as forest fringe village, with large dependency of communities on forest resources, there is an ample scope and opportunities for incentivizing those communities under REDD+ mechanism who are involved in community controlled forest management activities like JFM, Van Panchayats etc. For this purpose, India needs to accelerate its REDD+ readiness at national level and compliance as per the UNFCCC requirements.

Many countries have prepared their national REDD+ strategies at national and sub-national level, so that REDD+ can be implemented effectively and efficiently with minimal adverse impacts. Keeping this in view, ICFRE in collaboration with ICIMOD organized one day workshop “National REDD+ Strategy and Action Plan for India: Issues and Challenges” on 30 August, 2016 at ICFRE Dehradun. ICFRE is thankful to ICIMOD for providing support for the workshop. ICFRE is pleased to bring out the proceedings of the workshop and looking forward for future cooperation with regional and international organizations for making REDD+ workable in India. The recommendations of the workshop will be forwarded to Ministry of Environment, Forest and Climate Change. Hopefully, Government of India will soon come out with a National Strategy on REDD+ for effective implementation of REDD+ at national level.

(Dr. Shashi Kumar)
Preface

Globally, the forests are considered to provide a large climate change mitigation opportunity at relatively lower cost along with significant co-benefits. This fact is very well acknowledged in the recently adopted Paris Agreement on Climate Change. Article 5 (para 1) of the Paris Agreement reiterates “Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1(d), of the Convention, including forests”. This once again reaffirm that the forests play an important role in achieving the aim of Paris Agreement by keeping global temperature rise well below 2°C.

The concept of REDD+ as climate change mitigation tool is quite matured now. UNFCCC has agreed on methodological guidance for the implementation of REDD+, various countries has initiated REDD+ projects. Green Climate Fund (GCF) established by the UNFCCC is now open to finance REDD+ projects provided they meet the laid down criteria for REDD+. One of the essential requirements is that the countries should have a national REDD+ strategy or Action Plan in place. Hence, for obtaining the benefits of REDD+ finance, India needs to develop its national REDD+ strategy and action plan.

ICFRE is proactive in the field of forests and climate change and is contributing significantly to climate change issues relevant in the forestry at national and international level. The 'REDD+ Himalaya project' with active involvement of ICIMOD has been initiated at four landscapes i.e. Nepal, Myanmar, India and Bhutan with one of its prime objectives of building REDD+ capacity and developing REDD+ strategy at national level. Under the REDD+ Himalaya project, ICFRE has jointly organized one day workshop with ICIMOD in context of developing national REDD+ strategy for India.

I am hopeful that the deliberations and recommendations of the workshop will contribute towards developing national REDD+ strategy document for India. I appreciate the efforts put by the officers and staff of Biodiversity and Climate Change Division, Directorate of Research, ICFRE for bringing the proceedings along with the recommendations for developing ‘National REDD+ Strategy’.

(Dr. G.S. Goraya)
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Workshop Glimpses
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<td>CAMPA</td>
<td>Compensatory Afforestation Fund Management and Planning Authority</td>
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<td>COP</td>
<td>Conference of Parties</td>
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<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<td>D-RAP</td>
<td>District REDD+ Action Plan</td>
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<td>DRWG</td>
<td>District REDD+ Working Group</td>
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<td>FREL</td>
<td>Forest Reference Emission Level</td>
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<td>FRL</td>
<td>Forest Reference Level</td>
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<td>FSI</td>
<td>Forest Survey of India</td>
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<td>GCF</td>
<td>Green Climate Fund</td>
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<td>GEF</td>
<td>Global Environment Facility</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<td>ICIMOD</td>
<td>International Centre for Integrated Mountain Development</td>
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<td>IGNFA</td>
<td>Indira Gandhi National Forest Academy</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>JFM</td>
<td>Joint Forest Management</td>
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<td>JICA</td>
<td>Japan International Cooperation Agency</td>
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<td>KSLCDI</td>
<td>Kailash Sacred Landscape Conservation and Development Initiative</td>
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<td>LFGs</td>
<td>Local Forestry Groups</td>
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<td>MoEF&amp;CC</td>
<td>Ministry of Environment, Forest and Climate Change</td>
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<td>MRV</td>
<td>Measurement, Reporting and Verification</td>
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<td>NABARD</td>
<td>National Bank for Agriculture and Rural Development</td>
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<td>NRP</td>
<td>National REDD+ Policy</td>
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<tr>
<td>NRS</td>
<td>National REDD+ Strategy</td>
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<tr>
<td>P-RAP</td>
<td>Provincial REDD+ Action Plan</td>
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<td>REDD</td>
<td>Reducing Emission from Deforestation and Forest Degradation</td>
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<td>State Forest Department</td>
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<td>Small Help Groups</td>
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<td>SIS</td>
<td>Safeguard Information System</td>
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<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>USAID</td>
<td>United State Agency for International Development</td>
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<td>VCS</td>
<td>Verified Carbon Standard</td>
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1. INTRODUCTION

Forests are both sources and sinks of carbon. Deforestation results in immediate release of the carbon originally stored in the trees as CO₂ emissions. Reducing emissions from deforestation and forest degradation in developing countries REDD” was first introduced as a climate change mitigation option. With Indian intervention Conservation of Forest stocks, enhancement of forest carbon stocks and sustainable management of Forests was included in the agenda of REDD and since then REDD became REDD+. Finally, Cancun Agreements in 2010 finalised the scope of REDD+ to include following activities:

(a) Reducing emissions from deforestation;
(b) Reducing emissions from forest degradation;
(c) Conservation of forest carbon stocks;
(d) Sustainable management of forest;
(e) Enhancement of forest carbon stocks;

REDD+ remains one critical instrument under the UNFCCC that provides financial incentive to the developing countries for unlocking their potential in mitigating GHG by intervention in the forestry sector and at the same time providing adaptation co-benefits. In order to tap REDD+ finance available through variety of sources including GCF, India, in accordance to Cancun Agreements, needs to develop following elements:

(i) A national REDD+ strategy or action plan;
(ii) A national forest reference emission level and/or forest reference level or, if appropriate, as an interim measure, subnational (i.e., state level/or at physiographic level for country like India) forest reference emission levels and/or forest reference levels.
(iii) A robust and transparent national forest monitoring system for the monitoring and reporting of the REDD+ activities
(iv) A system for providing information on how the safeguards are being addressed and respected throughout the implementation of the activities

Countries are preparing strategies for implementing REDD+ and simultaneously trying to develop relevant capacity at different levels so that REDD+ can be implemented effectively and efficiently with minimal adverse impacts.

It is, in this context ICFRE with active collaboration from ICIMOD organised a one day workshop “National REDD+ Strategy and Action Plan for India: Issues and Challenges” at ICFRE headquarters Dehradun on 30th August 2016, under the project REDD+ Himalayas: Developing and Using Experience in Implementing REDD+ in the Himalayas. The objective of the workshop was to discuss the Issues and Challenges faced by India in developing its National REDD+ Strategy and Action Plan. Further, a road map through the recommendation will be sent to the Ministry of Environment, Forest and Climate Change (MOEF&CC) to develop the National REDD+ Strategy and Action Plan in time bound manner.
2. INAGURAL SESSION

The workshop started with the warm welcome address by Dr. T. P. Singh, Assistant Director General (ADG), Biodiversity and Climate Change Division, (BCC) ICFRE. He briefed about the Transboundary REDD+ Himalaya project implemented by ICFRE. He highlighted the contribution of ICIMOD in the development of protocols for elements of MRV that are measurable, reportable and verifiable, Safeguard Information System (SIS). He also briefly talked about the Draft of the National REDD+ Strategy and Policy web hosted on MOEF&CC website.

Dr. Rajan Kotru, Regional Programme Manager, Transboundary Landscapes, ICIMOD, congratulated ICFRE for conducting National workshop for designing REDD+ Strategy and Action Plan for India. He further explained about the transboundary REDD+ programme in the Himalayas. He highlighted the significance of REDD+ for ecosystem services, biodiversity conservation, and water regulatory services. He also stressed about the implementation of regional REDD+ programme to mitigate the climate change and support the livelihood of the local community. Dr. Kotru also highlighted the importance of local community through Gram Panchayats, Van Panchayats, etc. in the implementation of REDD+ programmes at landscape level. He also explained about the initiatives of ICIMOD in the Kailash Sacred Landscape through Kailash Sacred Landscape Conservation and Development Initiative (KSLCDI) being implemented in China, India and Nepal. He stressed about the standardization of packages and practices for the implementation of REDD+ at regional scale.

Dr. Shashi Kumar, Director General, ICFRE apprised the meeting with the words that climate change is happening and is inevitable. REDD+ is a good initiative to tackle the climate change through forestry sector. Climate change will create more problems to next generation and there is need to address the climate change and forests can play vital role in the sequestration of carbon dioxide. He also quoted Gandhiji’s words “Nature has enough for our need but not for our greed”. Dr. Kumar talked about the various anthropogenic factors responsible for climate change. He also briefed about the impacts of climate change on ecosystem. He said that perennial rivers are becoming seasonal, sea level is rising, cloud bursts are happening and coastal areas are submerging in the sea. He further said that the climate change will impact economic growth and India needs serious steps to tackle climate change.
3. **TECHNICAL SESSION**

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<td>Draft National REDD+ Policy and Strategy: Gap analysis</td>
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The Chairperson of the session, Dr. G.S. Goraya, DDG (Research), ICFRE, introduced the session and the participants. In his introductory remarks, Chair highlighted the importance of forestry sector in climate change mitigation and adaptation. Chair further stressed that REDD+ offers an opportunity to achieve these climate change objectives at regional and national level. In order to implement REDD+ on ground, country needs a sound national strategy and action plan for REDD+.

**Dr. Bhaskar Singh Karky**, Resource Economist, Programme Coordinator REDD+ Initiative, delivered his presentation on “District REDD+ Action Plan (D-RAP) Chitwan District”. He briefed that in order to implement a national REDD+ strategy, assessment of the drivers, barriers, policies and measures at a regional or sub-national level is essential. It has been done at district level in Nepal. A District REDD+ Action Plan (D-RAP) has been prepared for Chitwan district in Nepal. D-RAP is prepared in close consultation and coordination with District Forest Office (DFO), Chitwan National Park (CNP), Local Forestry Groups (LFGs) and private sectors. The objectives of the D-RAP are to reduce Greenhouse Gas (GHG) emissions from deforestation and forest degradation, enhance carbon stocks, and improve the health of forest ecosystems; minimize potential social and environmental risks of REDD+ implementation; ensure implementation and effective monitoring of the REDD+ intervention packages; develop D-RAP templates replicable to other districts in Nepal; and contribute in implementing National REDD+ Strategy (NRS) at sub-national level. Dr. Karky explained about the various direct and indirect causes of deforestation and forest degradation and barriers. Drivers of Deforestation and forest degradation were prioritized. Intervention packages were developed to address each of the prioritized drivers. He further explained about the social and environmental risks associated with the implementation of intervention packages. He said that social risks include negative social side-effects on poor and marginalized social groups while environmental risks are the potential
side-effects from REDD+ interventions that threaten risk to biodiversity from over-use of hybrid and exotic agroforestry species. Dr. Karky also explained about the social benefits and environmental safeguards. He stressed that D-RAP are to be aligned with National REDD+ Strategy to contribute to achieve the targets. D-RAP should also align with the district planning. He also stressed for the strong monitoring of the intervention packages through Divisional Forest Officer (DFO) and District REDD+ Working Group (DRWG). Dr. Karky highlighted that using a participatory approach to design the Chitwan D-RAP reflects the support of the Chitwan District stakeholders to the national REDD+ readiness process; provides the basis for improved methodological guidance for developing D-RAPs in the remaining districts of Nepal and Chitwan D-RAP process to be replicated in other districts. Dr. Karky also briefly apprised about the Provincial REDD+ Action Plan (PRAP) of Vietnam prepared by UN-REDD. He highlighted that the objective is to enhance Vietnam’s ability to benefit from future results-based payments for REDD+ and undertake transformational changes in the forestry sector. He also explained about the outcomes of the P-RAP. He summed up with highlighting the procedure for the implementation of P-RAP.

Dr. T.P. Singh, Assistant Director General (Biodiversity and Climate Change), ICFRE, presented ICFRE initiative on REDD+. He described about the emergence of REDD+ under Cancun Agreement and highlighted the significance of Post 2020 climate change scenario under Paris Agreement adopted at COP 21 in November 2015. He further explained about the status of two REDD+ projects implemented by ICFRE with the support from Uttarakhand Forest Department and ICIMOD. He briefly explained about implementation site of the projects. Uttarakhand REDD+ pilot project is being implemented in Nainital district of Uttarakhand state. Under ICFRE-ICIMOD Trans-boundary REDD+ Himalayas project, two studies were conducted. First was the scoping study of REDD+ in Kailash Sacred Landscape and second study was the Stocktaking of REDD+ in India. Dr. Singh explained about the standards being followed for the implementation of REDD+ project in Uttarakhand. He apprised about the VM006 methodology of the Verified Carbon Standard (VCS) is followed for the implementation of REDD+ programme in Uttarakhand. Also, Climate, Community and Biodiversity Standards are followed for the additional biodiversity and community value. Dr. Singh further informed about the drivers of forest degradation. Some of the drivers of forest degradation prevailing in Uttarakhand REDD+ pilot project site (Kalsra Gola Sub-watershed) are collection of fuelwood for cooking and source of energy for heating during winter months; fodder collection for animals; cattle Grazing in the Forest; fire; collection of leaf litter for livestock bedding and manuring; encroachment in the forest and illegal felling. He explained that carbon loss from fuelwood, fodder and litter collection is approx 4 t/ha/yr. Dr. Singh also proposes measure to address...
the forest degradation. Some of the measures are dried pine needles (Pirul) collection contributes reduction in fire incidence; small water reservoirs can be prepared to store the rain water; check dam construction to control the flow of water and soil erosion; appropriate tool/implements can be provided to Van Panchayats to control the fire occurrence; improved cook stove and LPG can be provided to the community to reduce the usage of fuelwood hence addressing forest degradation. He further explained about the steps for the registration of project under VCS.

Dr. Singh also elaborated on the ICIMOD-ICFRE Transboundary REDD+ project. He explained the objective of the project which includes establishment of South–south cooperation; exchange of experience and mutual learning for other three countries; MRV, SIS, Reference Levels (Regional); development of methods for calculating, modelling and forecasting carbon sequestration; preparation for REDD+ Readiness in North-Eastern India. He informed that the activities done so far include two side events at COP 21 in Paris (Dec 2015); project inception workshop at Aizawl (28-29 Jan.); preliminary site selection in Mizoram; stock taking review to understand REDD+ implementation in India; scoping study of REDD+ in Kailash Sacred Landscape (KSL) of Uttarakhand Himalayas. Dr Singh also briefed about the outcomes of consultation meeting held at Govind Ballabh Pant National Institute of Himalayan Environment and Sustainable Development (GBPNIHESD), Almora and at village Naukina, Pithoragarh for the scoping study of REDD+ in KSL. He explained about the drivers of forest degradation and also suggested interventions to address the drivers of forest degradation. He further shed light on the activities planned till December 2016 which includes scoping study of promoting Bamboo plantation in addressing REDD+ Objectives in Mizoram; provision of Solar Dryer for community based Turmeric grower Self Help Groups (SHGs); starting preparation of State REDD+ Action Plan for Mizoram and Uttarakhand; development of training manuals; formation of REDD+ Working Group with members from all North-Eastern States and Uttarakhand; side event on REDD+ Transboundary Project in India Pavilion at COP-22 in Marrakesh, Morocco in association with ICIMOD. In his concluding statement, he said that REDD+ offers an innovative way to mitigate climate change in post 2020 scenario; India needs to finalize REDD+ Strategy; pilot programmes are offering good, and they need to be synergized; capacity building of stakeholders holds the key to successful implementation at all levels.

Mr. Rajesh Kumar, Senior Deputy Director, Forest Survey of India, Dehradun delivered his presentation on “Developing Reference level of REDD+”. He explained that there is no explicit difference between Forest Reference Emission Level (FREL) and Forest Reference Level (FRL). FREL includes only emissions, and a FRL includes removals as well. Thus comprising of activities that enhances forest carbon stocks. The
Conference of Parties (COP) FREL/FRLs are: “...benchmarks for assessing each country's performance in implementing [REDD+] activities”. He further explained that components of REDD+ include National Strategy or Action Plan; National Forest Monitoring System; Safeguards Information System and Forest Reference Level/Forest Reference Emission Level. He also explained the various decisions of COP that assist in developing FREL/REL. Mr. Kumar briefed that the purpose of forest reference level is to assess country performance in contributing to mitigation of climate change through actions related to their forests; results-based payments require an assessed forest reference level and country may wish to assess progress on the outcomes of the policies and measures taken to mitigate climate change in the forestry sector for domestic reasons. Mr. Kumar expressed guidance on FREL/FRL construction. FREL/FRL be expressed in tonnes of carbon dioxide equivalent per year; maintain consistency with national GHG inventories. In terms of forest definition, sources of data used (for the activity and the emission factors) and carbon pools/GHG gases included for construction of FRLs; IPCC guidance and guidelines for National GHG Inventories can be used as a basis for estimating forest-related GHG emissions by sources and removals by sinks. Guidance further include FREL/FRL be established transparently, providing information and rationale of FRL development. Step-wise approach should be followed. The decisions of UNFCCC enables to improve FRLs over time by incorporating better data, improved methodologies and, where appropriate, additional pools. It also suggests that countries should update their FRLs periodically. FRL/FREL should be submitted to the UNFCCC for technical assessment. Information used by Parties in constructing a FRL includes historical data. FRL/FREL should be transparent, complete, and consistent and include accurate methodological information. Mr Kumar said that FRL/FREL should include description of data sets, approaches, methods, models, the assumptions used, descriptions of relevant policies and plans, and descriptions of changes from previously submitted information. Mr. Kumar also shed light on the key elements of FRL/FREL which includes forest definition; historical data; scope: REDD+ activities, pools and gases included in FRL; FRL calculation methodology includes details on national circumstances and how these are considered if adjustments are made; scale: The area covered by the FRL, with due consideration to the development of sub-national FRLs as an interim measure. Mr. Kumar summed up his presentation by highlighting the national circumstances for developing the FREL/FRL. India is yet to develop and communicate its Reference level for REDD+ in accordance with UNFCCC decisions.

Dr. Subash Ashutosh, Additional Principal Chief Conservator of Forests, Meghalaya
Prominent drivers include forest fire, fuelwood collection, quarrying, grazing, erosion, loss of biomass and destruction of endangered species habitat. Measure taken to address the drivers were also apprised. Measures include firelines, firewatcher, fuel efficient stoves, animal stall feeding, check dams, afforestation and rehabilitation & protection of habitats of rare orchids & amphibians etc.

Dr. Ashutosh also explained about the project activities carried in the project area. The activities completed include forest fire control (21 km fire line & fire watchers); Sustainable firewood (Fuelwood plantation on periphery); Regulation of grazing (Shifting to pigs & broilers); Agricultural containment (Organic cultivation & Orchards); Alternatives to charcoal making (Alternate livelihoods). He also explained project timeline which comprises of pilot activity, project design & preparation and implementation phase. He also explained that the for 1st certification in 2013, 21,805 tCO₂ C-certificates are issued. 5,193 tCO₂ equivalent credits are sold @US$6-7/tCO₂ and received US$ 25,947 fund. Umiam Watershed Trust Fund has been established for the utilization of fund for the project management & monitoring; awareness raising; establishment of 21 community nurseries; support to Women micro-finance groups & farmer’s clubs and forest restoration activities.

Dr. Ashutosh further highlighted Umket Raid REDD+ Pilot Project initiated and steered by the Forest Department with the support from the State Government. Total project area of the project is 1,089.83 ha comprising of community forest, village forest and private forest. He also explained the step wise procedure for the implementation of the project. He further explained the interventions carried under project. Interventions for forest management includes improving stocking of forest by planting in blank areas; assisted natural regeneration; fire protection; prevention of unauthorized removal of trees; eradication of invasive species; bamboo plantation. He also apprised about the annual increment in forest carbon after interventions. Dr. Ashutosh briefed about the various activities being carried in the project area which includes smokeless chullahs to local community; livelihood and enterprise promotion; apiculture; multipurpose reservoir; sericulture; eco
tourism; community nursery. He summed up the presentations by highlighting the importance of REDD+ in climate change mitigation and livelihood upliftment of the community.

Mr. Swapan Mehra, Chief Executing Officer, IORA Ecological Solutions, delivered his presentation on “Financial Mechanism for REDD+ and Green Climate Fund”. He initiated with the phased approach for REDD+ financing. Phase I emphasizes that countries can access immediate international funds for developing National REDD+ Strategy, institutional strengthening, capacity building etc. while in Phase II countries can access funding for implementing National REDD+ strategies, capacity building and result based demonstration activities. Phase III comprises of result based funding mainly market based. Currently, funding available through UNREDD, Forest Carbon Partnership Facility (FCPF) etc. He further highlighted the financing mechanism for REDD+ in India. He described that Central and State funds could be drawn for capacity building and readiness. Funds under Green India Mission, Compensatory Afforestation Fund Management and Planning Authority (CAMPA) funds and Corporate Social Responsibility (CSR) can be accessed for project establishment cost. REDD+ project operating cost can be accessed through State funds, CSR and international donors. Mr. Mehra also discussed different financing sources viz; bilateral, multilateral, market based, non market based and private sectors. He highlighted the global funds like FCPF Readiness Fund, FCPF Carbon Fund, UNREDD, BioCarbon Fund, Forest Investment Program, Global Environment Facility (GEF), Green Climate Fund, Japan International Cooperation Agency (JICA) Funds available for REDD+ financing. He also shed light on the major REDD+ funding countries and regions receiving REDD+ funds. Mr. Mehra explained the mechanism of voluntary carbon market and transacted volume by different projects.

Mr. Mehra briefed about the Green Climate Fund (GCF). He explained the conditionality and eligibility for GCF Fund. He explained that recipient countries can submit the proposal for funding. Access to the funding can be through accredited national, sub-national and regional implementing entities. National Bank for Agriculture and Rural Development (NABARD) is the only accredited entity of GCF in India. He briefed about the Forest-PLUS programme funded by USAID to improve the methodologies for the estimation of carbon content of different forest types, facilitate community participation and improve data management and availability. He also highlighted about the various Forest-PLUS projects being implemented in the states of Himachal Pradesh, Sikkim, Karnataka and Madhya Pradesh. He summed up his presentation by highlighting the unique features of project implemented in Sikkim and the plantation drive carried out in the project implemented in Madhya Pradesh.

Mr. V.R.S. Rawat, Scientist ’F’, BCC, ICFRE delivered his presentation on “Draft National REDD+ Policy and Strategy: Gap analysis”. He begins his presentation by highlighting the overview of REDD+ development. He highlighted the status of REDD+ implementation at national level. He stated that National Strategy/Action Plan is still in draft stage since last two years. No progress has been made on Safeguard Information System (SIS). Reference Level/Reference Emission Level/ (RL/REL) is under development by Forest Survey of India (FSI). Though India has well established national forest monitoring system maintained by FSI but needs to be tuned in accordance with UNFCCC guidelines. He also shed light on the modalities for (RL/REL) development.
Mr. Rawat explained that forest reference emission levels and/or forest reference levels expressed in tonnes of CO₂eq per year, are benchmarks for assessing each country’s performance in implementing the REDD+ activities. Countries have to submit information and rationale on the development of their forest RL/REL including details of national circumstances. So far, 14 countries (e.g. Brazil, Chile, Congo etc) have submitted a proposed forest RL/REL. He also stated that technical assessment of RL/REL is mandatory under UNFCCC guidelines.

Mr. Rawat highlighted the significance of SIS for the implementation of REDD+ projects. He also explained that actions are consistent with the conservation of natural forests and biological diversity, ensuring that the REDD+ actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits. Mr. Rawat also elaborated on various Decisions of UNFCCC regarding SIS/RL/REL, National Forest Monitoring System.

Mr. Rawat appraised the various objectives of draft National Policy on REDD+. The REDD+ Strategy is guided by the National REDD+ Policy. The strategy for operationalizing the draft REDD+ Policy as given in the webhosted document is (i) to build a critical mass of technical and institutional capacities of various stakeholders including SFDs, local communities, other related government agencies, (ii) to carry out periodic assessment of non-carbon and carbon variables relevant to reporting and financing under REDD+, (iii) to have a mechanism for Stakeholder participation, (iv) to enhancing cross-sectoral coordination within multiple government agencies including forestry and environmental authorities, land management authorities, (v) to analyse gaps in capacity and data by all REDD+ stakeholders and ensure that readiness activities promote a comprehensive and integrated approach and develop a transparent and accountable systems for REDD+ implementation, and (vi) to develop appropriate Management Information System (MIS) for sharing of relevant information/data related to REDD+ with all stakeholders; Mr. Rawat also briefed about the essential elements of REDD+ framework in the draft document.

He also informed that MoEF &CC constituted a Committee in 2015 for the preparation of National REDD+ Policy (NRP) and draft was ready in May 2015 but NRP was not web hosted for public comments. He said that it is broadly a Policy document and lacks implementation strategy, time line, action plan and deliverables etc. He also explained the objectives, implementation principles and benefits of REDD+ implementation. Mr. Rawat informed that MoEF&CC has published a REDD+ reference Document for India. This is a very comprehensive documents prepared by country REDD+ experts. Essential elements of REDD+ Staregy can be carved out from this document. REDD+ Cell at MoEF&CC has the task of coordinating and guiding REDD+ related actions, SFDs, guiding, collaborating and funding. He also proposed that REDD+ projects activities can be implemented in India in different agro-ecological regions of India addressing the different agreed REDD+ actions (e.g. Reducing Emissions from Forest Degradation in North Eastern States).

To sum up the session Chair in his concluding remarks stressed that National REDD+ Strategy is one of the elements to be developed for implementing REDD+ activities. It is highly dependent upon national circumstances. During the development and implementation of national strategies or action plans, countries should address, inter alia: the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the REDD+ Safeguards. He summed up his remarks that REDD+ activities to be implemented in phased manner, beginning with the development of national strategies or action plans, policies and measures, and capacity-building; followed by the implementation of national policies and measures and national strategies or action plans, technology development and transfer and results-based demonstration activities, and finally evolving into results-based actions that should be fully measured, reported and verified (MRVable).
4. PLENARY SESSION

Preparedness of SFDs in REDD+ implementation and capacity building with reference to proposed national REDD+ Policy and strategy

Chair: Mr. Saibal Dasgupta, Director General, Forest Survey of India
Panelists:
1. Dr. Subhash Ashutosh, Addl. PCCF, Meghalaya
2. Dr. Mohit Gera, Professor, IGNFA, Dehradun
3. Mr. Noyal Thomas, DIG, Forest Policy, MoEF&CC, New Delhi
4. Mr. Vidya Sagar, CCF Uttarakhand Forest Department
5. Dr. Bhaskar Karky, ICIMOD

Shri Saibal Dasgupta, Director General, Forest Survey of India, Dehradun Chaired the Plenary Session. Chair introduced the topic and the panellists. Following deliberations were made during the plenary session:

Dr. Mohit Gera, Professor, Indira Gandhi National Forest Academy, Dehradun stressed the need to fix the timeline for the preparation and implementation of National Policy on REDD+. He also showed concern for the capacity building for the implementation of REDD+. He proposed that the capsule course should be prepared for Indian Forest Services Officials. Dr. Gera also highlighted that the protocol should be developed to assess the Non Carbon Benefits of implementing REDD+ projects. He further expressed that the Payment for ecosystem services also needs to be qualified and evaluated with REDD+ programmes and also can find reference in the national REDD+ Strategy. Policy and strategy should incorporate guiding principles for equitable distribution of REDD+ benefits.

Dr. Subash Ashutosh, Additional Principal Chief Conservator of Forests, Meghalaya said that REDD+ involves many stakeholders outside the realm of forestry sector. These stakeholders need to be identified and sensitized for the implementation of REDD+ projects. He also stated that valuing is not required for REDD+ project and for the credibility of the project biodiversity and safeguards standards needs to be followed.
Dr. Bhaskar Karky, ICIMOD said that the REDD desk is established at the district level in Nepal and this model can be replicated in India at Division level. He proposed that road map may be prepared for State Level REDD+ Action Plans (S-RAP) as in Vietnam through establishment of State REDD+ Cells and principles for SRAP can be guided through REDD+ Strategy.

Mr. Noyal Thomas, Deputy Inspector General of Forests (Forest Policy), MOEF&CC, New Delhi expressed his concern for the training of frontline staff in the implementation of REDD+ Policy and Strategy. Private agencies will be requested to allocate the funds under Corporate Social Responsibility (CSR) for the REDD+. Pilot study of REDD+ will be started.

Mr. K. Vidhya Sagar, CCF, Uttarakhand Forest Department, Dehradun said that Uttarakhand Forest Department has taken the lead in the REDD+ and already funded pilot project implemented by ICFRE. He also expressed the need of adequate training for the staff and training manual should be prepared in local language also so that field staff can understand the technicality of REDD+ project.

Dr. G.S. Goraya, DDG (Research) ICFRE proposed that Policy and Strategy can be different documents as policy required legislation procedure while strategy can be decided among experts.

Mr. Saibal Das Gupta, in his concluding remarks underscored the REDD+ Capacity programmes being organised by ICFRE and FSI. ICFRE has developed expertise on REDD+ policy issues and its implementation, while FSI is leads in Nation Forest Monitoring and MRV related aspects. He also proposed that the REDD+ can be part of curriculum at IGNFA to train the forest officials. He also said that small video film should be developed to train the concept of REDD+ in an easy and understandable manner. Trainings should be provided for MRV procedure. REDD+ expert groups should be created at State level.
5. RECOMMENDATIONS OF THE WORKSHOP

Recommendations of the workshop are given below:

1. Meeting UNFCCC Requirements

During the ICFRE-ICIMOD workshop on “National REDD+ Strategy and Action Plan for India: Issues and Challenges” on 30 August 2016, various recommendations were made. It was also resolved to forward these recommendations to the Ministry of Environment and Forest and Climate Change (MoEF&CC) to initiate appropriate actions at the government level.

India, in accordance to UNFCCC agreements, needs to develop following elements:

(i) A national REDD+ strategy and action plan.

(ii) A national forest reference emission level and/or forest reference level and, if possible, sub-national (i.e., state level) forest reference emission levels and/or forest reference levels.

(iii) A robust and transparent national forest monitoring system for the measurement, reporting and verification (MRV) of the REDD+ activities.

(iv) A system for providing information on how the safeguards are being addressed and respected throughout the implementation of the activities.

These elements are needed for tapping REDD+ finance available through a variety of sources, public and private, bilateral and multilateral, including alternative sources.

2. Governance Structure for REDD+

(i) National REDD+ Cell at the MoEF & CC could initiate process developing India’s REDD+ Strategy and Action in accordance with the UNFCCC requirements. REDD+ Cell at the MoEF&CC should also endeavor to promote establishment of State REDD+ Cells for dissemination of mechanism at state level. States may then establish a REDD+ desk at Divisional Level.

(ii) At national level a robust REDD+ Governance structure is needed in the form of a National REDD+ Authority under the purview of MoEF&CC. The REDD+ Cell may provide secretarial work to the National REDD+ Authority. The proposed REDD+ Strategy could suggest a governing structure of REDD+ Authority, its functions and various bodies to support the functioning of National REDD+ Authority.

(iii) REDD+ cell in the ministry need to be strengthened with adequate expertise, preferably with officials having practical experience in the field. Specifically it should have a capacity building sub cell which can coordinate dissemination of expertise to ground level so that strategy can be rolled out on wider canvass with lesser costs.

(iv) National Forest policy 1988 which is under revision could mention about carbon benefit of forests/REDD+.

(v) There are REDD desk at district level in Nepal this model can be replicated in Indian situation also at the Forest Division level.

3. Elements of REDD+ Strategy, Action Plan and Time lines

(i) Government of India (MoEFCC) has adopted a Reference document to operationalize REDD+ in the
country. The document based on the existing knowledge available on the subject and roles and responsibilities of different departments, institutions, civil society and local communities to facilitate institutionalization and implementation of REDD+ in the country. This document could serve as a starting point for National REDD+ Strategy. However, it needs further refinement in accordance with UNFCCC decisions.

(ii) It was also recommended that a road map for implementation of National REDD+ strategies and accomplishing the elements therein with strict time lines/ action lines and deliverables need to be drawn. Actions that need to be considered for quick start of REDD+ in India are as follows:

(a) Identification of essential elements required for a national REDD+ strategy for effective implementation at state (Sub-national) and national level e.g. Safeguard Information System, REL/RL, National Forest Monitoring System, MRV, Capacity building, implementation of pilot projects, carbon right, land tenure, quantification of REDD+ benefits, and benefit-sharing mechanism with REDD+, evolving a system of performance based payment to Communities, and arranging finance for REDD+ actions.

(b) An action plan with time line for execution of the different actions identified in the National REDD+ Strategy.

4. Capacity Building

(i) Capacity building for REDD+ needs to be brought down to cutting edge level with better methodology and better packaging at different levels. Joint modules can be developed by IGNFA, ICFRE, FSI, CASFOS, IIFM and other state level training organizations. Capacity building must reach state forest training institutes to develop sufficient expertise at that level.

(ii) Capacity building could also include a module for REDD+ participating community members to be trained in recording the data. Simple protocols need to be developed for this purpose, 20-30 minute videos on REDD+, and manuals in the form of user-friendly material need to be developed for different stakeholders. Expert group and agencies from outside the forestry sector also need to be identified for using them for capacity building of cutting edge staff, and also for developing training modules and organize capacity building programmes.

5. Stakeholder Consultation

(i) REDD+ involves many stakeholders outside the realm of forestry sector. These players need to be identified, and linkages need to be developed with their actions that help in addressing drivers of deforestation and forest degradation. General awareness raising for public representatives need to be undertaken, since ultimately the political economy matters.

(ii) Stakeholder consultation process is needed for developing strategy and addressing the concerns raised during the consultation process like gender issues and involvement of indigenous people and local communities. Livelihoods enhancement should be the ultimate objective of REDD+ in India.

6. Learning from Successful REDD+ Programmes

(i) Identification of collaborating partners at national and international level with specific tasks to be performed based on their proven strength.
(iii) National REDD+ strategy can consider a road map for preparing State Level REDD+ Action Plans (S-RAP) (Example Vietnam) or further at Forest Circle or Division level (As done for district level in Nepal) through establishment of state REDD+ Cells.

(iv) States needs to be motivated for REDD+ projects in voluntary market, like VCS (e.g, Forest Plus, Uttarakhand REDD+), Plan Vivo (Example Meghalay), Gold standard etc. at small scale (watershed/subwatershed level/subdivision group of village community level). Capacity developed and lesson learnt from this exercise will help in developing REDD+ at Sub national/ National level. At state levels attempts can also be made to develop a State level REDD+ programme for financial support from Green Climate Fund (GCF) of UNFCCC.

(v) Exchange visit of participating communities, (JFM/ Van Panchayat etc.), field foresters to the successfully operating REDD+ projects needs to be arranged to further motivate REDD+ actions in the states.

7. Mobilizing REDD+ Finance

(i) Resources need to be augmented for start of REDD+ in a phased manner i.e., (a) beginning with the development of national strategies or action plans, policies and measures, and capacity-building, (b) followed by the implementation of national policies and measures and national strategies or action plans, technology development and transfer and results-based demonstration activities, and (c) evolving into results-based actions that should be fully measured, reported and verified (MRVable).

(ii) Funding from financial bodies for aforesaid phase I and phase II of REDD+, which may go hand in hand. Augment Finance for REDD+ actions for performance based payments for emission reduction through sources like multilateral, bilateral funding and GCF etc. Further MoEF&CC needs to explore financial resources from multilateral/ bilateral (UN REDD, FCPF readiness fund, WB Biocarbon fund, FIP, GEF, GCF, USAID, GIZ etc. India has recently joined UN-REDD Programme. MoEF&CC/REDD+ Cell can explore finance for phase I and phase II actions of REDD+ implementation of other elements like, SIS or REL/RL.

(iii) Payment for ecosystem services (Ecosystems services automatically flows with carbon benefits) also needs to be qualified and evaluated with REDD+ programmes and also can find reference in the national REDD+ Strategy. Forest Governance should form an important element of REDD+ Strategy. Policy and strategy should incorporate guiding principles for equitable distribution of REDD+ benefits.

A brief review of current REDD+ draft policy and strategy document

(i) In order to give impetus to REDD+, Government of India came out with a draft National REDD+ policy and strategy document, which is web hosted at the MoEF&CC’s website. While policy represents the will and vision of the nation to implement REDD+, the Strategy and Action Plan shall consists of actions with a definite time frame for achieving various actions required at national and state level required for implementing REDD+.

(ii) A REDD+ policy at national level will be helpful in laying down guiding principles in steering REDD+ at national level. The Current Final Draft Policy is inadequate as it does not appropriately reflects the relevant UNFCCC decisions on REDD+, the objectives are too broad and most of them are components of the strategy and Action plan.

(iii) The strategy section of the draft final document is very week and need more elaboration with objectivity and a time frame. A preamble needs to be included, that will stress the primary objective of policy as enrichment of our ecosystems and then to tap international resources for such efforts. Any unspelt clarification shall be interpreted using preamble. The strategy needs to draw a time-line to finalise REDD+ actions.
**Appendix I**

# Workshop’s Schedule

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<tr>
<th>TIME</th>
<th>TOPIC</th>
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<tr>
<td>09.15-09.30 A.M.</td>
<td>Registration</td>
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<tr>
<td>09.30-10.00 A.M.</td>
<td>Inaugural session</td>
<td>• Welcome and Introduction to Workshop: Dr. T.P. Singh, ADG, ICFRE</td>
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<td>• Introduction by Participants</td>
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<td>• Remarks by Dr. Rajan Kotru, Regional Programme Manager, ICIMOD</td>
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<td>• Address by Dr. Shashi Kumar, DG, ICFRE</td>
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<td>10.00 -10.30 A.M.</td>
<td>High Tea and Group Photo</td>
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<td>10.30 A.M.-1.00 P.M.</td>
<td>Technical session: Setting background for REDD+ Implementation</td>
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<td>10.30 -10.55 A.M.</td>
<td>Project Brief and REDD Action Plan process</td>
<td>Dr. Bhaskar Singh Karky, ICIMOD, Nepal</td>
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<td>10.55 -11.20 A.M.</td>
<td>ICFRE initiative on REDD+ in India</td>
<td>Dr. T.P. Singh, ADG (BCC), ICFRE</td>
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<td>11.20 A.M.-11.45 P.M</td>
<td>Developing REDD+ Reference Level and MRV for India</td>
<td>Mr. Rajesh Kumar, Sr. Deputy Director, FSI, Dehradun</td>
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<td>11.45 - 12.10 P.M.</td>
<td>Meghalaya Experience on REDD+ implementation</td>
<td>Dr. Subhash Ashutosh, Addl. PCCF, Meghalaya</td>
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<td>12.10 - 12.30 P.M.</td>
<td>Financial Mechanism for REDD+ and GCF</td>
<td>Mr. Swapan Mehra, IORA Ecological Solutions</td>
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<td>12.30-1.30 P.M.</td>
<td>Lunch Break: At Visiting Scientists Hostel, FRI</td>
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<tr>
<td>1.30 – 2.00 P.M. 30 min</td>
<td>Draft National REDD+ Policy and Strategy: Gap analysis ICFRE</td>
<td>Mr. V.R.S. Rawat, Scientist 'F' (BCC),</td>
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<td>02.00 - 03.00 P.M.</td>
<td>Plenary Session</td>
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<td>02.00 - 03.00 P.M. 1 hr</td>
<td>Preparedness of SFDs in REDD+ implementation and capacity building</td>
<td>Chair: Mr. Saibal Dasgupta, Director General, Forest Survey of India</td>
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<td></td>
<td>with reference to proposed national REDD+ Policy and strategy</td>
<td>Panelists:</td>
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<td>(i) Dr. Subhash Ashutosh, APCCF, Meghalaya</td>
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<td>(ii) Dr. Mohit Gera, Professor, IGNFA</td>
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<td>(iii) Mr. Noyal Thomas, DIG (FP), MoEF&amp;CC</td>
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<td>(iv) Mr. Basant Pant, Program Officer, ICIMOD</td>
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<td>(v) Dr. Parag M. Dhakate, CF, Uttarakhand Forest Department</td>
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<td>03.15 – 03.35 P.M. 20 min</td>
<td>Drafting recommendations to GOI on REDD+ strategy and action Plans:</td>
<td>Mr. V.R.S. Rawat</td>
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<td>03.35 P.M.</td>
<td>Vote of thanks and tea</td>
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## List of Participants

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<th>Name</th>
<th>Designation</th>
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<tbody>
<tr>
<td>Dr. Shashi Kumar</td>
<td>Director General</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:dg@icfre.org">dg@icfre.org</a></td>
</tr>
<tr>
<td>Dr. G.S. Goraya</td>
<td>DDG (Research)</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:gorayags@icfre.org">gorayags@icfre.org</a></td>
</tr>
<tr>
<td>Dr. N.S. Bisht</td>
<td>Director (IC),</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:ddg_extn@icfre.org">ddg_extn@icfre.org</a></td>
</tr>
<tr>
<td>Sh. Arun Singh Rawat</td>
<td>DDG (Admin)</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:ddg_edu@icfre.org">ddg_edu@icfre.org</a></td>
</tr>
<tr>
<td>Sh. Rajan Kotru</td>
<td>Regional Programme Manager</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:rajan.kotru@icimod.org">rajan.kotru@icimod.org</a></td>
</tr>
<tr>
<td>Dr. Bhaskar Singh Karky</td>
<td>Resource Economist</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:bhaskar.karky@icimod.org">bhaskar.karky@icimod.org</a></td>
</tr>
<tr>
<td>Sh. Basant Pant</td>
<td>Program Officer</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:basant.pant@icimod.org">basant.pant@icimod.org</a></td>
</tr>
<tr>
<td>Dr. Subhash Ashutosh</td>
<td>Addl. Pr. Chief Conservator of Forests (R &amp; T)</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:sashutosh30@yahoo.com">sashutosh30@yahoo.com</a></td>
</tr>
<tr>
<td>Dr. Parag M. Dhakate</td>
<td>Conservator of Forests,</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:paragenetics@gmail.com">paragenetics@gmail.com</a></td>
</tr>
<tr>
<td>Sh. K. Vidhya Sagar</td>
<td>Chief Conservator of Forests</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:vidyasagarkoppolu@yahoo.com">vidyasagarkoppolu@yahoo.com</a></td>
</tr>
<tr>
<td>Sh. Shivakumar CM</td>
<td>ADG (Education)</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:adg_admin@icfre.org">adg_admin@icfre.org</a></td>
</tr>
<tr>
<td>Sh. M.Z. Singson</td>
<td>Director</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:mzs@icfre.org">mzs@icfre.org</a></td>
</tr>
<tr>
<td>Sh. Saibal Dasgupta</td>
<td>Director General</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:dgfisi@fsi.nic.in">dgfisi@fsi.nic.in</a></td>
</tr>
<tr>
<td>Sh. Rajesh Kumar</td>
<td>Sr. Dy. Director</td>
<td>ICFRE, Dehradun</td>
<td><a href="mailto:rajesh@fsi.nic.in">rajesh@fsi.nic.in</a></td>
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<tr>
<td>Sh. Kamaljeet Singh</td>
<td>Joint Director, Forest Survey of India, Dehradun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email: <a href="mailto:ddfcm2@fsi.nic.in">ddfcm2@fsi.nic.in</a></td>
<td></td>
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</tr>
<tr>
<td>Sh. S. Elamurugannan</td>
<td>Assistant Inspector General of Forests, Ministry of Environment, New Delhi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email: <a href="mailto:sekannan76@gmail.com">sekannan76@gmail.com</a></td>
<td></td>
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</tr>
<tr>
<td>Dr. G.C.S. Negi</td>
<td>Scientist 'F', GBPIHED, Almora, Uttarakhand, Email: <a href="mailto:negigcs@gmail.com">negigcs@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Vishal Singh</td>
<td>CEDAR, Dehradun, Email: <a href="mailto:cedarhimalaya@gmail.com">cedarhimalaya@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Laxmi Rawat</td>
<td>Scientist 'F', Forest Ecology &amp; Environment Division, FRI, Dehradun Email: <a href="mailto:rawatl@ifcre.org">rawatl@ifcre.org</a></td>
<td></td>
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</tr>
<tr>
<td>Dr. H.B. Vasistha</td>
<td>Scientist- F and Head, Forest Ecology &amp; Environment Division, FRI Email: <a href="mailto:vasisthahb@ifcre.org">vasisthahb@ifcre.org</a></td>
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<tr>
<td>Sh. V.R.S. Rawat</td>
<td>Scientist 'F', BCC Division, ICFRE, Dehradun Email: <a href="mailto:rawatvrs@ifcre.org">rawatvrs@ifcre.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. R.S. Rawat</td>
<td>Scientist 'C', BCC Division, ICFRE, Dehradun Email: <a href="mailto:rawatrsc@ifcre.org">rawatrsc@ifcre.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sh. Nemit Verma</td>
<td>Consultant, BCC Division, ICFRE, Dehradun Email: <a href="mailto:nemit.verma@gmail.com">nemit.verma@gmail.com</a></td>
<td></td>
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<tr>
<td>Sh. Noyal Thomas</td>
<td>Deputy Inspector General of Forests (FP), Ministry of Environment, New Delhi</td>
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</tr>
<tr>
<td>Email: <a href="mailto:noyalifs1963@gmail.com">noyalifs1963@gmail.com</a></td>
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<tr>
<td>Dr. Mohit Gera</td>
<td>Professor, IGNFA, Dehradun Email: <a href="mailto:mohitgera87@gmail.com">mohitgera87@gmail.com</a></td>
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<tr>
<td>Sh. Swapan Mehra</td>
<td>CEO, IORA Ecological Solution, New Delhi Email: <a href="mailto:swapan@ioraecological.com">swapan@ioraecological.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sh. Samir Sinha</td>
<td>CEO, CAMPA, Dehradun Email: <a href="mailto:ceoukcampa@gmail.com">ceoukcampa@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Manoj Kumar</td>
<td>Scientist 'B', Forest Informatics Division, FRI, Dehradun Email: <a href="mailto:kumarmanoj@ifcre.org">kumarmanoj@ifcre.org</a></td>
<td></td>
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</tr>
<tr>
<td>Dr. T.P. Singh</td>
<td>ADG (BCC), ICFRE, Dehradun Email: <a href="mailto:adg_bcc@ifcre.org">adg_bcc@ifcre.org</a></td>
<td></td>
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<tr>
<td>Dr. Shilpa Gautam</td>
<td>Scientist 'D', BCC Division, ICFRE, Dehradun Email: <a href="mailto:gautams@ifcre.org">gautams@ifcre.org</a></td>
<td></td>
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</tr>
<tr>
<td>Dr. Md. Shahid</td>
<td>Consultant, BCC Division, ICFRE, Dehradun Email: <a href="mailto:mdshahid07@yahoo.com">mdshahid07@yahoo.com</a></td>
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</tr>
</tbody>
</table>
Appendix III

Presentations of the Workshop Speakers

DISTRICT REDD+ ACTION PLAN (D-RAP) CHITWAN DISTRICT

Rabindra Roy
Bhaskar Singh Karky
23 August 2016

International Centre for Integrated Mountain Development
Kathmandu, Nepal

context
- In order to implement a national REDD+ strategy, assessment of the drivers, barriers and PAMs at a regional or sub-national level is essential i.e. district level in Nepal.
- District REDD+ Action Plan (DRAP) for Chitwan District has been prepared first in country.
- DRAP is prepared in close consultation and coordination with
  - District Forest Office (DFO)
  - Chitwan National Park (CNP)
  - Local Forestry Groups (LFGs) and
  - private sectors

objectives
The main objectives of the Chitwan D-RAP are to:
- reduce GHG emissions from deforestation and forest degradation, enhance carbon stocks, and improve the health of forest ecosystems;
- minimize potential social and environmental risks of REDD+ implementation;
- ensure implementation and effective monitoring of the REDD+ intervention packages;
- develop D-RAP templates replicable to other districts in Nepal; and
- contribute in implementing National REDD Strategy (NRS) at sub-national level.

methods
- District consultative workshops
- DFO, CNP, DDC, DADO, FECOFUN, BZMC, HIMAWANTI, private sector and other forest sector actors; stakeholders.docx
- Identification of hotspots in terms of deforestation, forest degradation and forest enhancement activities and field visit;
- A series of consultative workshops/meetings with experts was organized in Kathmandu.

eight hotspots
- Padampur,
- Kabilaas,
- Shaktikhor,
- Koraak,
- Birendranagar,
- Piple,
- Lothaar and
- Baadarjhulaa.

- map.jpg, hotspot datasheet.docx
drivers of D&D and barrier to EA

<table>
<thead>
<tr>
<th>Direct and Indirect Causes of Deforestation and Forest Degradation, and Barriers to Improved Forest Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct drivers or causes</td>
</tr>
<tr>
<td>Deforestation</td>
</tr>
<tr>
<td>Illegal forest encroachment; infrastructure, power lines, road expansion, public buildings; etc.; rehabilitation of flood areas; resettlement and relocation</td>
</tr>
</tbody>
</table>

Indirect drivers or causes |
- High demand for land, low demand (inefficient land use policies, weak forestry governance, lack of employment); weak market infrastructure and technical inputs
- Weak policies for private forestry and agroforestry; weak management capacity; high price of LSP/timber and lack of access to clean energy; unsustainable supply and high price of timber; high forest dependence for fuelwood
- Low investment in sustainable forest management; weak management capacity; weak research, outreach and coordination; weak professional attitude; weak governance, and lack of good business plan

three major drivers (prioritized)

- Forest Encroachment for farming and illegal settlement, resettlement, and rural infrastructure development.
- Unsustainable supply of timber and fuelwood, dependency for livelihoods, and forest fire.
- Existing barriers in implementation of improved management of natural and plantation forests.

D-RAP intervention packages (IPs)

<table>
<thead>
<tr>
<th>Key challenges</th>
<th>Priority drivers/barrers</th>
<th>Intervention Packages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deforestation</td>
<td>Forest encroachment for farming and illegal settlement</td>
<td>1. Promotion of Agroforestry 2. Delineation of forest and private land boundaries 3. Diversification of livelihoods 4. Promotion of alternative and more efficient energy options and fuel efficient technology 5. Promotion of community based SFM</td>
</tr>
<tr>
<td>Forest Degradation</td>
<td>Unsustainable supply of fuelwood and timber</td>
<td>6. Forest based Payments for Ecosystem Services (PES) (Cross-cutting component: Linkages between research and extension)</td>
</tr>
</tbody>
</table>

Key results identified from solution trees

- Forest Degradation
- Barriers to improved management of natural and plantation forests

<table>
<thead>
<tr>
<th>Key results identified from solution trees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deforestation: Reduced forest encroachment for farming and Illegal settlement (X)</td>
</tr>
<tr>
<td>Agronomy (AF) producer cooperatives established and supported</td>
</tr>
<tr>
<td>Institutional (policy and finance) for private forestry and AF</td>
</tr>
<tr>
<td>Agricultural and technical support provided to improve AF</td>
</tr>
<tr>
<td>Forest and private land boundary demarcation in conflict areas</td>
</tr>
<tr>
<td>Economic forest monitoring protocols and reporting systems developed</td>
</tr>
<tr>
<td>Regular price dissemination of timber and OfM products</td>
</tr>
<tr>
<td>Improved rainfall and climate patterns</td>
</tr>
<tr>
<td>Strong linkage between REDD and PES for effective functioning of markets (market facilitation)</td>
</tr>
<tr>
<td>Forest support for commercial AF production</td>
</tr>
</tbody>
</table>

Social and environmental risks of IPs

- Social risks
  - Negative social side-effects on poor and marginalized social groups
- Environmental risks
  - Potential side-effects from REDD+ interventions that threaten biodiversity from over-use of hybrid and exotic agroforestry species

Social benefits and environmental safeguards

- Social benefits
  - AF cooperative: retaining shares, minimize elite capture etc.
- Environmental safeguards
  - AF cooperative: hybrid and exotic agroforestry species: at least 50% indigenous tree and crop species
alignment with policy

- **Alignment with policy**
  - the National REDD Strategy (NRS)
  - to contribute to achieve the targets set out in the NRS
  - sectoral alignment with district planning
    - periodic DDC plans, the Chitwan District Forest Sector Plan, and the periodic DFO and CNP plans

monitoring of IPs

- DRWG, the DFO and the CNP as the key agencies for conducting regular monitoring;
- DFO and CNP periodically present the monitoring data to DRWG;
- DRWG and the REDD IC analyze and use the monitoring data according to their own objectives;
- the REDD IC integrates the data into its national database system.

conclusions

- using a participatory approach to designing the Chitwan D-RAP reflects the support of the Chitwan District stakeholders to the national REDD+ readiness process;
- provides the basis for improved methodological guidance for developing D-RAPs in the remaining districts of Nepal,
- Chitwan D-RAP process to be replicated in other districts.

Thank you for your kind attention...
Introduction of UNREDD Phase II

- **Objective**: To enhance Viet Nam’s ability to benefit from future results-based payments for REDD+ and undertake transformational changes in the forestry sector.
- **Six outcomes**
  - **Duration**: 2013 – 2015 – extended to 2018
  - **Budget**: NOK 180 million, equivalent to approx. US$30 million (almost half for demonstration activities)

**Phase II: Outcomes**

- **Outcome 1**: Capacities for an operational National REDD+ Action Programme (NRAP) are in place
- **Outcome 2**: The six pilot provinces enabled to plan and implement REDD+ actions (PRAP/SiRAP)
- **Outcome 3**: National Forest Monitoring System (NFMS) for Monitoring and Measurement, Reporting and Verification and National REDD+ Information System (NRIS) on Safeguards are operational

**Phase II: Outcomes**

- **Outcome 4**: Stakeholders at different levels are able to receive positive incentives
- **Outcome 5**: Mechanisms to address the social and environmental safeguards under the Cancun Agreement, established
- **Outcome 6**: Regional cooperation enhances progress on REDD+ implementation

**PRAP Process**

- The PRAP process is an integral part of the broader development planning of Province such as SEDP and FPDP
- The PRAP is participatory process and deals with cross-sectoral issues
- The PRAP process should be owned and driven by the province through the facilitation of the UN-REDD Programme and its PMU, PPMU

**So why do DRAP in Nepal**

- DRAP is a comprehensive REDD+ plan at local level
- DRAP intends to harmonize with existing district plans
- DRAP works with entities that have potential for emission reduction to address D&D
- DRAP is a methodology that follows FPIC principles - participatory & inclusive
- It goes beyond forestry
- It has a monitoring system
ICFRE Initiatives on REDD+

Dr. T.P. Singh
Assistant Director-General
Biodiversity and Climate Change
Indian Council of Forestry Research and Education,
30th August 2016
Dehradun

REDD +

- Decision 1/CP.16 (2009) of Cancun Agreement defines Scope of REDD+
  - (a) Reducing emissions from deforestation
  - (b) Reducing emissions from forest degradation
  - (c) Conservation of forest carbon stocks
  - (d) Sustainable management of forests
  - (e) Enhancement of forest carbon stocks

- Finalized under Paris Agreement on Post 2020 Climate Change Scenario

Status of ICFRE REDD+ Projects

ICFRE is implementing two pilot projects
- Uttarakhand REDD+ by ICFRE
  - 60,000 Ha. in Nainital District
  - VCS and CCB Standards
  - Huge data generated – for Carbon and Safeguards
- Trans-boundary Himalayas ICFRE-CIMOD (N-E)
  - International Project
  - South-south cooperation and capacity building
  - Focus on shifting cultivation and Bamboo promotion

ICFRE Project in Uttarakhand

The Project is implemented in 60,000 Ha. of Nainital District with funding from CAMPA, Uttarkhand Forest Department

Kosi Watershed – Kals Gola sub-watershed

Methodology for the Project

- From Voluntary market Standards
  - Verified Carbon Standard (VCS)
  - Carbon, Community and Biodiversity (CCB)
- VCS + CCB methodology followed
  - Captures both carbon and safeguards information
  - Credits fetch high value in C-market
Specific Methodology within VCS

**VCS - VM0006**

**Carbon accounting for Mosaic and landscape scale REDD Projects**

**CCB Standard**

As a value addition to VCS Projects for ensuring social and biodiversity safeguards

### LANDSAT Data used

<table>
<thead>
<tr>
<th>Data/Task</th>
<th>VM0006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Sensing imagery/resolution</td>
<td>≤ 30m</td>
</tr>
<tr>
<td>Remote Sensing/ imagery time series needs for reference area</td>
<td>Imagery from three time points used from the period 0-15 years prior to project start (2001, 2008 and 2015)</td>
</tr>
</tbody>
</table>

---

**Ground Verification in Sample Plots**

---

**Collection of Soil Sample**

---

**Carbon Stock Status in Project Area:**

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Mean Carbon Stock Density (t/ha)</th>
<th>Area (ha)</th>
<th>Carbon Stock (tonnes)</th>
<th>No of plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banj Oak Forest</td>
<td>191.89</td>
<td>12,763.70</td>
<td>2,449,165.72</td>
<td>36</td>
</tr>
<tr>
<td>Himalayan Chir Pine Forest</td>
<td>160.85</td>
<td>26,096.26</td>
<td>4,197,480.63</td>
<td>73</td>
</tr>
<tr>
<td>Kharu Oak Forest</td>
<td>210.65</td>
<td>1.38</td>
<td>290.70</td>
<td>2</td>
</tr>
<tr>
<td>Moist Deodar Forest</td>
<td>157.92</td>
<td>158.52</td>
<td>25,035.76</td>
<td>2</td>
</tr>
<tr>
<td>Moist Siwalik Sal Forest</td>
<td>248.30</td>
<td>1,849.02</td>
<td>459,116.20</td>
<td>7</td>
</tr>
<tr>
<td>Moist Temperate Deciduous Forest</td>
<td>230.91</td>
<td>116.41</td>
<td>26,879.75</td>
<td>5</td>
</tr>
</tbody>
</table>
**Drivers of Degradation at Project Site**
- Collection of fuelwood is for cooking and source of energy for heating during winter months.
- Fodder collection for animals.
- Cattle Grazing in the Forest.
- Fire
- Collection of Understorey vegetation for livestock bedding and manuring.
- Encroachment in the forest.
- Illegal felling.

**Fuel wood Collection**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Winter Season Mean ± Standard Error</th>
<th>Summer Season Mean ± Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity of Collection (Kg) / HH / Day</td>
<td>28.33 ± 0.50</td>
<td>24.26 ± 0.60</td>
</tr>
<tr>
<td>Time Spent (hr)</td>
<td>3.77 ± 0.07</td>
<td>3.41 ± 0.09</td>
</tr>
<tr>
<td>Distance Traveled (Km)</td>
<td>3.30 ± 0.12</td>
<td>3.00 ± 0.12</td>
</tr>
</tbody>
</table>

**Annual fuelwood consumption and carbon emission**

<table>
<thead>
<tr>
<th>Fuel wood Biomass consumption per HH/day</th>
<th>Total no. of HH in the project area</th>
<th>Estimated biomass consumption/ year in the project area (Million Tonnes)</th>
<th>Total carbon loss due to fuel wood burning/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.29kg</td>
<td>18458</td>
<td>26.29*18458 *365= 0.1771 Million Tonnes</td>
<td>0.1771*0.5 = 0.8885 Million Tonnes / year = 88,000 Tonnes / 1.5 Tonnes/ Ha/yr</td>
</tr>
</tbody>
</table>

**Fodder Collection**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Winter Season Mean ± Standard Error</th>
<th>Summer Season Mean ± Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity of Collection (Kg) / HH</td>
<td>26 ± 0.58</td>
<td>25.19 ± 0.60</td>
</tr>
<tr>
<td>Time Spent (hr)</td>
<td>3.20 ± 0.08</td>
<td>3.27 ± 0.21</td>
</tr>
<tr>
<td>Distance Traveled (Km)</td>
<td>2.84 ± 0.13</td>
<td>2.68 ± 0.11</td>
</tr>
</tbody>
</table>
**Leaf Litter collection**

<table>
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<tr>
<th>Parameters</th>
<th>Winter Season</th>
<th>Summer Season</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean ± Standard Error</td>
<td>Mean ± Standard Error</td>
</tr>
<tr>
<td>Quantity of Collection (Kg/HH)</td>
<td>22.22 ± 0.59</td>
<td>21.23 ± 0.63</td>
</tr>
<tr>
<td>Time Spent (hr/d)</td>
<td>2.69 ± 0.07</td>
<td>2.97 ± 0.08</td>
</tr>
<tr>
<td>Distance Travelled (Km/day)</td>
<td>2.62 ± 0.09</td>
<td>2.67 ± 0.10</td>
</tr>
</tbody>
</table>

Fuelwood + Fodder + Leaf Litter = Carbon Loss of around 4 Tonnes / Ha / year

**Measures to Address the Drivers of Degradation**
- Plantation of fodder grasses.
- *Pirul* collection contributes reduction in fire incidence.
- Small water reservoirs can be prepared to store the rain water.
- Check Dam construction to control the flow of water and soil erosion.
- Appropriate Tool/implements can be provided to Van Panchayats to control the fire occurrence.
- Improved Cook Stove and LPG can be provided to the community to reduce the usage of fuelwood hence addressing forest degradation.

**Next Steps in Project**
- Preparation of PDD  
  - as per VCS and CCB Guidelines  
- Registration of the Project  
- Validation  
- Capacity Building of Department and communities  
- Actual Activities in the field

**ICIMOD-ICFRE REDD+ Project**
- Part of Trans-boundary REDD+ Programme of ICIMOD in 4 countries  
- Contiguous with other three countries: Nepal, Bhutan and Myanmar  
- Improve capacity on REDD+ understanding in N-E Indian Himalayas  
- Activities specifically focused on Mizoram

**Specific Project Objectives**
- Establishment of South-south cooperation  
- Exchange of experience and mutual learning for other three countries  
  - MRV, SIS, Reference Levels (Regional)  
- Development of Methods for calculating, modelling and forecasting carbon sequestration  
- Preparation for REDD+ Readiness in North-Eastern India

**Activities completed so far**
- Two side events at CoP-21 in Paris (Dec 2015)  
- Inception Workshop at Aizawl (28-29 Jan.)  
  - Preliminary Site selection in Mizoram  
- Stock taking review to understand REDD+ implementation in country  
- Scoping study of REDD+ in Kailash Landscape of Uttarakhand Himalayas
Location of Kailash Sacred Landscape (KSL)

District of Pithoragarh, and part of Bageshwar

Kailash Sacred Landscape Visited

Landuse system (Agriculture and Forest) studied

Chir Pine Forest

Broad Leaved Forest

Forest Type Status in KSL

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Groups</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest</td>
<td>Subgroup Types</td>
<td>19</td>
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</tbody>
</table>

Forest Cover Status in KSL

<table>
<thead>
<tr>
<th>Forest Class</th>
<th>Area (ha.)</th>
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<tbody>
<tr>
<td>Very Dense Forest</td>
<td>61672.20</td>
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<tr>
<td>Moderately Dense Forest</td>
<td>119476.92</td>
</tr>
<tr>
<td>Open Forest</td>
<td>46615.51</td>
</tr>
<tr>
<td>Scrub</td>
<td>2790.43</td>
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</tbody>
</table>
**Change in area (km²) by each forest class wise in Pithoragarh from 2003-2015**


**Carbon Stock Estimation in KSL**

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Major Group</th>
<th>Density</th>
<th>Carbon Stock (t/ha)</th>
<th>Total area forest cover wise</th>
<th>Total Carbon (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tropical</td>
<td>Moist</td>
<td>VDF</td>
<td>99.95</td>
<td>1320.09</td>
<td>131942.64</td>
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<tr>
<td></td>
<td>Deciduous</td>
<td>MDIF</td>
<td>82.53</td>
<td>1699.01</td>
<td>89958.72</td>
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<tr>
<td></td>
<td></td>
<td>GF</td>
<td>55.34</td>
<td>730.98</td>
<td>40648.30</td>
</tr>
<tr>
<td>Tropical</td>
<td>Dry</td>
<td>VDF</td>
<td>167.53</td>
<td>3849.52</td>
<td>644909.55</td>
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<tr>
<td></td>
<td>Deciduous</td>
<td>MDIF</td>
<td>152.64</td>
<td>3307.57</td>
<td>535365.45</td>
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<tr>
<td></td>
<td></td>
<td>GF</td>
<td>66.59</td>
<td>1510.71</td>
<td>101890.02</td>
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<tr>
<td>Subtropical</td>
<td>Pine</td>
<td>VDF</td>
<td>155.76</td>
<td>16902.47</td>
<td>2632729.16</td>
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<tr>
<td></td>
<td>Forest</td>
<td>MDIF</td>
<td>120.57</td>
<td>12083.79</td>
<td>1577512.57</td>
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<tr>
<td></td>
<td></td>
<td>GF</td>
<td>91.96</td>
<td>9935.74</td>
<td>909718.09</td>
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<tr>
<td>Montane</td>
<td>Moist</td>
<td>VDF</td>
<td>128.34</td>
<td>4854.54</td>
<td>7615513.53</td>
</tr>
<tr>
<td>Temperate</td>
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<td>MDIF</td>
<td>94.27</td>
<td>3307.97</td>
<td>3118591.94</td>
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<tr>
<td></td>
<td>Forest</td>
<td>GF</td>
<td>181.34</td>
<td>7869.22</td>
<td>1435534.92</td>
</tr>
<tr>
<td>Subalpine</td>
<td>&amp; Dry</td>
<td>VDF</td>
<td>152.69</td>
<td>6651.64</td>
<td>1015638.57</td>
</tr>
<tr>
<td>Temperate</td>
<td>Forest</td>
<td>MDIF</td>
<td>103.52</td>
<td>4509.64</td>
<td>466838.34</td>
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<tr>
<td></td>
<td></td>
<td>GF</td>
<td>202.34</td>
<td>4.02</td>
<td>812.75</td>
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<tr>
<td>Alpine Scrub</td>
<td></td>
<td>MDIF</td>
<td>84.57</td>
<td>1.67</td>
<td>141.31</td>
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<tr>
<td></td>
<td></td>
<td>GF</td>
<td>65.91</td>
<td>1.31</td>
<td>86.24</td>
</tr>
</tbody>
</table>

**Consultation at GBPNIHESD, Almora**

**Consultation with local community at Village Naukina, Pithoragarh**

**Driver of Deforestation and Forest Degradation**

- Fuel wood Collection
- Grazing
- Forest Fires
- Litter Collection
- Encroachment and Illegal Felling
- Collection of Medicinal Plants
- Invasive Species
Interventions/ Activities to address the drivers of Deforestation and Forest Degradation

- Improved Cook Stoves and Alternative Sources of Clean Energy.
- Grazing Control: Fodder Plantation
- Forest Fire Control: Participation of local youth
- Litter Collection: Encouragement of Vermicomposting
- Agricultural Practices: Improved variety, implements etc
- Cultivation of Medicinal Plants
- Eradication of Invasive Species
- Strengthening of Van Panchayats

Activities planned till Dec ‘16

- Scoping study of promoting Bamboo plantation in addressing REDD+ Objectives (Mizoram)
  - Interface with National Bamboo Mission Project
- Provision of Solar Dryer for community based Turmeric grower SHGs
- Starting preparation of State REDD+ Action Plan for Mizoram and Uttarakhand
  - Experience of Uttarakhand REDD+ to be utilised

Activities planned contd..

- Development of Training Manuals
- Formation of REDD+ Working Group with members from all N-E States and Uttarakhand
- Side Event on REDD+ Trans-boundary Project in India Pavilion at CoP-22 in Marrakesh, Morocco
  - In association with ICIMOD

Conclusion

- REDD+ offers is an innovative way to mitigate climate change in post 2020 scenario
- India needs to finalize REDD+ Strategy
- Pilot Programmes are offering good, and they need to be synergized
- Capacity building of stakeholders holds the key to successful implementation at all levels

Thanks
Financial Mechanism for REDD+ and GCF

Swapan Mehra, CEO
IORA Ecological Solutions

Our Services Sectors

IORA's Services Sectors

- Forestry
- Biodiversity
- Climate Change
- Partnership

REEAD+ R&D, Management, Forestry, Policy, Bioenergy, Policy

IORAs REDD+ Activities

- Project
  - Forest PLUS
  - Garam Hills REDD+
  - REDD+ Assessment in NE
  - National REDD+ Reference Document and Policy
  - REDD+ Manual for Field Practitioners
  - REDD+ Institutional Framework for Indonesia
  - REDD+ Feasibility Assessment in Odisha, Maharashtra
  - New VCS REDD+

- Scope
  - Develop a REDD+ project, MVA System, RS Protocols
  - Developed REDD+ project concept
  - Identify potential projects in all NE states in partnership with RCRAP
  - Developing District-level REDD+ Project in Assam
  - Co-authored by IORA
  - Co-authored with ILF and FS
d
  - Co-developed with UNDIREED

Phased approach for REDD+ financing

- Readiness
  - Donors and Domestic

- Investment
  - Funds, Donors, Domestic

- Phase I: Countries can access immediate international funds for developing National REDD+ strategy, development, institutional strengthening, capacity building, etc.

- Phase II: Countries can access funding for implementation national REDD+ strategy, capacity building and result-based demonstration activities

- Currently only FCPF, UNREDD, BCF, Some Donor

REDD+ finance cycle

- CAPEX
- OPEX
- ROI

- Development
- Implementation
- Project Interconnection

- Expansion/Capital

- House Credits
- Market Credits

**Financing REDD+ India**

Up front capacity-building (readiness) costs
(Donors, State/Central Funds)

REDD+ project establishment costs (NAP, DSM, CAMA, CSR)

Forest protection costs

Intervention actions, site development

Reduction in traditional carbon markets

REDD+ project operating cost (Donors, State Funds, CSR)

MRV systems

Maintenance of deployed intervention actions

Reward systems (internationally based financing for REDD+ was discussed)

Offsetting opportunity costs

Performance and novelty by based new system

---

**Major COP decision in REDD+ Financing Context**

Copenhagen 2009 COP 15, REDD+ mechanism that would

lead in mobilizing financial resources from developed
countries

Copenhagen 2009 COP 15. REDD+ was established to be designated as

an operating entity of the financial mechanism of the Convention
under Article 14 and REDD+ was supported

Durban 2011 COP 17, result

based payment for developing
countries was agreed

Oslo 2012 COP 18, soft market and nonmarket based financing

for REDD+ was discussed

Warsaw 2013 COP 19, produced

funding under the instrument

would be multi-based

frameworks that REDD+ finance

can come from public and

private, bilateral and multilateral

and alternative sources.

Scaling up the financial support

Paris 2015 COP 21, recognizes

importance of adequate and

predictable financial flow which

shall be result oriented. Finance

may come from public, private,

bilateral, or multilateral sources,

but no commitment (finance

REDD+)---

---

**REDD+ Financing Sources**

### Bilateral

- Second largest funding source

### Multilateral

- Compliance

### Market based

- Voluntary

### Non-market based

### Private sector

70% of REDD+ financing from bilateral sources (Bonn, 2010)

Honours: Responsible for Fortek’s and Teslar’s COP

Funding Committee ~USD 400 million per year.

---

**Multilateral Funding**

<table>
<thead>
<tr>
<th>Funds</th>
<th>Administering organization</th>
<th>Purpose</th>
<th>Geographical focus</th>
<th>Current Pledged Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP F</td>
<td>No REDD+</td>
<td>To build REDD strategies, MRV systems, and national baseline knowledge sharing among countries in developing countries</td>
<td>All developing countries</td>
<td>584 million USD</td>
</tr>
<tr>
<td>COP C</td>
<td>UNFCCC</td>
<td>To support early in the developing countries but being propelled forward REDD+ measures are</td>
<td>All developing countries</td>
<td>702 million USD</td>
</tr>
<tr>
<td>DON-RED</td>
<td>UNDP, UNFPA and FAO</td>
<td>To support development of national REDD+ Readiness in developing countries</td>
<td>All developing countries</td>
<td>271 million USD</td>
</tr>
<tr>
<td>REDD+</td>
<td>UNDP, contributing countries</td>
<td>To support development of national REDD+ Readiness in developing countries</td>
<td>All developing countries</td>
<td>566 million USD</td>
</tr>
</tbody>
</table>

---

**Bilateral Funding**

<table>
<thead>
<tr>
<th>Donor</th>
<th>Multilateral agencies</th>
<th>Activities</th>
<th>Geographical focus</th>
<th>Current funding</th>
<th>Targeted Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norwegian Agency for Development Cooperation</td>
<td>COP 15, COP 17, REDD+</td>
<td>Develops Forest carbon sinks</td>
<td>Africa, Asia, Latin America and the Caribbean</td>
<td>400 million USD</td>
<td>LII and III</td>
</tr>
<tr>
<td>Australian Aid</td>
<td>COP 15, COP 21</td>
<td>Reduce tropical deforestation and promote trade in sustainably managed wood products</td>
<td>Asia/Pacific region</td>
<td>5 million USD, 2017–2023</td>
<td>I and II</td>
</tr>
<tr>
<td>Canadian International Development Agency</td>
<td>COP 15 and COP 17</td>
<td>MRV and institutional capacity building and knowledge sharing</td>
<td>Developing countries</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Danish Development Cooperation</td>
<td>COP 15, COP 17</td>
<td>Improve and develop on REDD+ and MRV</td>
<td>Africa, Latin America, The Middle East</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
### Bilateral Funding

<table>
<thead>
<tr>
<th>Donor</th>
<th>Multilateral agency</th>
<th>Activities</th>
<th>Geographical focus</th>
<th>Current funding</th>
<th>Targeted Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>USAID</td>
<td>IFI, IBRD and IDA</td>
<td>Pervasive activities; included wide range of activities against climate change, ongoing</td>
<td>Asia, China, Africa, Latin America and Caribbean and Middle East</td>
<td>USD 600 million annually by 2020</td>
<td>1 and II</td>
</tr>
<tr>
<td>Swedish International Development Cooperation Agency (SIDA)</td>
<td>GEF</td>
<td>Support government ITUNU, aid and trade policies</td>
<td>Africa, Asia, Latin America</td>
<td>Insufficient public data</td>
<td>I</td>
</tr>
<tr>
<td>Korean International Cooperation Agency (KIC)</td>
<td>PFM, IFI and IDA</td>
<td>Capacity building, technology exchange</td>
<td>Africa, Asia, Latin America and Europe</td>
<td>USD 100 million USD in China Financing for 2015 for Developed countries</td>
<td>I</td>
</tr>
<tr>
<td>Germany (KFS, BMZ, GIZ and NDE)</td>
<td>PFM and GIZ</td>
<td>Whole range of activities including technical assistance and institutional capacity building</td>
<td>Africa, Asia, South Central &amp; South America, Europe and Germany</td>
<td>Insufficient public data</td>
<td>I</td>
</tr>
</tbody>
</table>

### Voluntary REDD+ “Kickstarted”

| Ecosystems Marketplace | GCF | Whole range of activities including technical assistance and institutional capacity building | Africa, Asia, South Central & South America, Europe and Germany | Insufficient public data | I |

### Major REDD+ funding countries and regions receiving REDD+ funds

<table>
<thead>
<tr>
<th>Recipients</th>
<th>Funders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia-Pacific, Africa, Latin America, China, Europe, Middle East, USA</td>
<td>Asia-Pacific, Africa, Latin America, China, Europe, Middle East, USA</td>
</tr>
</tbody>
</table>

### Voluntary Market Transacted Volume by Project Type

- Offsets from wind farms are starting to produce greenhouse gas reductions from deforestation and forest degradation (REDD+) as the most significant project types in 2015, totaling 2.7 million tonnes of CO2 equivalent in 2015.
- Most projects are high-impact projects, such as reducing deforestation.

### Structure of GCF

#### GCF Board

- GCF Board
- Independent Oversight Unit

#### Structure of GCF

- GCF Board
- Independent Oversight Unit

---

**Background**

- A key milestone in climate finance was established under the UNFCCC at COP 16,坎昆.
- Aims to link climate-friendly projects with carbon finance.
- Supports projects that are developed by and are relevant to the UNFCCC.
- Accountable to and function under the guidance of the COP.
- A legally independent entity, but managed by South Korea.
- Manages an account, which is governed by the GCF Board (24 members appointed by the COP).
- Funds maintain a 50:50 balance between mitigation and adaptation.
- COP 21 at Paris recognizes GCF as the key provider of predictable financial resources in the post-2020.
- GCF could be an important source for NDC implementation.

---

**National REDD+ Strategy and Action Plan for India: Issues and Challenges**

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1. Mr. Padmanabha Kotagal, Secretary, Department of Economic Affairs, Ministry of Finance, represented Asia-Pacific one of the board members of the GCF.
The GCF Fund criteria

- Impact potential
- Paradigm shift potential
- Sustainable development potential
- Responsive to recipient
- Promote country ownership
- Economic / financial soundness of the programme / project
- Degree to which the proposed activity can catalyze impact beyond a small project or programme investment
- Social environmental and economic benefits for long term benefit
- Sustainability and financing needs of the beneficiary country and population in the target group
- Beneficiary country ownership of capacity to implement a funded project or programme (policies, climate strategies and institutions)

Condition and Eligibility for GCF

- Recipient countries can submit proposal only through NDA
- Access to GCF funding can be through accredited national, sub-national and regional implementing entities and any other organizations or intermediaries
  - NABARD is the only accredited entity of GCF in India
- Entities seeking accreditation shall meet funds fiduciary and environmental standards
- GCF funds can also be accessed through multilateral implementing entities
- All developing countries are eligible to receive GCF funds
- In case of REDD+, GCF recognizes the value of incorporating results based financing

Sources of Funding for GCF

For period 2015 – 2018, $9.3 billion from developed countries are on-going, thus from the U.S. $15 billion currently pledged to the fund, $1830 billion comes from developed country Parties

Some common questions on how funding is decided in GCF

How are proposals developed
Any organization can come up with an idea, but the proposal must be submitted with an accredited entity of GCF

What activities are funded
At least meet one of the fund priority area

How a proposal can be submitted
Accredited entities submit the proposals which must have the no objection certificate from the NDA

Who approve the proposals
GCF Board

When one can generate proposal
Anytime

Thank You

IORDA Ecological Solutions
225/164A, FF
Indraprastha Green Mandir Complex,
Lodhi Village,
New Delhi - 110030
Tel: +91-11-41025748
Fax: +91-11-41025126
Email: swagat@iordaeological.com
Web: www.iordaeological.com
Developing Reference Levels for REDD+

- No explicit difference between FREL and FRL.
- Common understanding is that a FREL includes only emissions, and a FRL includes removals as well.
- Thus comprising activities that enhance forest carbon stocks.
- The Conference of Parties (COP) FREL/FRLs are: “…benchmarks for assessing each country’s performance in implementing [REDD+] activities” (decision 12/CP. 17).

Key Elements of REDD+ and UNFCCC Decisions

- It is relevant to assess country performance in contributing to mitigation of climate change through actions related to their forests.
- Results-based payments require an assessed forest reference level (Decision 9/CP.19, paragraph 3 and Decision 13/CP.19, paragraph 2).
- Country may wish to assess progress on the outcomes of the policies and measures taken to mitigate climate change in the forestry sector for domestic reasons (UNFCCC does not require).

Guidance on FREL/FRL construction

- Be expressed in tonnes of carbon dioxide equivalent per year (Decision 12/CP.17, paragraph 7).
- Maintain consistency with national GHG inventories (Decision 12/CP.17, paragraph 8). In terms of
  - forest definition,
  - sources of data used (for the activity and the emission factors) and
  - C pools/GHG gases included for construction of FRLs.
- using the IPCC guidance and guidelines for National GHG Inventories as a basis for estimating forest-related GHG emissions by sources and removals by sinks.

Purpose of forest reference levels

- Be established transparently, providing information and rationale of FRL development.
- Allow for a step-wise approach (Decision 12/CP.17, paragraph 10)
  - The decision enables to improve FRLs over time by incorporating
    - better data,
    - improved methodologies and,
    - where appropriate, additional pools.
  - It also suggests countries should update their FRLs periodically
- Allow for the use of sub-national FRLs as an interim measure (Decision 12/CP.17, paragraph 11).
FRL information required for UNFCCC submission

- Once constructed, countries may, on a voluntary basis, submit their proposed FRLs to the UNFCCC (Decision 11/CP.17)
- Information used by Parties in constructing a FRL, including historical data;
- Transparent, complete, consistent and accurate information, including
  - methodological information,
  - a description of
    - data sets,
    - approaches, methods, models,
  - the assumptions used,
  - descriptions of relevant policies and plans, and
  - Descriptions of changes from previously submitted information;

FRL information required for UNFCCC submission

- Pools, gases, and activities included in the FRLs
- The definition of forest used in the construction of the FRLs.

Technical assessment of FREL/FRLs

- To assess the degree to which the information provided meets the UNFCCC guidelines,
- The scope of the technical assessment - data, methodologies and procedures,
- Carried out at Bonn by 2 LULUCF Experts one each from Developing and Developed country.

Key Elements of FRLs

- Forest definition: The forest definition used for the construction of the FRL;
- Data: How historical data (Natcoms) taken into account;
- Scope: REDD+ activities, pools and gases included FRL;
- FRL calculation methodology: information and rationale on the development of their FRLs. This includes details on national circumstances and how these are considered if adjustments are made;
- Scale: The area covered by the FRL, with due consideration to the development of sub-national FRLs as an interim measure

Forest definition

- Country has to provide the definition of forest used.
- If different from the definition of forest used in the national GHG inventory (consequence of different definition?)
- Why and how the definition used in FRLs was chosen.
- IPCC guidance provides a description for forest land which states it includes “all land with woody vegetation consistent with thresholds used to define forest land”
- Thresholds of description of forest land concern:
  - Minimum crown cover,
  - Minimum tree height,
  - Minimum area.

Scope of Activities, Pools and Gases to be included

<table>
<thead>
<tr>
<th>Activities</th>
<th>Pools</th>
<th>Gases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing emissions from deforestation</td>
<td>Above ground Biomass</td>
<td>CO₂</td>
</tr>
<tr>
<td>Reducing emissions from forest degradation</td>
<td>Below-ground Biomass</td>
<td></td>
</tr>
<tr>
<td>Conservation of forest carbon stocks</td>
<td>Soil</td>
<td></td>
</tr>
<tr>
<td>Sustainable management of forests</td>
<td>Litter</td>
<td></td>
</tr>
<tr>
<td>Enhancement of forest carbon stocks</td>
<td>Dead wood</td>
<td></td>
</tr>
</tbody>
</table>

Scope guiding questions

- Which REDD+ activities contribute most for mitigation?
- Are increased emissions expected from omitted activities in the future?
- Is the omission of pool/gas/activity conservative, i.e., are emissions from the omitted pool/gas/activity expected to reduce with REDD+ implementation?
- Are there other national objectives that favor the inclusion of certain activities, pools and gases that are not key contributors to emission in the sector?
- Can estimates of accounted mitigation for these significant REDD+ activities be produced with reasonable accuracy?
- Which carbon pools and gases are subjected to significant change in these activities?
- Can estimates for these significant pools and gases be produced with a reasonable accuracy?
Basic Input information requirement
GHG inventories require information

- **Activity data** on extent of an emission or removal category
- **Emission factors** GHG per unit of area (removal of CO₂ per ha of added forest area)

*Note*: carbon stock is measured in metric tons of carbon (generally, t C ha⁻¹)

Approaches for activity data
Three different approaches are given in the IPCC GPG

- **Approach 1**: Total area of each land-use category but no information on conversions (only net changes)
- **Approach 2**: Tracking of conversions between land-use categories (only between 2 points in time)
- **Approach 3**: Spatially explicit tracking of land-use conversions over time

Preparing for REDD+? only Approach 3

Available Activity data
1. Forest Cover Map for the years
   a. 1994
   b. 2000
   c. 2002
   d. 2004
   e. 2008
2. Forest Type Maps of above years.
3. What is to be done to improve FCMs & FTMs
   a. Improve by incorporating changes due to Errors identified during successive Cycles of FCM

Land Transition Matrix (FSI's CHANGE MATRIX)

![Image of Land Transition Matrix](image)

Forest Cover Change Matrix (km²) depicts

<table>
<thead>
<tr>
<th>Class</th>
<th>VOF</th>
<th>MDF</th>
<th>OF</th>
<th>Scrub</th>
<th>Non Forest</th>
<th>Total Forest Cover 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dense Forest</td>
<td>83,065</td>
<td>295</td>
<td>45</td>
<td>0</td>
<td>169</td>
<td>83,471</td>
</tr>
<tr>
<td>Moderately Dense Forest</td>
<td>435</td>
<td>317,516</td>
<td>1786</td>
<td>2</td>
<td>1,569</td>
<td>320,738</td>
</tr>
<tr>
<td>Open Forest</td>
<td>4</td>
<td>825</td>
<td>385,584</td>
<td>60</td>
<td>1,823</td>
<td>287,620</td>
</tr>
<tr>
<td>Scrub</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non Forest</td>
<td>0</td>
<td>0</td>
<td>8,138</td>
<td>450</td>
<td>3,053,823</td>
<td>2,653,059</td>
</tr>
<tr>
<td>Total Forest Cover 2013</td>
<td>83,502</td>
<td>318,748</td>
<td>229,631</td>
<td>41,383</td>
<td>3,057,092</td>
<td>2,657,263</td>
</tr>
<tr>
<td>Net change</td>
<td>35</td>
<td>-1,841</td>
<td>7851</td>
<td>-790</td>
<td>-5078</td>
<td></td>
</tr>
</tbody>
</table>

Activity-wise Annual change in forest cover (Improved)

![Image of Activity-wise Annual change in forest cover](image)
Tiers that are used for the emission factors

Tiers for emission factors: change in Carbon stocks

Tiers 1: IPCC default values

Tiers 2: Country specific data for key factors

Tiers 3: Detailed national inventory for key C stocks, repeated measurement for key stocks through time or modeling

Preparing for REDD+? Only tier 3 may play.

National Forest and Tree Resource Inventory on a two year cycle

Two sample plots are randomly selected. Thereafter, every alternate 1°N X 1°E GRID is systematically selected to form two systematic samples. At center of selected 1°N X 1°E SUB GRID, sample plots of 0.1 ha is laid out.

Data Collection

5.1 m Square plot: for tree measurements - dbh, height, aspect, crown diameter, etc.

3.0 ha Circular plot for qualitative information like - land use, land cover, composition, origin of trees, incidence, soil, regime, succesión, grazing, etc.

Intensity of degradation

Presence of weeds

Presence of grass

Soil erosion

Sample Point and Attached plots

Cartopy: P. Somasundaram
Districts Completed Under National Forest Inventory

Inventory of 3 Cycle (about 180 districts) used
Sample plots = 21,000

National Circumstances

NFMS
MRV for REDD+
Analysis of Historical data
Details on national circumstances (NC)
Assess drivers of deforestation and forest degradation

FRL entirely based on historic data
No Adjustment for NC?
Yes

FRL takes into account historic data and adjustment for NC

FREL based on Historical Average GHG Emissions from Forests

Annual emissions (tonnes)

- Historical emission
- Reduction
- Assessment of

REDD+ Reference Level

Future business-as-usual scenario
Future emissions
Historical emissions

Annual Carbon Sequestration (Mill. Tonnes)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>59.2</td>
<td>51.2</td>
<td>19.8</td>
<td>16.2</td>
<td>-</td>
</tr>
<tr>
<td>2000</td>
<td>-</td>
<td>-</td>
<td>19.8</td>
<td>16.2</td>
<td>13.6</td>
</tr>
<tr>
<td>2004</td>
<td>59.2</td>
<td>51.2</td>
<td>21.0</td>
<td>16.2</td>
<td>13.6</td>
</tr>
<tr>
<td>2008</td>
<td>39.7</td>
<td>51.2</td>
<td>6.2</td>
<td>16.2</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Annual carbon Sequestration (mill. tonnes)

Reported UNFCCC
Mod-Hist-Av (1994-2008)
Linear (Reported-Hist-Av)
Linear (Mod-Hist-Av (1994-2008))
Linear (Mod-Hist-Av (2000-2008))
Linear (Reported-Hist-Av)
### Annual Carbon di Oxide - equivalent (Mill. Tonnes)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>217.1</td>
<td>187.6</td>
<td>72.7</td>
<td>59.6</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>-</td>
<td>-</td>
<td>72.7</td>
<td>59.6</td>
<td>49.7</td>
</tr>
<tr>
<td>2004</td>
<td>217.1</td>
<td>187.6</td>
<td>76.8</td>
<td>59.6</td>
<td>49.7</td>
</tr>
<tr>
<td>2008</td>
<td>145.6</td>
<td>187.6</td>
<td>22.6</td>
<td>59.6</td>
<td>49.7</td>
</tr>
</tbody>
</table>

### The "Conservative Principle" for Accountable Carbon Credits

- **Time 1 Stock**
- **Upper error bound (95%)**
- **Time 2 Stock**
- **Lower error bound (95%)**
- **Accountable carbon credit**

### Thanks

Visit [www.fsi.nic.in](http://www.fsi.nic.in)
REDD+: the Meghalaya Experience

Dr Subhash Ashutosh
Addl PCCF (CC, R&T)
Meghalaya

30th Aug/16

REDD+

- is a mitigation mechanism involving Forestry Sector
- works on the principle of performance based financial incentive
- works in the project mode
- project has to demonstrate that there is additional carbon mitigation than the business as usual (BAU)
  - by additional investment and effort additional mitigation of carbon is achieved and the project is economically viable – addiitionality
- has evolved since 2005 (COP 11) under UNFCCC
- REDD+ under UNFCCC is still under negotiation but is being transacted in voluntary market since 2006
- “Warsaw Framework on REDD-plus” at COP19 in December 2013 is considered as major breakthrough towards operationalising performance based finance for REDD+

REDD+ (Reduction of Emission from Deforestation and Degradation+)

Five Components of REDD+
(a) reducing emission from deforestation
(b) reducing emission from forest degradation
(c) conservation of forest carbon stocks
(d) sustainable management of forests
(e) enhancement of forest carbon stocks

Reference Level: Sustainable Management of Forests

UMIAM SUB-WATERSHED REDD+ PROJECT, MEGHALAYA, INDIA

Community Forest International
Land Cover Types

<table>
<thead>
<tr>
<th>LAND COVER</th>
<th>AREA 2010 (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense forest</td>
<td>9,270</td>
</tr>
<tr>
<td>Open forest</td>
<td>5,947</td>
</tr>
<tr>
<td>Barren or fallow</td>
<td>6,330</td>
</tr>
<tr>
<td>Agriculture</td>
<td>4,777</td>
</tr>
<tr>
<td>Other (shadow/water/no data)</td>
<td>814</td>
</tr>
<tr>
<td>Total Area</td>
<td>27,139</td>
</tr>
</tbody>
</table>

Local tree species – Khai pine, G. griffithi and Chestnut

Project Overview

Total Project Area = 17,052 ha
- Total Forest Cover = 8106 ha, of which 3852 ha is Dense forest and 4454 ha is Open forest
- The Net CO2 additionality per year on account of Avoided Deforestation and Degradation and Afforestation in the Project Area works out as under:
  - Gross 27,246 mt. CO2
  - Reduction at 60% level of Gross 16,448 mt. CO2
  - Subtract Leakage 30% 4984 mt. CO2
  - Net CO2 11,444 mt. CO2

Project Design Process

- The time line of the processes that influenced the design activities stipulated in the Project were as under:
  - 2005 - 2008: Project Design Phase – Based on dialogue with Indigenous inhabitants, the main drivers of deforestation were identified and mitigation activities agreed upon in a Conservation Resolution adopted by the Community members.
  - 2007 – 2009: Project Implementation Phase - Based on the identified Drivers of Deforestation and degradation and required Mitigation Activities, a Forest Landscape Restoration Scheme (FLRS) was drawn up for implementation in Lyngjhen Sunel and Lyngjhen Ramkhang villages of Hima Mungshing. The Project covered an area of 11923.4 ha.

Assisted Natural Regeneration

The main Drivers of Deforestation and Degradation and Mitigating measures undertaken to protect forests and biodiversity:

Main Drivers
- Forest Fires
- Fuelwood collection
- Quarrying
- Grazing
- Erosion & loss of biomes
- Destruction of endangered species habitat

Mitigating Measures
- FireLines/Watchers
- Fuel efficient stoves
- Total ban
- Animal exchange & Stall feeding
- Vegetative check dams & afforestation
- Rehabilitation & protection of habitats of rare orchids & amphibians

Before (2007)

After (2009)
Artificially Created Amphibian Habitat

Community training, project technician start writing Plan Vivo with community and evaluating their viability

Project Activities

- REDD
- Forest fire control (21 km fire line & fire watchers)
- Sustainable firewood (Fuelwood plantation on periphery)
- Regulation of grazing (Shifting to pigs & broilers)
- Agricultural containment (Organic cultivation & Orchards)
- Alternatives to charcoal making (Alternate livelihoods)
- ANR
- Advanced closure (Initial phase-absolute protection)
  - Fire
  - Grazing
  - Fuelwood collection
- ANR treatment (Second phase)
  - Weeding, thinning & enrichment planting

Project Timelines

- Pilot activity – 2006-2010 (For GS assessment & estimating trends of degradation)
- Project design & preparation – 2010-2012
- I" implementation phase – 2012-2016
- II" implementation phase – 2017-2021
- REDD base line – Status of C-pools in 2010 and trends of degradation as per BAU
- Project scenario – Reduced degradation & ANR
- C-Pools (for estimating carbon benefits)
  - Above Ground Biomass

Annual REDD and ANR Benefits

(Difference between base line & project scenario)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>REDD BENEFIT (TCO2E)</th>
<th>ANR BENEFIT (TCO2E)</th>
<th>TOTAL (TCO2E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>15,763</td>
<td>2,038</td>
<td>17,801</td>
</tr>
<tr>
<td>2013</td>
<td>20,364</td>
<td>6,214</td>
<td>26,579</td>
</tr>
<tr>
<td>2014</td>
<td>20,908</td>
<td>13,228</td>
<td>34,137</td>
</tr>
<tr>
<td>2015</td>
<td>21,404</td>
<td>20,381</td>
<td>41,785</td>
</tr>
<tr>
<td>2016</td>
<td>21,857</td>
<td>30,571</td>
<td>52,428</td>
</tr>
<tr>
<td>2017</td>
<td>22,273</td>
<td>41,928</td>
<td>64,201</td>
</tr>
<tr>
<td>2018</td>
<td>22,656</td>
<td>34,451</td>
<td>57,107</td>
</tr>
<tr>
<td>2019</td>
<td>23,010</td>
<td>68,140</td>
<td>91,150</td>
</tr>
<tr>
<td>2020</td>
<td>23,340</td>
<td>82,996</td>
<td>106,336</td>
</tr>
<tr>
<td>2021</td>
<td>23,650</td>
<td>99,018</td>
<td>122,668</td>
</tr>
</tbody>
</table>

REDD-plus Project Benefits

- 1st certification in 2013 – 21,805 tCO2 C-certificates issued
- By 2013 end, 5193 tCO2 sold @US$6-7/tCO2
- Federation received US$ 25,947
- Remaining certificates are being sold
- "Umiam Watershed Trust Fund" being established
- C-revenue utilized in
  - Project management & monitoring
  - Awareness raising
  - Establishment of 21 community nurseries
  - Support to Women micro-finance groups & farmer’s clubs
- Forest restoration activities
REDD+ Pilot Project at Umket Raid

Salient Features
- A project of CO mitigation by sustainable management of forests involving communities in participatory approach
- Performance linked financial incentive in the form of carbon credits
- Determination of carbon credits by assessing net increase in forest carbon (following IPCC framework of forest carbon accounting)
- Integrated approach of sustainable natural resource management and livelihood promotion
- Project Design Document (PDD) based on scientific methodologies involving use of remote sensing and GIS based resource assessment and participatory rural appraisal (PRA)

Contd....

- under the funding support from State Government (TFC)
- initiated and steered by the Forest Department
- activities supported under the project
- first payment of carbon credits from the project itself
- after measurement and verification
- after preparing the PDD, Plan Vivo and other Voluntary Carbon organizations would be approached for registry
- based on the standards/methodology of the organisation, the PDD will be accordingly modified (already in talk with CFI)

Raid Umket

Satellite Image of Raid Umket REDD+ Pilot Project Area
ESRI, LULC 14 Image, 16 Jun 2013

Map Showing Community Forests

• Area
  Total Project Area in Raid Umket - 1089.83 Ha
• Forest Area (Community Owned)

<table>
<thead>
<tr>
<th>Village and Community Forest</th>
<th>Area (in Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raid (community) Forest</td>
<td>39.614</td>
</tr>
<tr>
<td>Umtung Village Forest</td>
<td>10.417</td>
</tr>
<tr>
<td>Umket Village Forest</td>
<td>2.634</td>
</tr>
<tr>
<td>Mawdaur Village Forest</td>
<td>2.174</td>
</tr>
<tr>
<td>Palwi Village Forest</td>
<td>1.421</td>
</tr>
<tr>
<td>Total Area</td>
<td>56.26</td>
</tr>
</tbody>
</table>

• Area of Private Forest - 759.49 Ha

Steps
- creating awareness about REDD+ in the community
- resolution, signing of MoU between SFD & the community
- creating a project boundary
- preparation of Land Use Land Cover map of the village – baseline
- LULC maps of previous periods
- determination of reference level
- Forest Resource Inventory
- forest carbon assessment
- socio-economic survey
- identifying drivers of deforestation and forest degradation
- participative planning of natural resource management
- addressing livelihood issues
- addressing drivers of deforestation and forest degradation
- identifying actions under improved forest management
- projections of forest carbon enhancement over the next 20 years
- analysing leakage and additionality
- preparation of PDD
- implementation of forest management plan
- capacity building in MRV
- first measurement and validation
Approach for Forest Carbon Assessment and Projection

- using stratified random sampling - forest inventory design for forest growing stock assessment
- selection of carbon pools
  - above ground biomass
  - below ground biomass
- using forest type specific biomass expansion factors (BEF) for assessing other components of biomass
- calculating forest carbon in the project area
- using tree growth equations, Von Montel formula and expert knowledge for making projections for growth of biomass and forest carbon in selected pools for 20 years

Forest Management Interventions

- Management prior to Project
  - Jhum practice was prevalent
  - Unsustainable collection of firewood
  - Frequent Forest fire
  - Unauthorised cutting of trees for Charcoal Making
  - No planting activity
- Forest Management under the project
  - Improving stocking of forest by planting in blank areas
  - Assisted Natural Regeneration
  - Fire protection
  - Prevention of unauthorized removal of trees
  - Eradication of invasive species
  - Bamboo plantation

Annual Increment in Forest Carbon

<table>
<thead>
<tr>
<th>Forest Management Intervention</th>
<th>Estimated Forest Carbon Enhancement per annum (tonnes/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Growth under SFM</td>
<td>117</td>
</tr>
<tr>
<td>Reduced fuel wood collection</td>
<td>288</td>
</tr>
<tr>
<td>Fire Protection</td>
<td>72</td>
</tr>
<tr>
<td>Tree Plantation- improved stocking</td>
<td>87</td>
</tr>
<tr>
<td>Bamboo Plantation</td>
<td>79</td>
</tr>
<tr>
<td>ANR</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>687</td>
</tr>
</tbody>
</table>

Other interventions

- Smokeless Chullahs
- Livelihood and enterprise promotion
  - Apiculture
  - Multipurpose reservoir
  - Sericulture
  - Eco tourism
  - Community nursery

Thank You
Draft National REDD+ Policy and Strategy: Gap analysis

V.R.S. Rawat
Forests and Climate Change Division
Indian Council of Forestry Research and Education (ICFRE)
P.O. New Forest Dehradun, 248006 INDIA
email: rawatvrs@icfre.org

Where do we stand in terms of REDD+ implementation at national level?

1. National strategy or Action Plan: Only draft stage for last two years
2. Safeguard Information System (SIS) ???
3. Reference Level (REL/RL): FSI developed not yet finalised
4. National Forest Monitoring system: FSI but needs to be prepared in accordance with UNFCCC guidelines

Modalities for forest reference emission levels and forest reference levels (REL/RL)

Forest reference emission levels and/or forest reference levels expressed in tonnes of CO\textsubscript{2} eq per year, are benchmarks for assessing each country’s performance in implementing the REDD+ activities

Parties to submit information and rationale on the development of their forest RL including details of national circumstances

Countries that submitted a proposed forest reference emission level and/or forest reference level

1. Brazil
3. Colombia
5. Congo
7. Ethiopia
9. Indonesia
11. Mexico
13. Peru
15. Zambia
2. Chile
4. Costa Rica
6. Ecuador
8. Guyana
10. Malaysia
12. Paraguay
14. Viet Nam

Submission of safeguard Information System

<table>
<thead>
<tr>
<th>Item</th>
<th>Actions</th>
</tr>
</thead>
</table>
| Timing and frequency of submission of summary of information on how Safeguards are addressed and respected (Decision 12/CP.19) | (i) Parties should provide a summary of information on how all of the safeguards are being addressed and respected throughout the implementation of the REDD+ activities.  
(ii) The information to be provided periodically and be included in NATCOM, or communication channels agreed by the COP.  
(iii) Parties should start providing the summary of information in their NATCOM or other communication channel after the start of the of REDD+ |

Technical assessment of Reference level

<table>
<thead>
<tr>
<th>Item</th>
<th>Actions</th>
</tr>
</thead>
</table>
| Guidance and procedure for technical assessment of Reference Emission levels/Reference Levels submitted by Parties (Decision 13/CP.19) | UNFCCC Secretariat to prepare a synthesis report on the technical assessment process  
Parties and relevant international organizations were invited to support capacity-building in relation to the development and assessment of forest reference emission levels and/or forest reference levels. |
1. Preamble:
2. REDD+ a brief historical perspective (Up to Warsaw 2013)
3. India and REDD+-
   i. State of forests:
   ii. Livelihoods and sustenance from forests:
   iii. Scope of forests for mitigation of Climate Change
3.2 Present Policy Framework and REDD+
3.3 Current State of REDD+ readiness: (Poorly drafted)
3.4 Towards implementing REDD+: challenges for implementing REDD+ on the ground, building technical capacities for MRV, institutional coordination, safeguards, financing and robust institutional mechanism and ensuring effective people’s involvement etc.
Public and private funding including Program/ Project based approach and a possible market based mechanism in the future after establishing a robust readiness phase. Advantage in view of scientific and technical capacity and institutional strength India has strong forest conservation policies robust remote sensing

4. Objectives of National REDD+ Policy: (A very long list of objectives, too broad) The Policy which will apply to all types of forests areas irrespective of ownerships, aims at reducing loss of forest carbon by addressing drivers of forest degradation and arresting deforestation are as under:
   i. to create REDD+ architecture at National and Sub-National levels
   ii. to develop an appropriate REDD+ strategy and implementation frameworks
   iii. to develop a national REDD+ plan
   iv. Institutional capacity for a robust and transparent National Forest Carbon Accounting
   v. improving and enhancing supply of forest products and ecological and environmental services,
   vi. incentivize local communities for their role in conservation and safeguard their rights and interests
   vii. appropriate mechanism for channelizing REDD+ funding from various sources
   viii. strengthen coordination among sectors and stakeholders
   ix. emphasis on achieving various thematic elements of SMF and help in disengaging action plans to address the drivers of deforestation and forest degradation, afforestation of degraded areas, adequate protection measures, forest governance and gender considerations etc. while implementing the REDD+ programme.
   x. provide adequate technical and financial resources to implement various REDD+ phases
   xi. to build resilience and adaptation to projected climate change impacts to sustain the carbon sinks under REDD+ and to ensure conservation of biodiversity and ecosystem services.

National REDD+ Strategy:
The REDD+ Strategy guided by the National REDD+ Policy
The important programmes areas identified for REDD+ implementation are as under:
   i. Developing a National Forest Monitoring System
   ii. Setting up of National REDD+ Architecture and Governance
   iii. Creation of a Platform for Stakeholder engagement
   iv. National REDD+ information system including National Forest Carbon Accounting And Monitoring System (NFCAMS)
   v. System for managing data on valuation and equitable sharing of multiple benefits of forests
   vi. Transparent, equitable and accountable management
   vii. Capacity Building
   viii. Developing institutions and technical capacity for modeling land use change, deforestation rates, carbon stock changes and carbon sequestration rates

2. Strategy proposed for operationalising REDD+ Policy
   i. to build a critical mass of technical and institutional capacities of various stakeholders including SFDS, local communities, other related government agencies,
   ii. to carry out periodic assessment of non-carbon and carbon variables relevant to reporting and financing under REDD+,
   iii. to have a mechanism for Stakeholder participation
   iv. to enhancing cross-sectoral coordination within multiple government agencies including forestry and environmental authorities, land management authorities
   v. to analyse gaps in capacity and data by all REDD+ stakeholders and ensure that readiness activities promote a comprehensive and integrated approach and develop a transparent and accountable systems for REDD+ implementation
   vi. to develop appropriate Management Information System (MIS) for sharing of relevant information/data related to REDD+ with all stakeholders
3. REDD+ FRAMEWORK: Essential elements of REDD+ Framework:

- **National Level:** Establishing **National REDD+ Authority** in the MoEF&CC under a National Steering Committee on REDD+, serviced by REDD+ Cell

**Supporting institutions:** FSI, ICFRE, IFM, IIsc, WII and others working in the field of REDD+; Concerned Ministries (long list).

i. Functions of National REDD+ Authority and REDD+ Cell

ii. REDD+ Cell/ Division will assist the National REDD+ Authority

iii. FSI as Nodal Agency for National Level: MRV for REDD+

iv. ICFRE along with other scientific institutions and SFIs to take up capacity building activities of various stakeholders.

v. IIsc for carbon inventory methods, model development and capacity building and for developing adaptation strategy to climate change.

[iii] Local/ District Level: Forest Divisions, other line departments, NGOs / Civil society Organizations, Gram Sabha (JFMC supported by Gram Sabha or Eco Development Committee)

5. Funding for strengthening Institutional mechanism

The strategy is to channelize funds from all possible sources through:

i. Budgetary support for REDD+ Cell.

ii. International funding from bilateral, Multilateral funding agencies

iii. Projects based funding.

iv. Domestic funding from PSUs/ corporate sector under CSR

vi. Budgetary support under climate change scheme

Develop mechanism for flow of incentives to communities. Time Frame: REDD+ Readiness to be achieved in 2 years.

7. Strengthening stakeholders’ participation for addressing forest degradation: (Not talking about deforestation)

Drivers of degradation are outside the domain of forests, require specific action:

- i. alternative cheap cooking fuel supply, promoting non-conventional energy sources.

- ii. agro-forestry for meeting demands of fuelwood and fodder

- iii. education / skills to children, effective use of modern communication

- iv. improved silvicultural operations for improving site specific productivity, small timber, fuelwood and NTFPs

- v. quick and effective insect and disease control mechanism

- vi. Building capacities of youth and women in villages in forestry activities for controlling forest fires.

- vii. Forest fire prediction and control mechanism etc.

- viii. non natural resources based economic activities for diverting unsustainable pressure from forests.

- ix. addressing shifting cultivation.

India’s draft National REDD+ Policy (NRRP)

MoEF &CC a Constitute Committee in 2015
Draft in May 2015

Not web hosted for public comments

Fate of this draft ????

Overall objective and intent

1. **Objective:**

   Overarching objective of the policy is to facilitate implementation of REDD+ in conformity with relevant decisions of UNFCCC, and the national legislative framework

   REDD+ is to be community driven,

   i.e., local communities partners and stakeholders in steering the implementation of REDD+ at the grassroots level.

   The policy clearly spells out the financial incentives the local communities.

   The Policy ensures the protection, conservation of all natural resources including forests and other tree resources
Overall objective and intent
The policy devolves major responsibility for REDD+ activities and measurement of their performance on the State Forest Departments (SFDs)
It places high priority on capacity building of the local communities, all levels of the SFD, and staff of other line departments with a view to facilitating implementation of REDD+, and creating awareness about its benefits to the community, and sustainable management of natural resource of forests

Overall objective and intent
NRPP will give equal importance to all the ecosystem services flowing from the forests, which are traditionally harvested or enjoyed by the local communities, and will treat carbon as one such important service.
Local communities, wherever they are managing or co-managing forest or tree resources will have first right over the financial incentives accruing as a result of REDD+ performance in the country.

2. Implementation principles:
The National REDD+ Policy aims to provide roadmap for India’s REDD+ preparedness and lays down the broad principles for developing and implementing REDD+ requisites and activities, and at the same time create financial incentives for local communities involved in conservation of forests.

2. Implementation principles: Major stake holders identified

<table>
<thead>
<tr>
<th>Central Government- of Environment, Forests and Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>National REDD+ Authority</td>
</tr>
<tr>
<td>State/UT Forest Department</td>
</tr>
<tr>
<td>State REDD+ Cell</td>
</tr>
<tr>
<td>Local communities/JFM Committees</td>
</tr>
<tr>
<td>Other Central Government Ministries and Departments:</td>
</tr>
<tr>
<td>Ministries of Tribal Affairs, Finance, Social Welfare,</td>
</tr>
<tr>
<td>Rural Development, Water Resources (Watershed</td>
</tr>
<tr>
<td>Management Authorities), Health (AYUSH), Panchayati</td>
</tr>
<tr>
<td>Raj, Power (Renewable Energy), Agriculture, Animal</td>
</tr>
<tr>
<td>Husbandry, Tourism, DONER, etc</td>
</tr>
<tr>
<td>State Government Departments:</td>
</tr>
<tr>
<td>Social and Tribal Welfare, Rural Development, Health,</td>
</tr>
<tr>
<td>General Administration, Water, Finance, Irrigation, etc</td>
</tr>
<tr>
<td>Other National and State Agencies: NBA, State Biodiversity Boards, National Bamboo Mission, National Mission for Sustainable Agriculture, NMCP, National Horticulture Mission, etc.</td>
</tr>
</tbody>
</table>

2. Implementation principles: Major stake holders

<table>
<thead>
<tr>
<th>National Level Capacity Building, Scientific, Research, and Development Agencies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICFRE, FSI, IIFM, IGNFA, WI, IISc</td>
</tr>
<tr>
<td>State Level Capacity Building, Scientific, Research, and Development Agencies:</td>
</tr>
<tr>
<td>State Forest Department, State Forest Research Institute, Working Plan Wing, State Medicinal Plant Board, etc</td>
</tr>
<tr>
<td>District and Sub-district Level Agencies, Gram Sabha:</td>
</tr>
<tr>
<td>Forest Division and Ranges, Forest Development Agency, district administration, district tribal/social welfare office, DRDA, watershed management institutions, etc</td>
</tr>
<tr>
<td>Forest Development Corporations, Federations, Forest Based Industries, Self Help Groups</td>
</tr>
</tbody>
</table>

2. Implementation principles: Major stake holders

<table>
<thead>
<tr>
<th>Civil Society/NGOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private sector/corporate</td>
</tr>
<tr>
<td>Public Representatives MP, MLA, Sarpanch (Village Heads) etc.</td>
</tr>
<tr>
<td>Universities and other Educational Institutions</td>
</tr>
<tr>
<td>Media</td>
</tr>
</tbody>
</table>

UNFCCC, IPCC
UNREDD, World Bank (FCPF), UNFF, FAO and CPF UNDP, UNEP, GEF
Bilateral agencies, USAID, DFID, GIZ, NORAD, etc.
3. Compatibility with UNFCCC decisions
Bali, Copenhagen, Cancun, Durban, and Warsaw

4. National Laws
- Environment Protection Act, 1984
- FC Act, 1980
- Water Act and Air Act
- Wild Life Protection Act
- Tribal Act, 2006
- NFP, 1988
- NEP, 2006

Various provisions of the Policies and Acts are in tune with the elements of REDD-plus. Further, the people-centric approach adopted in the management of forests for almost over three decades supports the core element of REDD-plus that natural resources are to be conserved and protected for enhancement of ecosystem.

5. Coverage:
- Forests (Definition adopted by FSI)
- ToF
- Grasslands (future)
- Blue carbon- mangroves, coastal sea grasslands (future)
- Any other photosynthetic source or sink (future)

6. Benefit sharing mechanism with States and participating communities:
REDD-plus incentives will be transmitted from the Centre to State Governments and then to district level.
The State Government and district level authorities will plan and manage the flows further down to the local communities.
Broad guidelines for flow of incentives from the Government of India (GOI) to State Governments will be developed by the MoEF&CC
Potential role of Private sector in REDD-plus mechanism

7. Operationalization of REDD-plus Policy
- National strategy: (1 para 8 lines)
  ✓ Aims at enhancing and improving forest and tree cover, ecosystem services
  ✓ carbon service from forests co-benefit not the sole benefit,
  ✓ Various programmes (GIM, NAP, Agro-forestry) to add 1 mha forest/tree cover annually
- Reference document for REDD+ in India:

Reference document for REDD+ in India: (Jan 2015)
Government of India (MoEFCC) has adopted a Reference document to operationalize REDD+ in the country.
The document based on the existing knowledge available on the subject and roles and responsibilities of different departments, institutions, civil society and local communities to facilitate institutionalization and implementation of REDD+ in the country.
Consists of 9 chapters on necessary guidance and framework for REDD+ implementation, covering important elements like:
- Construction of national forest reference level,
- Safeguards,
- Governance,
- MRV mechanism,
- Capacity building, and
- Identification of research gaps in REDD+ in India.
Could serve as REDD+ Strategy need further refinement

7. Operationalization of REDD-plus Policy
- Institutional mechanism for REDD+ at national level:
  REDD-plus Cell having the task of coordinating and guiding REDD-plus related actions, SFDs, Guiding, collaborating, Funding, (All REDD+ related tasks have been assigned to the Cell)
What is required for a National REDD+ Strategy

- It is one of the elements to be developed for implementing REDD+ activities.
- It is highly dependent upon national circumstances.
- During the development and implementation of national strategies or action plans, countries should address, inter alia:
  - the drivers of deforestation and forest degradation,
  - land tenure issues,
  - forest governance issues, gender considerations and
  - the REDD+ Safeguards (full and effective participation of relevant stakeholders, inter alia IPs and LCs).

At the same time, the COP recognized the importance and necessity of adequate and predictable financial and technology support for developing the national strategy or action plan.

What India needs to do to implement REDD+ at national level

1. National strategy or Action Plan: implementation with a deliverable time line/action line,
   (Reference document for REDD+ can be beginning point)
2. Safeguard Information System (SIS)
3. Finalise our Reference Level (REL/RL):
4. National Forest Monitoring system:
   Needs to be prepared in accordance with UNFCCC guidelines
   Capacity building, MRV, performance based payment, carbon right, land tenure, performance based payments Quantification of REDD plus benefit and sharing mechanism with REDD+ Communities, Finance for REDD Plus actions

Implementation approach

REDD plus activities to be implemented in three phases:
1. beginning with the development of national strategies or action plans, policies and measures, and capacity-building,
2. followed by the implementation of national policies and measures and national strategies or action plans, technology development and transfer and results-based demonstration activities,
3. and evolving into results-based actions that should be fully measured, reported and verified (MRVable).

Recently India has joined UN-REDD: can tap finance for phase 1 (Strategy, Capacity building) or 2 of Pilots, REDD+,

National REDD+ Strategy Governance Structure

- National REDD+ Strategy
- UNFCCC
- National REDD+ Authority
- National REDD+ Strategy
- National REDD+ Policy Committee
- National REDD+ Technical Working Group
- Thematic Advisory Committees
  - SIS, REL/RL, NFRMS, MRV
- Secretariat/Nodal Point

Currently there is Forestry subgroup on climate change

National REDD+ Strategies

Brazil:
- Context
- Objectives
- Governance
- Structure
- Action lines
- Annex

Nepal:
- National Circumstances
- Guiding Principles
- Strategy: Institutional Framework
- N Forest Monitoring system
- REL/RL, MRV

Thanks

This was a presentation from ICFRE www.icfre.gov.in

For further detail pl Contact:
rawatvrs@icfre.org
Indian Council of Forestry Research and Education (ICFRE) is an autonomous body of the Ministry of Environment, Forest and Climate Change, Government of India, is the apex organization in the national forestry research system. ICFRE deals with solution based forestry research in tune with emerging issues in the sector, including global concerns such as climate change, conservation of biological diversity combating and desertification. ICFRE is proactive in forest and climate change related issues at national and international level, and contributes in developing Government of India's policy on forest and climate change.

The International Centre for Integrated Mountain Development (ICIMOD) is a regional intergovernmental learning and knowledge sharing centre serving the eight regional member countries of the Hindu Kush Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. Overall, ICIMOD is working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream now, and for the future.

For Further Details, contact:
Assistant Director General (Biodiversity and Climate Change)
Indian Council of Forestry Research and Education
P.O. New Forest, Dehradun - 248006 (Uttarakhand), India
Ph: +91-135-2224823
Email: adg_bcc@icfre.org Website: www.icfre.org