Project Completion Report

Execution of Readiness for Implementation of REDD+ in India

Indian Council of Forestry Research and Education

(An Autonomous Body of Ministry of Environment, Forest and Climate Change, Government of India)

P.O. New Forest, Dehradun - 248006 (INDIA)

Execution of Readiness for Implementation of REDD+ in India

PROJECT COMPLETION REPORT

2023

Submitted to:

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Management and Planning Authority
Ministry of Environment, Forest and Climate Change
Government of India

Submitted by:

Indian Council of Forestry Research and Education
(An Autonomous Body of Ministry of Environment, Forest and Climate Change, Government of India)
P.O. New Forest, Dehradun - 248006 (INDIA)

Biodiversity and Climate Change Division
Directorate of International Cooperation
Indian Council of Forestry Research and Education
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Profile of the Project

Title of the Project: Execution of Readiness Activities for Implementation of REDD+ in India
Funding Agency: National Compensatory Afforestation Fund Management and Planning Authority, Ministry of Environment, Forest and Climate Change, Government of India
Implementing Agency: Indian Council of Forestry Research and Education
Principal Investigator: Dr. R. S. Rawat, Scientist-E, Biodiversity and Climate Change, ICFRE
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Date of Completion of the project: 30 June 2023
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INDIAN COUNCIL OF FORESTRY RESEARCH AND EDUCATION
(An Autonomous Body of Ministry of Environment, Forest and Climate Change, Government of India)
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Overview of the project titled Execution of Readiness Activities for Implementation of REDD+ in India

REDD+ is one of the climate change mitigation options for reducing emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks in developing countries. REDD+ is now widely accepted as climate change mitigation option under United Nations Framework Convention on Climate Change (UNFCCC). In accordance with the Conference of Parties decisions of UNFCCC developing country parties seeking financial support for implementation of REDD+ activities need to develop a national strategy or action plan, a national forest reference emission level and/or forest reference level, a national forest monitoring system, and safeguards information system.

Ministry of Environment, Forest and Climate Change assigned the task to ICFRE for institutionalization of dealing the technical aspects of REDD+ implementation in coordination with Forest Policy Division of the Ministry of Environment, Forest and Climate Change, Government of India. Accordingly, a meeting of ICFRE and FSI was held and tasks for preparation of National REDD+ Strategy and Safeguards Information System were assigned to ICFRE whereas tasks pertaining to development of forest reference level and national forest monitoring system were assigned to FSI. ICFRE developed National REDD+ Strategy on behalf of the Ministry of Environment, Forest and Climate Change, Government of India in the year 2018.

CAMPA funded project titled Execution of Readiness Activities for Implementation of REDD+ in India has been implemented by ICFRE for development of safeguards information system for REDD+ with the objectives: i). Development of Safeguard Information System for REDD+ as per the guidelines and COP decisions of UNFCCC, ii). Development of REDD+ learning and knowledge sharing platform, web-based SIS module and networking of relevant stakeholders, and iii). Capacity building of the stakeholders on various aspects of REDD+ including safeguards. Development of Safeguard Information System for REDD+ is essentially required to get the result-based finance for implementation of REDD+ activities in the country. The Safeguards Information System for REDD+ in India has been developed through analysis of UNFCCC COP decisions, existing national policies, law and regulation related to environment, forest, biological diversity and right of local communities as per the requirement of Cancun safeguards for implementation of REDD+ activities followed by stakeholder consultations. After approval of the Ministry, draft of Safeguards Information System for REDD+ had been published and submitted to the Ministry. Ministry had submitted the Safeguards Information System for REDD+ in India to UNFCCC and same is available on REDD+ Web Platform of UNFCCC.

The REDD+ Knowledge Sharing and Safeguards Information System has also been developed for sharing the knowledge on REDD+ for capacity building of State Forest Departments and other stakeholders on REDD+. Web based SIS module will be helpful in collection of data on REDD+ safeguards for preparation of summary of information on safeguards for further submission to UNFCCC.

Trainings for the State Forest Departments on Development of State REDD+ Action Plans were organised under the Component 4: Capacity Building of State Forest Departments for Developing State REDD+ Action Plan under CAMPA funded ICFRE scheme titled 'Strengthening Forestry Research for Ecological Sustainability and Productivity Enhancement'. Different aspects of the REDD+ including safeguards were also covered under the trainings. Two days training workshop on REDD+ for IFS officers of the country was also organised. Different aspects on the REDD+ were covered in the session of the stakeholder consultation workshops.

(Dr. R. S. Rawat)	**(Dr. Rajesh Sharma)**	**(Kanchan Devi)**
Scientist -E, BCC Division, ICFRE	ADG (BCC), ICFRE	Director (IC), ICFRE

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ABBREVIATION USED

AFRI	:	Arid Forest Research Institute
BCC	:	Biodiversity and Climate Change
BMC	:	Biodiversity Management Committee
BUR	:	Biennial Update Report
CBD	:	Convention on Biological Diversity
CITES	:	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CO_2	:	Carbon dioxide
COP	:	Conference of Parties
cum	:	Cubic Metre
EDC	:	Eco-Development Committee
FSI	:	Forest Survey of India
FRI	:	Forest Research Institute
GoI	:	Government of India
ha	:	Hectare
HFRI	:	Himalayan Forest Research Institute
ICFRE	:	Indian Council of Forestry Research and Education
IFB	:	Institute of Forest Biodiversity
IFGTB	:	Institute of Forest Genetics and Tree Breeding
IFP	:	Institute of Forest Productivity
IUCN	:	International Union for Conservation of Nature
IWST	:	Institute of Wood Science and Technology
JFM	:	Joint Forest Management
JFMC	:	Joint Forest Management Committee
mha	:	Million hectare
MFP	:	Minor Forest Produce
MoEFCC	:	Ministry of Environment, Forest and Climate Change
NAP	:	National Action Programme
NAPCC	:	National Action Plan on Climate Change
NBA	:	National Biodiversity Authority
NBAP	:	National Biodiversity Action Plan
NDCs	:	Nationally Determined Contributions
NDE	:	National Designated Entity
NGC	:	National Governing Council
NGO	:	Non-Governmental Organization
NGT	:	National Green Tribunal
NTFPs	:	Non-Timber Forest Products
PLR	:	Policies, Laws and Regulations
REDD+	:	Reducing emissions from deforestation and forest degradation, and role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
RFRI	:	Rain Forest Research Institute
SAPCC	:	State Action Plan on Climate Change

SBB	:	State Biodiversity Board
SFD	:	State Forest Department
SIS	:	Safeguards Information System
sq km	:	Square Kilometre
SMF	:	Sustainable Management of Forest
SoI	:	Summary of Information
TFRI	:	Tropical Forest Research Institute
TRAFFIC	:	Trade Records Analysis of Flora and Fauna in Commerce
UNCCD	:	United Nations Convention to Combat Desertification
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
UNFCCC	:	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

Reducing emissions from deforestation and forest degradation along with role of conservation, sustainable management of forests and enhancement of forest carbon stocks collectively known as REDD+, has the potential to deliver significant carbon and non-carbon benefits to the local communities including alternative livelihoods generation and conservation of natural forests and biological diversity. However, implementation of REDD+ activities can pose risks on the forests, biological diversity and local communities. Further, to mitigate the risks of REDD+ activities, UNFCCC has adopted a set of seven Cancun safeguards. These safeguards need to be addressed and respected during the implementation of REDD+ activities. The Cancun safeguards ensure that the REDD+ actions should have positive impact on the natural forests, biological diversity and local communities. As per the Cancun Agreements of UNFCCC, developing country Parties are required to develop a Safeguards Information System (SIS) to report on compliance of the safeguards while implementing REDD+ activities.

The Government of India has always made positive efforts through framing suitable policies, laws and regulations, and by amending them from time to time to conserve and protect environment and natural resources including forests. National REDD+ Strategy of India endorsed that Cancun safeguards principles shall be adhered to during the implementation of REDD+ activities, and SIS shall be developed based on the existing policies, laws and regulations of forest governance. Accordingly, the SIS was built on the existing forest governance structures, legal and institutional frameworks, to meet the objectives of SIS as per the UNFCCC requirement for implementation of REDD+ activities in India. Stakeholder's consultation processes followed and nine regional stakeholder consultation workshops were organised in different parts of the country for developing SIS. The goal of SIS for India is to address and respect the Cancun safeguards for implementation of REDD+ activities and to meet the UNFCCC reporting requirements.

The scale for application of SIS for implementation of REDD+ activities will be national, sub-national and local. Necessary institutional arrangement has also been devised for implementation of safeguards information system. In order to address grievances related to application of safeguards in implementation of REDD+ activities, three grievance redressal committees are proposed to be established at national, state and local levels. Twenty indicators have been identified for collection of data/ information on how Cancun safeguards will be addressed and respected during implementation of REDD+ activities. The State REDD+ Cells will provide necessary information/ data on REDD+ safeguards to the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India. Further, access of states wise data/ information will be given to the Indian Council of Forestry Research and Education (ICFRE) for further compilation, analysis and preparation of the summary of information on safeguards for submission to the National Designated Entity-REDD+, MoEFCC, Government of India. MoEFCC will submit periodically the summary of information on safeguards to the UNFCCC with biennial update reports, national communications or other appropriate means as decided by the UNFCCC.

The REDD+ Knowledge Sharing and Safeguards Information System (https://reddplus.icfre.gov.in) developed under this project consists of REDD+ learning and knowledge sharing platform and web-based module on safeguards information system. This portal is developed mainly for sharing the knowledge on REDD+ for capacity building of State Forest Departments and other stakeholders on REDD+. Web based SIS module will support collection of data on REDD+ safeguards for preparation of summary of information on safeguards.

Capacity building workshop for officers of State Forest Department and other stakeholders of Chhattisgarh on development of State REDD+ action Plan was organised under Ecosystem Services Improvement Project. Trainings for the State Forest

Departments on Development of State REDD+ Action Plans were organised under the Component 4: Capacity Building of State Forest Departments for Developing State REDD+ Action Plan under CAMPA funded ICFRE scheme titled 'Strengthening Forestry Research for Ecological Sustainability and Productivity Enhancement'. Different aspects of the REDD+ including safeguards were also covered under the trainings. Two days training workshop on REDD+ for IFS officers of the country was also organised. Different aspects on the REDD+ were covered in the first session of the stakeholder consultation workshops.

INTRODUCTION

REDD+ is one of the climate change mitigation options in developing countries for reducing emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks. REDD+ is now widely accepted as climate change mitigation option under United Nations Framework Convention on Climate Change (UNFCCC). In the Sixteenth Session of Conference of Parties of UNFCCC held at Cancun, Governments agree to boost action to curb emissions from deforestation and forest degradation in developing countries with technological and financial support. REDD+ is described in the Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (Decision1/CP.16 (UNFCCC, 2011) as "encourages developing country Parties to contribute to mitigation actions in the forest sector by undertaking the activities on reducing emissions from deforestation, reducing emissions from forest degradation, conservation of forest carbon stocks, sustainable management of forest and enhancement of forest carbon stocks as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances".

In accordance with the Conference of Parties decisions of UNFCCC developing country parties seeking financial support for implementation of REDD+ activities need to develop a national strategy or action plan, a national forest reference emission level and/or forest reference level or, if appropriate, as an interim measure, sub-national forest reference emission levels and/or forest reference levels (FREL/FRL), a robust and transparent national forest monitoring system for the monitoring and reporting of the REDD+ activities, if appropriate, sub-national monitoring and reporting as an interim measure, in accordance with national circumstances; and a system for providing information on how the safeguards are being addressed and respected throughout the implementation of the REDD+ activities, while respecting sovereignty.

The Decision (1/CP.16) also outlines a phased approach for strengthening efforts by developing countries to implement REDD+ activities in phased manner beginning with the development of national strategies or action plans, policies and measures, and capacity-building; implementation of national policies, measures, national strategies or action plans, technology development & transfer and results-based demonstration activities; and Evolving into results-based actions that should be fully measured reported and verified. The Decision (1/CP.16) calls on developing countries planning to undertake such efforts to develop a national strategy or action plan, a national forest emission level or forest reference level and a transparent national system for monitoring and reporting of conservation and emission reduction efforts. Countries are also to follow safeguards ensuring the full and effective participation of local communities and other stakeholders in REDD+ activities. Many countries have initiated REDD+ readiness programme and pilot projects at domestic level with international funding.

ICFRE has always been in the forefront for developing policy approaches for REDD+ in India. In fact, the concept of inclusion of 'conservation of forest carbon stocks' in the policy approach of REDD was introduced by ICFRE, which later on culminated as REDD+ in thirteenth session of Conference of Parties (COP13) of UNFCCC held at Bali in 2007. Recognizing the capabilities of ICFRE, Ministry of Environment, Forest and Climate Change assigned the task to ICFRE for institutionalization of dealing the technical aspects of REDD+ implementation in coordination with Forest Policy Division of the Ministry of Environment, Forest and Climate Change vide letter no. 18-16/ 2013-FP dated 19 September 2017 and asked ICFRE to look in to the technical aspects of REDD+ implementation and submit the necessary proposal for undertaking the assignment. Tasks for development of National REDD+ Strategy and Safeguards Information System assigned to ICFRE.

Accordingly, ICFRE has prepared National REDD+ Strategy on behalf of the Ministry of Environment, Forest and Climate Change, Government of India in the year 2018. After approval of the Ministry, National REDD+ Strategy was submitted to the UNFCCC. As

per National REDD+ Strategy, roadmap and action plan for implementation of National REDD+ Strategy includes the establishment of a National Governing Council for REDD+ at the national level, creation of a REDD+ Cell in the State Forest Departments (SFDs), capacity building of all cadres of the SFDs to enable them to implement and accurately assess and measure performance of REDD+ and other REDD+ related issues, capacity building of Forest Working Plan Officers on assessment of forest carbon stocks, measurement, reporting and verification, and other REDD+ related issues for incorporating REDD+ in Forest Working Plans of the Forest Divisions, and skill development of community youths for various forestry activities like assisted natural regeneration, tree nurseries, soil and moisture conservation, fire protection, weed management, management of forest insects and pests, agroforestry, tree fodder production, NTFP management, bioenergy production, and biodiversity and ecotourism management activities.

Safeguards have been identified as an important tool to ensure the effective implementation of REDD+ actions and to avoid, or at least minimize negative governance, social, and environmental impacts. Sixteenth Session of Conference of the Parties to the UNFCCC held in Cancun in 2010 establishes that REDD+ activities should promote and support a set of seven safeguards which are also known as the "Cancun safeguards": actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements; transparent and effective national forest governance structures, taking into account national legislation and sovereignty; respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples; the full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities; actions are consistent with the conservation of natural forests and biological diversity, ensuring that REDD+ activities 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; actions to address the risks of reversals and actions to reduce displacement of emissions. Safeguard Information System provide the information on how all Cancun Safeguards are addressed and respected throughout implementation of REDD+ actions. Decision 1/CP.16 requests developing countries to develop a system for providing information on how the safeguards are being addressed and respected in a transparent manner throughout the implementation of REDD+ actions. Decision 12/CP.17 complements by defining that the Safeguards Information System should be consistent with the guidance identified in decision1/CP.16; provide transparent and consistent information that is accessible by all relevant stakeholders and updated on a regular basis; be transparent and flexible to allow for improvements overtime; provide information on how all of the safeguards are being addressed and respected, be country-driven and implemented at the national level and build upon existing systems, as appropriate. Therefore, development of Safeguard Information System for REDD+ is essentially required to get the result-based finance for implementation of REDD+ activities in the country.

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CHAPTER

OBJECTIVES

1. Development of Safeguard Information System for REDD+ as per the guidelines and COP decisions of UNFCCC
2. Development of REDD+ learning and knowledge sharing platform, web-based SIS module and networking of relevant stakeholders
3. Capacity building of the stakeholders on various aspects of REDD+ including safeguards

REVIEW OF LITERATURE

Developing countries need to have in place a national strategy or action plan, an assessed forest reference emission level and/or forest reference level, a national forest monitoring system and a system for providing information on how the safeguards are being addressed and respected for receiving results-based finance from the implementation of REDD+ activities. Accordingly, the progress of the developing countries in implementation of REDD+ activities was studied through consulting their submissions to the UNFCCC. It was reported that developing countries are under different phases of implementation of REDD+ activities and progress done by the developing countries for implementation of REDD+ activities are highlighted as under:

S. No.	Country	Progress done in implementation of REDD+ activities
1.	Argentina	1. Biennial update report with submission of REDD+ results (BUR 4) 2022 2. Biennial update report with submission of REDD+ results (BUR 3) 2020 3. Forest reference level 4. Safeguards information summary 5. National REDD+ Strategy
2.	Bangladesh	1. Forest reference level
3.	Belize	1. Biennial update report with submission of REDD+ results (BUR 1) 2021 2. Forest reference level 3. National REDD+ Strategy 4. Safeguard information summary 5. National Forest Monitoring System
4.	Bhutan	1. Forest reference level
5.	Bolivia	1. Reference level
6.	Burkina Faso	1. Reference level 2. National REDD+ Strategy
7.	Brazil (Amazon Biome)	1. Biennial update report with submission of REDD+ results (BUR 4) 2021 2. Biennial update report with submission of REDD+ results (BUR 3) 2019 3. Biennial update report with submission of REDD+ results (BUR 2) 2017 4. Biennial update report with submission of REDD+ results (BUR 1) 2015 5. Reference level (Amazon biome) 6. First safeguards information summary 7. Second safeguards information summary 8. National REDD+ Strategy
	Brazil (Cerrado Biome)	1. Biennial update report with submission of REDD+ results (BUR 4) 2021 2. Biennial update report with submission of REDD+ results (BUR 3) 2019 3. Reference level 4. First safeguards information summary 5. Second safeguards information summary 6. National REDD+ Strategy
8.	Cambodia	1. Biennial update report with submission of REDD+ results (BUR 1) - 2020 2. Reference level 3. Safeguards information summary 4. National REDD+ Strategy

9.	Central African Republic	1. National REDD+ Strategy - 2022
10.	Chile	1. Biennial update report with submission of REDD+ results (BUR 3)-2019 2. Forest reference level 3. Safeguards information summary 4. Safeguards information system 5. National REDD+ Strategy 6. Measurement and Monitoring System of National Strategy
11.	Colombia	1. Biennial update report with submission of REDD+ results (BUR 1)- 2016 2. Biennial update report with submission of REDD+ results (BUR 2) - 2015 3. Reference level 4. First safeguards information summary 5. Second safeguards information summary 6. Third safeguards information summary 7. Fourth safeguards information summary 8. Fifth safeguards information summary 9. National REDD+ Strategy
12.	Congo	1. Reference level
13.	Costa Rica	1. Biennial update report with submission of REDD+ results (BUR 2) - 2020 2. Reference level 3. First safeguards information summary 4. Second safeguards information summary 5. National REDD+ Strategy 6. National Forest Monitoring System
14.	Cote d'Ivoire	1. Reference level-2017 2. Supplementary information 3. Safeguards information summary
15.	Democratic Republic of the Congo	1. Biennial update report with submission of REDD+ results (BUR1)- 2018 2. Reference level 3. Safeguards information summary
16.	Dominica	1. Reference level
17.	Dominican Republic	1. Reference level
18.	Ecuador	1. Biennial update report with submission of REDD+ results (BUR 1)-2016 2. Reference level 3. First safeguards information summary 4. Second safeguards information summary 5. National REDD+ Strategy
19.	El Salvador	1. Reference level
20.	Equatorial Guinea	1. Reference level
21.	Ethiopia	1. Reference level
22.	Fiji	1. First safeguards information summary
23.	Gabon	1. Biennial update report with submission of REDD+ results (BUR 1)-2022 2. Reference level 3. Safeguards information summary 4. National REDD+ Strategy
24.	Ghana	1. Reference level 2. Safeguards information summary 3. REDD+ social and environmental principles, criteria and indicators 4. National REDD+ Strategy 5. National Forest Monitoring System

25.	Guatemala	1. Reference level 2. National REDD+ Strategy
26.	Guinea-Bissau	1. Reference level
27.	Guyana	1. Reference level 2. First safeguards information summary 3. Second safeguards information summary
28.	Honduras	1. Biennial update report with submission of REDD+ results (BUR 1)-2021 2. Reference level 3. Safeguards information summary 4. National REDD+ Strategy 5. National Forest Monitoring System
29.	India	1. Forest reference level 2. National REDD+ Strategy-2018 3. Safeguards information system-2022
30.	Indonesia	1. Biennial update report with submission of REDD+ results (BUR 3)-2022 2. Biennial update report with submission of REDD+ results (BUR 2)-2019 3. Reference level 4. Safeguards information summary 5. National REDD+ Strategy
31.	Kenya	1. Submission on proposed reference level-2020 2. Modified submission on proposed reference level
32.	Lao People's Democratic Republic	1. Biennial update report with submission of REDD+ results (BUR 1)-2020 2. Reference level 3. First safeguards information summary 4. Second safeguards information summary 5. National REDD+ Strategy 6. National Forest Monitoring System
33.	Liberia	1. Reference level 2. Safeguard information summary 3. National REDD+ Strategy
34.	Madagascar	1. Reference level
35.	Malaysia	1. Biennial update report with submission of REDD+ results (BUR 1)-2016 2. Reference level 3. Safeguards information summary 4. National REDD+ Strategy
36.	Malawi	1. Reference level-2020
37.	Mexico	1. Biennial update report with submission of REDD+ results (BUR 3)-2020 2. Reference level 3. Safeguards information summary 4. National REDD+ Strategy
39.	Mongolia	1. Reference level 2. National REDD+ Strategy
40.	Mozambique	1. Biennial update report with submission of REDD+ results (BUR 1) -2018 2. Forest reference level 3. National REDD+ Strategy 4. National REDD+ Action Plan
41.	Myanmar	1. Reference level 2. Safeguards information summary
42.	Nepal	1. Reference level

43.	Nicaragua	1. Reference level
44.	Nigeria	1. Reference level
45.	Pakistan	1. Reference level 2. National REDD+ Strategy
46.	Panama	1. Reference level 2. First safeguards information summary 3. Second safeguards information summary 4. National REDD+ Strategy
47.	Papua New Guinea	1. Biennial update report with submission of REDD+ results (BUR 2)-2022 2. Biennial update report with submission of REDD+ results (BUR 1)-2019 3. Reference level 4. Safeguards information summary 5. National REDD+ Strategy
48.	Paraguay	1. Biennial update report with submission of REDD+ results (BUR 2)-2019 2. Reference level 3. Safeguards information summary 4. National REDD+ Strategy
49.	Peru	1. Submission on proposed reference level - 2016 2. Reference level 3. Safeguards information summary
50.	Philippines	1. Reference level
51.	Saint Lucia	1. Reference level
52.	Solomon Islands	1. Reference level
53.	Sri Lanka	1. Reference level
54.	Sudan	1. Reference level 2. National REDD+ strategy & action plan
55.	Suriname	1. Biennial update report with submission of REDD+ results (BUR1)-2021 2. Reference level 3. Safeguards information summary 4. National REDD+ Strategy
56.	Thailand	1. Reference level
57.	Timor-Leste	1. Reference level
58.	Togo	1. Reference level
59.	Uganda	1. Biennial update report with submission of REDD+ results (BUR 1)-2020 2. Reference level 3. First Safeguards information summary 4. Safeguards summary report-2021
60.	United Republic of Tanzania	1. Reference level
62.	Vanuatu	1. Reference level
63.	Viet Nam	1. Biennial update report with submission of REDD+ results (BUR 1)-2021 2. Reference level 3. Safeguards information summary 4. National REDD+ Action Plan
64	Zambia	1. Submission on proposed forest reference level-2016 2. Safeguards information summary 3. Reference level

(Source: https://redd.unfccc.int/info-hub.html)

Results-based activities of REDD+ should be fully measured, reported and verified. The Lima REDD+ Information Hub has been established by UNFCCC for publishing the information on the results of REDD+ activities, and corresponding results-based payments (Decision 9/CP.19 of the COP-UNFCCC). The Lima REDD+ Information Hub aims to increase transparency of information on REDD+ results-based activities. The REDD+ result reported by the country in the biennial update reports as technical annex has undergone a technical analysis. About 17 countries viz. Argentina, Belize, Brazil, Cambodia, Chile, Colombia, Costa Rica, Ecuador, Gabon, Honduras, Indonesia, Lao People's Democratic Republic, Malaysia, Papua New Guinea, Paraguay, Suriname and Viet Nam have reported the REDD+ results. About 9 countries viz. Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Gabon, Indonesia and Papua New Guinea, have received the results-based payment. Details of the REDD+ results and payment received are highlighted as under:

S. No.	Country	Year	Results (t CO2 eq/year)	Assessed forest reference level (t CO2 eq/year)	Quantities for which payments received (t CO2 eq/year)	Entity paying for results
1.	Argentina	2014	44,409,046	101,141,848	18,731,707 (period 2014-2016)	Green Climate Fund
		2015	59,006,338	101,141,848	-	-
		2016	61,757,321	101,141,848	-	-
		2017	55,603,446	101,141,848	-	-
		2018	53,855,134	101,141,848	-	-
2.	Belize	2016	81,794	4,606,875	-	-
		2017	940,385	4,850,928	-	-
		2018	4,580,384	5,094,981	-	-
3.	Brazil	2006	529,930,490.25	1,106,027,616.63	23,911,039.60	Govt. of Norway
					1,542,650.58	Petroleo Brasileiro S.A.
		2007	497,761,219.37	1,106,027,616.63	-	-
		2008	440,022,301.24	1,106,027,616.63	-	-
		2009	741,687,139.44	1,106,027,616.63	28,347,560.00	Govt. of Norway
					3,188,874.00	Govt. of Germany - KfW
		2010	761,621,104.20	1,106,027,616.63	33,363,022.00	Govt. of Norway
					4,005,769.00	Govt. of Germany - KfW
		2011	622,451,671.72	907,959,466.33	33,363,022.00	Govt. of Norway
		2012	671,275,311.89	907,959,466.33	32,733,224.00	Govt. of Norway
					1,000,000.00	Govt. of Germany - KfW
		2013	606,111,615.42	907,959,466.33	24,746,724.31	Govt. of Norway
					9,020,000.00	Govt. of Germany - KfW
		2014	634,367,865.74	907,959,466.33	24,000,000.00	Govt. of Norway
					1,464,000.00	Govt. of Germany - KfW
					9,515,517.98	Green Climate Fund
		2015	620,295,262.00	907,959,466.33	19,590,670.23	Govt. of Norway
					11,534,093.04	Govt. of Germany - KfW
					3,774,489.6	Govt. of the United Kingdom
					9,304,428.93	Green Climate Fund
		2011	159,099,238	335,540,289	-	-

		2012	159,099,238	335,540,289	-	-
		2013	136,203,956	335,540,289	-	-
		2014	170,181,166	335,540,289	-	-
		2015	157,885,429	335,540,289	-	-
		2016	234,428,859	335,540,289	-	-
		2017	221,098,119	335,540,289	-	-
		2016	377,344,006.03	751,780,503.37	-	-
		2017	391,656,866.92	751,780,503.37	-	-
		2018	345,428,734.49	751,780,503.37	-	-
		2019	173,538,420.54	751,780,503.37	-	-
		2018	232,957,994	335,540,289	-	-
		2019	237,138,558	335,540,289	-	-
		2020	227,389,933	335,540,289	-	-
4.	Cambodia	2015	35,245,948	78,953,951	-	-
		2016	35,245,948	78,953,951	-	-
		2017	46,337,172	78,953,951	-	-
		2018	46,337,172	78,953,951	-	-
5.	Chile	2014	6,136,475	159,826	6,119,748	Green Climate Fund
		2015	6,136,475	159,826	6,136,469	Green Climate Fund
		2016	6,136,475	159,826	6,136,467	Green Climate Fund
6.	Colombia	2013	13,544,112.3	51,599,618.7	8,540,822	Programa REM Colombia - Visión Amazonía
		2014	15,439,415.1	51,599,618.7	10,318,472	Programa REM Colombia - Visión Amazonía
		2015	19,365,884.7	51,599,618.7	8,882,898	Programa REM Colombia - Visión Amazonía
					3,214,808	Green Climate Fund
		2016	12,109,048.8	51,599,618.7	6,830,439	Programa REM Colombia - Visión Amazonía
					2,289,216	Green Climate Fund
7.	Costa Rica	2014	7,489,243	From: 14,911,467 (for 1997–2009) To: 4,365,160 (for 2010–2025)	5,350,250	Green Climate Fund
		2015	7,305,504	From: 14,911,467 (for 1997–2009) To: 4,365,160 (for 2010–2025)	5,209,583	Green Climate Fund
8.	Ecuador	2009	4,831,679	43,418,126	-	-
		2010	4,831,679	43,418,126	-	-
		2011	4,831,679	43,418,126	-	-
		2012	4,831,679	43,418,126	-	-
		2013	4,831,679	43,418,126	-	-
		2014	4,831,679	43,418,126	3,623,759	Green Climate Fund
9.	Gabon	2010	27,808,257	-96,468,186	-	-
		2011	23,601,080	-96,468,186	-	-
		2012	24,293,859	-96,468,186	-	-
		2013	21,340,794	-96,468,186	-	-
		2014	20,416,707	-96,468,186	-	-

	2015	21,262,203	-96,468,186	-	-
	2016	19,590,223	-96,468,186	2,746,434	Central African Forest Initiative
	2017	15,584,848	-96,468,186	635,771	Central African Forest Initiative
	2018	13,206,318	-96,468,186	-	-
10. Honduras	2017	957,480.46	6,552,746.47	-	-
	2018	957,480.46	6,552,746.47	-	-
11. Indonesia	2013	48,978,427	568,859,881	-	-
	2014	48,978,427	572,355,503	6,750,000	Green Climate Fund
	2015	48,978,427	575,851,125	6,750,000	Green Climate Fund
	2016	48,978,427	579,346,747	6,750,000	Green Climate Fund
	2017	48,978,427	582,842,369	-	-
	2018	192,483,053	586,337,991	-	-
	2019	192,483,053	589,833,613	-	-
	2020	192,483,053	593,329,235	-	-
12. Lao People's Democratic Republic	2015	2,680,944 (emission reductions) 468,325 (enhanced removals)	41,013,316 (FREL) -7,533,558 (FRL)	-	-
	2016	2,680,944 (emission reductions) 468,325 (enhanced removals)	41,013,316 (FREL) -7,533,558 (FRL)	-	-
	2017	3,721,683 (emission reductions) 468,325 (enhanced removals)	41,013,316 (FREL) -7,533,558 (FRL)	-	-
	2018	3,721,683 (emission reductions) 468,325 (enhanced removals)	41,013,316 (FREL) -7,533,558 (FRL)	-	-
13. Malaysia	2006	-18,000,000	–183,550,000 (2006–2010) –197,830,000 (2011–2015)	-	-
	2007	-15,740,000	–183,550,000 (2006–2010) –197,830,000 (2011–2015)	-	-
	2008	-23,470,000	–183,550,000 (2006–2010) –197,830,000 (2011–2015)	-	-

		2009	-19,820,000	–183,550,000 (2006–2010) –197,830,000 (2011–2015)	-	-
		2010	-20,440,000	–183,550,000 (2006–2010) –197,830,000 (2011–2015)	-	-
14.	Papua New Guinea	2014	3,957,412	43,369,737	-	-
		2015	5,045,902	45,049,344	-	-
		2016	13,777,302	46,728,951	-	-
		2017	24,394,158	48,408,557	-	-
		2018	23,169,695	50,088,164	-	-
15.	Paraguay	2016	23,020,721.90	58,763,376.14	-	-
		2017	3,772,589.12	58,763,376.14	-	-
16.	Suriname	2016	1,819,273	14,627,465	-	-
		2017	1,526,545	15,591,284	-	-
		2018	2,903,107	16,555,103	-	-
		2019	2,930,053	17,518,922	-	-
		2020	4,097,351	14,008,889	-	-
		2021	4,839,390	14,612,231	-	-
17.	Viet Nam	2011	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-
		2012	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-
		2013	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-
		2014	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-
		2015	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-
		2016	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-
		2017	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-
		2018	18,293,162 (FREL) 38,506,098 (FRL)	59,960,827 (FREL) -39,602,735 (FRL)	-	-

(Source: https://redd.unfccc.int/info-hub.html)

As per the UNFCCC, at the end of 2022, REDD+ activities implemented by developing countries cover a forest area of approximately 1.35 billion hectares (about 62% of forest area in developing countries) and about 75% of global deforestation. REDD+ submissions to the UNFCCC secretariat now cover forest ecosystems from the boreal forests of Mongolia to the dry forests of Malawi, and from rainforests in all tropical regions. As a result of REDD+ activities, 16 developing countries reported a reduction of almost 11 billion tonnes of carbon dioxide, almost twice the amount of net greenhouse gas emissions from the United States in 2021, and are now eligible to seek results-based finance (https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd?gclid=EAIaIQobChMI2u3T5Ki5gQMVFKdmAh0JJAm4EAMYASAAEgLb6PD_BwE#The-REDD-success-story).

METHODOLOGY

Following steps have been followed for developing the Safeguard Information System (SIS) for REDD+, REDD+ learning and knowledge sharing platform and web-based SIS module:

- Review of reports/publications of national and international organizations related REDD+ activities
- Consultation of UNFCCC- COP decisions related to REDD+ safeguards
- Review of existing national policies, law and regulations related to forests and environment
- Preparation of draft of SIS by the Expert Committee
- Organisation of country wide stakeholder consultation workshops in different parts of the country for getting the necessary inputs of the stakeholders on draft safeguards information system
- Web hosting of SIS draft on the website of Ministry of Environment, Forest and Climate Change (MoEFCC) and Indian Council of Forestry Research and Education (ICFRE) for inviting public comments
- Finalization of SIS draft after incorporation of all the relevant comments/ suggestions/inputs of the stakeholders
- Submission of final draft of SIS to the Ministry of Environment, Forest and Climate Change, Government of India for approval
- Publication of the final approved draft of SIS
- Submission of the published draft of SIS to the Ministry of Environment, Forest and Climate Change, Government of India and onward submission to the UNFCCC
- Development of REDD+ learning and knowledge sharing platform and web-based SIS module

Expert Committee for developing Safeguard Information System for REDD+: The Director General, ICFRE has constituted an Expert Committee of the following expert members for developing Safeguard Information System for REDD+ in India:

1	Sh. Arun Singh Rawat, Director General, ICFRE:	Chairman
2	Dr. Jagdish Kishwan, Former ADGF (WL), MoEFCC:	Member
3	Dr. Promode Kant, Director, Institute of Green Economy, New Delhi:	Member
4	Dr. Subhash Ashutosh, Former Principal Chief Conservator of Forests, Meghalaya:	Member
5	Dr. Mohit Gera, Principal Chief Conservator of Forests & HoFF, J&K:	Member
6	Dr. Sanjay Srivastava, Addl. Principal Chief Conservator of Forests, Jharkhand:	Member
7	Dr. Jagmohan Sharma, Addl. Principal Chief Conservator of Forests, Karnataka:	Member
8	Sh. Anurag Bhardwaj, Former Director (International Cooperation), ICFRE:	Member
9	Sh. Rohit Tewari, Inspector General of Forests (Forest Policy), MoEFCC:	Member
10	Dr. T.P. Singh, Addl. Principal Chief Conservator of Forests & Secretary Forests, Haryana:	Member
11	Dr. Parag M. Dhakate, Chief Conservator of Forests, Uttarakhand:	Member
12	Sh. V.R.S. Rawat, Former ADG (BCC), ICFRE:	Member
13	Dr. R.S. Rawat, Scientist 'E', Biodiversity and Climate Change Division, ICFRE: Member	Member Secretary

Process followed for the development of Safeguards Information System: The Expert Committee developed a draft of Safeguards Information System for REDD+ in India through analysis of UNFCCC COP decisions, existing national policies, law and regulation related to environment, forest, biological diversity and right of local communities as per the requirement of Cancun safeguards for implementation of REDD+ activities. The outlines of the process followed for developing the Safeguards Information System are given in Fig. 1.

Fig. 1: Outlines of the process followed for developing SIS

Organisation of Stakeholder Consultation Workshops: Nine stakeholder consultation workshops on draft safeguards information system were organised in different parts of the country to get relevant inputs stakeholders as per following details:

S. No.	ICFRE's institutes involved in organisations of the stakeholder consultations	States covered in the regional stakeholder consultation workshops	Date of the stakeholder consultation	No. of participants
1.	ICFRE-IWST, Bengaluru	Karnataka, Andhra Pradesh and Goa	16/09/2020	65
2.	ICFRE-TFRI, Jabalpur	Madhya Pradesh, Maharashtra, and Chhattisgarh	30/09/2020	53
3.	ICFRE-HFRI, Shimla	Himachal Pradesh, Jammu and Kashmir, and Ladakh	09/10/2020	74
4.	ICFRE-FRI, Dehradun	Haryana, Punjab, Uttar Pradesh, Delhi	14/10/2020	42
5.	ICFRE-RFRI, Jorhat	North-eastern states	22/10/2020	21
6.	ICFRE-AFRI Jodhpur	Dadra and Nagar Haveli, Daman and Diu, Rajasthan, Gujarat	03/11/2020	35
7.	ICFRE-IFP, Ranchi	Bihar, Jharkhand, West Bengal	05/11/2020	45
8.	ICFRE-IFGTB, Coimbatore	Tamil Nadu, Puducherry, Lakshadweep, Kerala	16/12/2020	48
9.	ICFRE-IFB, Hyderabad	Telangana and Odisha	04/01/2021	40

Stakeholders from State Forest Departments and other line departments such as agriculture, water, horticulture, rural development, tribal development, research and academic institutions, NGOs, Joint Forest Management Committees and *Van Samiti* etc. participated in the above-mentioned stakeholder consultation workshops. Presentations on (i) REDD+ Readiness in India and (ii) Draft Safeguards Information System for REDD+ were made in all the stakeholder consultation workshops. Presentations made in the stakeholder consultation workshops are placed at Annexure-1 and Annexure -2. Proceedings of the stakeholder consultation workshops are placed at Annexure - 3. A stakeholder consultation workshop on draft safeguards information system for REDD+ was also organised at Dehradun on 21 December 2021. Members of the Van Panchayats of Dehradun district and frontline field staff of Uttarakhand State Forest Department participated in the workshop. Relevant inputs of the aforesaid stakeholder consultation workshops on draft REDD+ safeguards have been incorporated in the draft which was presented before the Expert Committee on 22 March 2021. The draft has been further improved by the Expert Committee in view of the stakeholder's inputs. Draft of safeguards information system was web-hosted on the websites of the Ministry of Environment, Forest and Climate Change (Government of India) and Indian Council of Forestry Research and Education for the period of one month from 13 September 2021 to 15 October 2021 to get the public comments. After addressing the public comments, final draft of safeguards information system for REDD+ was submitted to the Ministry of Environment, Forest and Climate Change, Government of India for approval.

OUTCOME

Ministry of Environment, Forest and Climate Change, Government of India has conveyed their approval on 31 March 2022. After approval of the Ministry, Safeguards Information System for REDD+ had been published and submitted to the Ministry. Ministry had submitted the Safeguards Information System for REDD+ in India to UNFCCC. Final approved document of the Safeguards Information System for REDD+ in India is available on REDD+ Web Platform of UNFCCC(https://redd.unfccc.int/media/safeguards_information_system_for_redd__in_india_2022.pdf) and REDD+ Knowledge Sharing and Safeguard Information System of India (https://reddplus.icfre.gov.in/docs/pdf/safeguards-information-system.pdf). Outcomes of the project are highlighted in the following heads:

1. Safeguards Information System for REDD+ in India

Introduction

India is the seventh largest country in the world with total geographic area of 32,87,469 sq km, occupying 2.4 percent of the world's geographical area while supporting over 17 percent of the world human population and 18 percent of the cattle population. India has a federal structure of governance with 28 States and 8 Union Territories with each state having its own plans and programmes towards implementation of national policies and programmes. Forests play a vital role in social and cultural well-being, economic and industrial development of the country as well as in maintaining its ecological security, besides providing significant opportunities for mitigation of climate change and adapting to it.

India is among the top ten forested countries of the world with 2 percent of the total global forest area. Total forest and tree cover of the country is estimated to be 8,09,537 sq km which accounts for 24.62 percent of the geographical area of the country. The forest cover of the country has been classified on the basis of the tree canopy density into pre-defined classes: very dense forest (canopy density of >70%), moderately dense forest (canopy density of 40-70%) and open forest (canopy density of 10-40%). The total growing stock of forest and trees outside forest is estimated to be about 6,167.50 million cum of which 4388.15 million cum lies inside the recorded forest area and 17795.35 million cum lies outside the recorded forest areas. Total carbon stocks in India's forests are estimated to be 7204 million tonnes (FSI, 2021). India is one of the few countries where forest and tree cover has increased in recent years transforming country's forests into a net sink of carbon dioxide (MoEFCC, 2021) owing to national policies aimed towards conservation and sustainable management of forests. Government of India's long-term goal is to bring 33 percent of its geographical area under forest and tree cover.

The Protected Area network for conservation of biological diversity in the country include 18 Biosphere Reserves, 101 National Parks, 553 Wildlife Sanctuaries, 86 Conservation Reserves, and 163 Community Reserves. India is Party to all the major global conventions and agreements related to forest, biological diversity and environment such as Convention on Biological Diversity, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Convention on Migratory Species of Wild Animals, Ramsar Convention on Wetlands of International Importance, United Nations Framework Convention on Climate Change, United Nations Convention to Combat Desertification, World Heritage Convention, etc.

India's Nationally Determined Contribution (NDC) target for forestry sector under the Paris Agreement is to create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030. Forestry sector constitutes an important part in India's NDC and can be achieved by upscaling ongoing programme such as National Mission for a Green India and other programmes. India is committed to achieve land degradation neutrality and to restore 26 million hectares of degraded lands by 2030.

Reducing emission from deforestation and forest degradation along with conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries are collectively referred to as REDD+. Cancun Agreements of UNFCCC on REDD+ "*encourages developing country Parties to contribute to mitigation actions in the forest sector by undertaking the activities, i.e., (a) Reducing emissions from deforestation; (b) Reducing emissions from forest degradation; (c) Conservation of forest carbon stocks; (d) Sustainable management of forest;* and *(e) Enhancement of forest carbon stock".* REDD+ as climate change mitigation option under UNFCCC has potential to deliver significant co-benefits to the forest dependent communities through biodiversity conservation, improvement in ecosystem services, provision of alternate income generation and equitable benefit sharing of revenues generated from emission reductions (FCPF, 2012). REDD+ is now widely recognized as a means of financial incentive to the communities for their contribution in reducing emissions from, and increasing removals in forests. An effective REDD+ programme will provide a variety of income generation opportunities, livelihoods security, resilience and social wellbeing. As per Cancun Agreements of UNFCCC, developing countries are required to develop their National REDD+ Strategy or Action Plan, National REDD+ Reference Level/ Reference Emission Level, National Forest Monitoring System and Safeguards Information System as a prerequisite for implementing REDD+ activities.

Complying with the UNFCCC decisions on REDD+, India has submitted its National REDD+ Strategy to UNFCCC. The Strategy built upon existing national initiatives, which have been updated in line with India's National Action Plan on Climate Change, and India's Nationally Determined Contribution to UNFCCC. India's National REDD+ Strategy has also been aligned with the precepts of the National Forest Policy. The overarching objective of National REDD+ Strategy is to facilitate implementation of REDD+ programme in the country in conformity with relevant decisions of UNFCCC, in particular the Cancun Agreements, Warsaw Framework for REDD+, Paris Agreement, and the national legislative and policy framework for conservation and improvement of forest and the environment (MoEFCC, 2018 b).

As part of India's REDD+ Strategy a National Governing Council for REDD+ has been established to coordinate and guide REDD+ related actions at the national level. A National Designated Entity for REDD+ has also been established at the Ministry of Environment, Forest and Climate Change to liaise with UNFCCC and state governments. The strategy devolves major responsibility for execution of REDD+ activities on the state forest departments. Each state is required to create a REDD+ Cell in the state forest department. The National REDD+ Strategy impresses upon the states to develop a road map in consultation with stakeholders including local communities for addressing drivers of deforestation and forest degradation and issues like safeguards for implementation of REDD+ activities.

The strategy further focuses on creation of trained human resource capable of carrying out forest related measurements at all levels of REDD+ implementation. It supports empowerment of local youth cadres as community foresters, who can be engaged effectively in performing various forestry related activities like: (i) assisted natural regeneration, (ii) soil and moisture conservation, (iii) harvesting, thinning, and hygienic removals, (iv) forest nurseries and raising of quality planting stocks, and (v) prevention and control of forest fires, pests and diseases and spread of invasive alien plant species. National REDD+ Strategy requires that Cancun safeguards be adhered to at all stages of REDD+ implementation, and a safeguards information system (SIS) be developed in accordance with national circumstances (MoEFCC, 2018).

Roadmap and action plan for implementation of National REDD+ Strategy are as under:

- Establishment of a National Governing Council for REDD+ at the national level.
- Creation of a REDD+ Cell in each State Forest Department.

- Capacity building of all cadres of the State Forest Departments (SFDs) on assessment of forest carbon stocks and other REDD+ related activities.
- Green Skill development of community youths for various forestry activities.
- Creation of additional infrastructure for SFDs comprising technical expertise, trained manpower and latest equipment and facilities for forest carbon measurement.
- Expansion of the technical and technological capability of ICFRE, FSI and the SFDs by upgrading its existing technical capacity.
- Creation of modern measuring capability with latest equipment in each State. The existing space application centres and GIS facilities in the States will be strengthened and upgraded for the purpose.
- Focus of forestry research on productivity in an integrated and multidisciplinary manner on forests and forest products aiming at increasing livelihood support and economic growth.
- Development of a Forest Reproductive Material Certification Policy-cum-Strategy.

India is regularly using satellite based remote sensing technology for assessment of the forest resources. The application of remote sensing technology to assess the forest cover of the entire country began in early 1980s. The first nationwide remote sensing-based assessment of forest resources was done in 1987 with LANDSAT-MSS sensor. Since 1995, India started using indigenous remote sensing satellite data and mode of interpretation has partly shifted from visual to digital. In the latest assessment of country's forest resources, ortho-rectified LISS III data of IRS Resourcesat-2 with a spatial resolution of 23.5 meters has been used for interpretation at a scale of interpretation 1:50,000 with the minimum mappable unit of 1 ha. Forest Survey of India (FSI) is responsible for undertaking the assessment of country forest resources on every two-year basis and published the assessment results as 'India State of Forest Report'. Since 1987, seventeenth such assessments have been completed and all India State of Forest Reports are electronically available at https://fsi.nic.in.

National Forest Reference Level (FRL) serves as benchmark for assessing performance of implementation of REDD+ activities in a country and it is also one of the mandatory requirements for implementation of REDD+ activities. All the five pools namely above ground biomass, below ground biomass, dead wood and litter and soil organic carbon have been taken into account for construction of FRL. Only CO_2 as greenhouse gas has been taken into account for construction of FRL. Historic period of 2000 to 2008 was considered for construction of forest reference level. Government of India submitted the National Forest Reference Level to UNFCCC in 2018 which has since been technically assessed by the UNFCCC. India's Forest Reference Level is (-)49.70 million tonne CO_2 eq.

Background: Cancun Safeguards and National Circumstances

Cancun Agreements state that REDD+ actions should be consistent with the conservation of natural forests and biological diversity, incentivize the protection and conservation of natural forests, and enhance other social and environmental benefits (UNFCCC, 2011). REDD+ activities should:

(a) Contribute to the achievement of the objective set out in Article 2 of the Convention;

(b) Contribute to the fulfilment of the commitments set out in Article 4, paragraph 3, of the Convention;

(c) Be country-driven and be considered options available to Parties;

(d) Be consistent with the objective of environmental integrity and take into account the multiple functions of forests and other ecosystems;

(e) Be undertaken in accordance with national development priorities, objectives and circumstances and capabilities and should respect sovereignty;

(f) Be consistent with Parties' national sustainable development needs and goals;

(g) Be implemented in the context of sustainable development and reducing poverty, while responding to climate change;

(h) Be consistent with the adaptation needs of the country;

(i) Be supported by adequate and predictable financial and technology support, including support for capacity building;

(j) Be results-based;

(k) Promote sustainable management of forests;

Country Parties to the Convention on Biological Diversity (CBD) have also recognized that REDD+ can provide considerable benefits for biological

diversity of forest. CBD has also highlighted the risks of poorly designed REDD+ efforts on biological diversity, indigenous people and local communities (CBD, 2011). Potential risk for biological diversity in implementation of REDD+ as identified by CBD (2011) are:

- the conversion of natural forests to plantations and other land uses of low biological diversity value,
- introduction and growing of biofuel crops,
- the displacement of deforestation and forest degradation to areas of higher carbon value and high biological diversity value,
- increased pressure on non-forest ecosystems with high biological diversity value and
- afforestation in areas of high biological diversity value.

REDD+ safeguards requirements: Safeguards have been identified as an important tool to ensure the effective implementation of REDD+ actions and to avoid, or at least minimize slack governance, and adverse social and environmental impacts of REDD+ implementation. Sixteenth Conference of the Parties (COP 16) to the UNFCCC vide Decision 1/CP.16 establishes that REDD+ activities should promote and support a set of seven governance, social and environmental safeguards, also known as the Cancun safeguards.

The Cancun safeguards ensure that the REDD+ actions should have positive impact on the ecosystem services, biological diversity and forest dependent communities. As per decision 1/CP.16 of UNFCCC, when undertaking the REDD+ activities the following safeguards should be promoted and supported:

(a) That actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;

(b) Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;

(c) Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;

(d) The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of this decision;

(e) That actions are consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of this decision 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;

(f) Actions to address the risks of reversals;

(g) Actions to reduce displacement of emissions.

Decision 1/CP.16 of UNFCCC further requests developing country Parties to develop a system for providing information on how these safeguards are being addressed and respected in a transparent manner throughout the implementation of REDD+ actions/ activities. Decision 12/CP.17 of UNFCCC complements by defining that the Safeguards Information System should:

(a) Be consistent with the guidance identified in decision 1/CP.16, appendix I, paragraph 1;

(b) Provide transparent and consistent information that is accessible by all relevant stakeholders and updated on a regular basis;

(c) Be transparent and flexible to allow for improvements over time;

(d) Provide information on how all of the safeguards referred to in appendix I to decision 1/CP.16 are being addressed and respected;

(e) Be country-driven and implemented at the national level;

(f) Build upon existing systems, as appropriate.

Assessing benefits and risks of REDD+ actions: REDD+ mechanism has the immense global potential to bring synergies among three Rio Conventions (UNFCCC, UNCCD and CBD) for mitigating the climate change, combating desertification and land degradation, and conservation of biological diversity. REDD+ remains a critical instrument under the UNFCCC that provides financial incentive to the developing countries for unlocking their potential in mitigating greenhouse gas emission by intervention in the forestry sector and at the same time providing adaptation co-benefits.

India's National REDD+ Strategy is a key element of National REDD+ Framework. It puts forth vision, objectives and different strategies for implementing REDD+ activities. The Strategy has a road map for addressing drivers of deforestation and forest degradation and issues like safeguards for rights of local community, first right of use with local community, gender equity, creation of green jobs to the local youths etc.

The global objective of REDD+ is to contribute to global climate change mitigation, at the same time an effective REDD+ programme has the potential to deliver variety of additional social and environmental benefits. Forests provide a range of ecosystem services that are crucial for the human beings. REDD+ actions can further enhance these additional benefits. The social benefits include improved livelihoods by providing additional and alternative sources of income, improved governance of natural resources, resolving land tenure issues etc. However, at the same time REDD+ actions could also pose certain risks during its implementation. Conversion of natural forest to tree plantations and shifting of anthropogenic pressure from natural forests to other areas outside project boundary are among the major environmental risks of REDD+ actions. Social risks include curtailing right and concession traditionally enjoyed by the local communities and limited participation of relevant stakeholders in implementation of the REDD+ actions.

The National REDD+ Strategy of India recommends state governments to develop their State REDD+ Action Plans and at the time of planning of various REDD+ approaches, intervention packages, implementation risks and risk reduction measures are taken into consideration. Some of the measures to reduce risks and promote benefits may include: prioritising in REDD+ actions (or intervention packages) for benefits, putting safeguard measures in place, identifying risks and benefits that may arise from specific actions and selecting locations for these that secure high-priority benefits with low risks.

India needs to build the capacity of the stakeholders on REDD+ mechanism in order to implement National REDD+ Strategy. Financial support for developing and implementing REDD+ projects, focussing on trainings, technology sharing and knowledge dissemination are needed to resolve the complex issue related to REDD+. Initially pilot REDD+ projects at sub-national level will a better learning opportunity to implement REDD+ considering the national circumstances. The present Safeguards Information System which has been developed in accordance with the guidance provided by the various COP decisions of the UNFCCC is an attempt to address and respect the potential risks likely to be emerged from the REDD+ actions.

National circumstances: The issues related to forest and environmental management have been given adequate importance in the overall national policies and planning for balanced development of the country. The basic approach is development without destruction. Environmental protection is enshrined in the Constitution of India. Article 48-A of the Directive Principles in the Constitution of India state that "*the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife in the country*", and under Article 51 A (g) it is a fundamental duty of every citizen "*to protect and improve the national environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures*".

Forest governance in India: The era of scientific management in India began in 1864 with the appointment of Sir Dietrich Brandis as Inspector General of Forests. This was followed by the creation of a separate forest service in 1867 and the promulgation of legal measures, notably the Forest Act, 1865 which was revised in 1878 and 1927 to consolidate laws related to forests. It provided for the creation of separate categories of forests such as reserved forest, protected forest, village forest, etc. (MoEF, 1999).

The major task undertaken by the forest departments until about the end of the 19th century was the creation of reserved and protected forests and the settlement of rights therein. Most of the exploitable areas and important tree species were brought under working plans. Various silvicultural systems were developed including irregular shelterwood system, selection and selection-cum-improvement felling, conversion to uniform system, coppice with standard/ reserves as well as the *taungya* system involving clear-felling and strip planting with short duration agriculture crops between the strips and finally the clear-felling and planting of commercially important species. All these silvicultural systems were primarily designed for harvesting and regeneration of important timber species for commercial resource generation.

After independence, the princely states became part of Indian union and provincial administrative units called states were established. Some of these states had organized forest departments whereas others had engaged trained foresters from the neighbouring provinces of erstwhile British India and had brought their forests under a reasonable state of management. This period also saw the initiation of large-scale developmental activities for industrialization, hydro-power projects, urbanisation, expansion of railways, network of highways and other roads, and construction activities etc., which resulted in substantial diversion of forest area for non-forestry purposes. The 'grow more food' campaign for increasing agricultural production also claimed large areas of forests. The growing human population and cattle population also placed heavy demand on forests for fuel, fodder, food, medicine and small timber causing rapid degradation of forests.

Constitutional amendments leading to paradigm shift in forest governance: Before 1976, the subject of forest and wildlife came under the state list of the Constitution for the purpose of governance. In 1976 with 42nd Constitutional Amendment, forests were brought under the Concurrent List which implied that both the Centre as well as State Governments could make laws on the subject. The forest resources in India are administered by the Ministry of Environment, Forest and Climate Change at the national level and by the State Forest Departments at the state level. The Ministry of Environment, Forest and Climate Change is responsible for planning, promotion, coordination and overseeing the implementation of the various environmental, forestry and climate change-related laws, policies and programmes with the objectives of conservation of forests and biological diversity, prevention and control of pollution, afforestation and regeneration of degraded areas and protection of environment. The State Forest Departments are responsible for planning, implementation and monitoring of programmes in the forestry sector at the state level.

Forest Departments of respective States/ Union Territories are responsible for the protection, conservation, administration and development of forests. State Forest Department is headed by the Principal Chief Conservator of Forests who is also the Head of the Forest Force of the state. At the cutting-edge level, a forest range is the key functional unit of forestry administration for execution of works in the field. The Executive Unit (Forest Division) is headed by the Divisional Forest Officer. There are other functional divisions within the State Forest Department to look after specialized activities and responsibilities. Functional Divisions include Working Plan, Silviculture, Wildlife, Research, Social Forestry and Watershed Management Divisions etc. which carry out specific functions related to a particular aspect of forest management (MoEF, 2014 a).

Forest management in India: Sir Dietrich Brandis in 1856 propounded the fundamental principle that the number of first-class trees - trees over a prescribed diameter- to be felled in a year should be limited to the number of second-class trees that will eventually replace them in that year. Based on this principle of yield control, Brandis prepared the first forest management plan using strip sampling for the Pegu Yoma (now in Myanmar) Forests of British India in the year 1860. In 1884, the efforts of Sir Wilhelm Schlich, the then Inspector General of Forests, resulted in a countrywide unified approach towards the preparation of working plans and scientific management of forests as per prescription of working plans (MoEF, 2014 b).

At the country level, Forest Working Plan has been the main instrument of forest planning for scientific management of forests. Earlier, state governments adopted their own provincial working plan codes as per regional requirements. However, in accordance with the directions of Supreme Court of India in 1996, all Forest Working Plans are now required to be approved by the Government of India. The Ministry of Environment, Forest and Climate Change, Government of India adopted a uniform code (National Working Plan Code – 2014) for preparation of working plans for the management of forests. The forest working plan prescriptions strive to harmonize socio-economic development with forest conservation keeping in view all relevant policies, rules and regulations, and other international conventions/ agreements related to forests.

India is one of the few countries with documented forest policy right from 1894. National Forest Policy, 1952 emphasized the role of forests in meeting the needs of industry and society besides recognizing forest conservation requirements. National Forest Policy, 1988 mainly focused on maintaining ecological balance. This policy underlines the need to meet the domestic demands of the tribal and rural

people for forest produce, as well as highlighting the imperative of a participatory approach to the protection and management of forests. The policy advocates for a people's movement for forest conservation and protection, and gave a thrust to social forestry for extending forests outside the traditional forest areas to minimise the pressure on natural forests.

Essentials of Forest Management as per National Forest Policy, 1988 are as under:

- Existing forests and forest lands should be fully protected and their productivity should be improved. Forest and vegetal cover should be increased rapidly on hill slopes, in catchment areas of rivers, lakes and reservoirs, and on the semi-arid, and desert tracts.
- For the conservation of total biological diversity, the network of national parks, wildlife sanctuaries, biosphere reserves, conservation and community reserves should be strengthened and extended adequately.
- Provision of sufficient fodder, fuelwood and pasture, especially in areas adjoining forests, is necessary in order to prevent depletion of forests beyond the sustainable limit.
- Minor forest produce provides sustenance to tribal population and to other communities residing in and around forests. Such produce should be conserved, improved and their production enhanced with due regard to generation of employment and income.
- No forest should be permitted to be worked without approved working plan, which should be in a prescribed format and in keeping with the National Forest Policy.
- Exotic species should not be introduced for enhancing the forest cover in the country, and meeting national needs through public or private sources, unless long-term scientific trials undertaken by the specialists in ecology, forestry and agriculture; and have established that exotic species are suitable and have no adverse impact on native vegetation and environment.

Joint forest management: India has a long history of protection of forests by the involvement of local communities. There are many examples of successful participation of local communities in managing forests in the country such as forest management by *Van Panchayats* in Uttarakhand since 1931. Joint Forest Management is an approach and programme initiated in the context of the National Forest Policy of 1988 wherein state forest departments support local forest dwelling and forest fringe communities to regenerate, protect and manage degraded forests through Joint Forest Management Committee (JFMC) guided by locally prepared bye-laws and micro plans.

A JFMC is a democratic, decentralized and transparent local institution of forest and forest fringe dwelling communities that is part of the *Gram Sabha* fully or partially and set up as per the provisions of relevant JFM rules/ guidelines of the state. There are about 1,18,213 JFMCs spreading across 28 States and 8 Union Territories that are managing about 22.94 mha of forests in the country (ICFRE, 2011).

An Eco-Development Committee (EDC) is similar to JFMC, but meant for villages in Protected Areas and their buffer zones. Their setup, working, role, responsibilities, powers, funds etc. are as per the state-level orders. Their area of operation is restricted to protected areas, and forest and non-forest areas near protected areas. EDCs are set up with twin objectives to protect wildlife and other biological diversity, and to undertake eco-development activities in the villages.

Goals, scope and scale of safeguards application:
The National REDD+ Strategy identifies the following REDD+ activities to be undertaken as per its applicability in the different parts of the country:

(i) Reducing deforestation,
(ii) Reducing forest degradation,
(iii) Conservation of forest carbon stocks,
(iv) Sustainable management of forests, and
(v) Enhancement of forest carbon stocks.

All the above-mentioned REDD+ activities are consistent with the National Forest Policy, 1988 and, in fact, India has been practicing this approach for past many decades in one form or the other. Thus, it is relevant to state that a broad framework for addressing the various elements of Cancun safeguards for implementation of REDD+ activities in India are already in existence.

The goal of the Safeguards Information System (SIS) for India is to address and respect the Cancun safeguards during the implementation of REDD+ activities and to meet the UNFCCC reporting requirements. The scope for application

of SIS mainly focusing the REDD+ activities to be implemented in the forest sector as well as in other land-use sectors. The scale for application of SIS shall be national, sub-national and local level. Ministry of Environment, Forest and Climate Change, Government of India will provide necessary guidance to the State Forest Departments for application of the SIS in implementation of REDD+ activities. State REDD+ Cells will provide necessary information on application of SIS to the Ministry of Environment, Forest and Climate Change, Government of India on periodical basis for preparation of the summary of information on safeguards.

In addition to Cancun safeguards, the SIS will also cover the safeguards provisions of National Forest Policy and forestry programmes as well as safeguards provisions of the World Bank, Global Environment Facility and Green Climate Fund relevant to forest sector as applicable.

Major global conventions and agreements ratified by India: India is Party to all the major global conventions and agreements related to forest, biological diversity and environment such as United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement, Convention on Biological Diversity (CBD), United Nations Convention to Combat Desertification (UNCCD). Ministry of Environment, Forest and Climate Change is the nodal Ministry in the Government of India for all global conventions and agreements related to environment. Some of the major global conventions and agreements related to forest and environment ratified by India are as under:

United Nations Framework Convention on Climate Change (UNFCCC): India signed UNFCCC on 10 June 1992 and ratified on 1 November 1993. India submitted its Initial National Communication in the year 2004, second National communication in 2012, first Biennial Update Report (BUR) in 2016, second BUR in 2018 and third BUR in 2021. Now, India is in the process of submission of Third National Communication to UNFCCC. India hosted the eighth session of Conference of Parties (COP 8) of the UNFCCC at New Delhi in 2002.

India has signed the Paris Agreement- an international treaty allowing each country to set its own national emission goals on climate change, on 22 April 2016 and ratified same on 2 October 2016. India has submitted its Nationally Determined Contribution (NDC) to UNFCCC on 2 October 2016 keeping in view its development agenda, particularly the eradication of poverty coupled with its commitment to following the low carbon path to progress. NDC target of forestry sector is "to create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030".

Towards implementation of REDD+ activities, India has submitted its National REDD+ Strategy and Forest Reference Level (FRL) to UNFCCC in 2018.

Convention on Biological Diversity (CBD): India ratified the Convention on 18 February 1994 and later its successive offshoots, *i.e.*, Cartagena Protocol on Biosafety (to ensure the safe handling, transport and use of living modified organisms resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health) ratified on 17 January 2003, and Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization, ratified on 9 October 2012. National Biodiversity Action Plan (NBAP) was prepared in 2008 and submitted to the CBD. An addendum to the National Biodiversity Action Plan 2008 was also prepared in 2014. The country has also developed 12 National Biological Diversity Targets for achieving Aichi Biodiversity Targets. Five cycles of national reporting for CBD has been completed. India's Fifth National Report to the CBD in 2014 provides an update on biological diversity status, trends and threats, updating of NBAP, and India's progress towards Aichi targets. India hosted the eleventh session of Conference of Parties (COP 11) of CBD at Hyderabad in 2012.

United Nations Convention to Combat Desertification (UNCCD): India ratified the convention on 17 December 1996. After ratification, the country prepared its National Action Programme in 2001 which *inter-alia* provides the initiatives taken for combating desertification. First national reporting in 2000 to seventh reporting to UNCCD Secretariat in 2018 has been completed. India hosted the fourteenth session of Conference of Parties (COP 14) of UNCCD in September 2019.

Existing Governance Arrangements in India for Addressing Cancun Safeguards: Over the past seven decades since independence, the Government of India has made a series of efforts to conserve and protect environment and

natural resources, including forests, by framing suitable policies, laws and regulations and through appropriate administrative and managerial actions. The first Forest Policy enacted by British Colonial Government in 1894 aimed at a custodial and timber-oriented management of forests. To ensure maintenance of adequate forest cover for general well-being of the country, meeting needs of local people and revenue collection was the main thrust of the policy. First Forest Policy of independent India enacted in 1952 recommended that 33 percent of the total geographical area of the country should be brought under forest or tree cover. It provided detailed guidelines for management and protection of forests and wildlife. The policy was revised in 1988 and emphasised on extension of forests beyond the traditional forest areas. This gave impetus to social forestry, agroforestry and farm forestry.

In India several policies, laws and regulations related to environment, forest, biological diversity, and right of local communities are in place. These have the effect of addressing the concerns of Cancun safeguards and are described below:

1. National Forest Policy, 1988: It enunciates conservation and preservation of the natural forests, which are home for unique and endemic flora and fauna. Policy also recognizes the rights and concessions enjoyed by the tribal and other poor communities living within forest, and on forest fringes. Policy further states that the domestic requirements of fuel-wood, fodder, minor forest products and timber for construction to the tribal and other communities should be the first charge on forest produce.

The national goal of forest policy is to have a minimum of one-third of the total geographical area of the country under forest and tree cover. In the hills and in mountainous regions, the aim is to maintain two-third of the area under forest and tree cover in order to prevent soil erosion and land degradation and to ensure the stability of the fragile ecosystem. The principal aim is to ensure environmental stability and maintenance of ecological balance including atmospheric equilibrium which are vital for sustenance of all lifeforms, human, animal and plant. The derivation of direct economic benefit must be subordinated to this principal aim. The basic objectives of the National Forest Policy, 1988 are:

- Maintenance of environmental stability through preservation and, where necessary, restoration of the ecological balance that has been adversely disturbed by serious depletion of the forests of the country.
- Conserving the natural heritage of the country by preserving the remaining natural forests with the vast variety of flora and fauna, which represents the remarkable biological diversity and genetic resources of the country.
- Checking soil erosion and denudation in the catchment areas of rivers, lakes and reservoirs.
- Checking the extension of sand-dunes in the desert areas of Rajasthan and along the coastal tracts.
- Increasing substantially the forest/tree cover in the country through massive afforestation and social forestry programmes, especially on all denuded, degraded and unproductive waste lands.
- Meeting the requirements of fuel-wood, fodder, minor forest produce and small timber for local rural and tribal communities.
- Increasing the productivity of forests to meet essential national needs.
- Encouraging efficient utilisation of forest produce and maximising substitution of wood.
- Creating a massive people's movement with the involvement of women, for achieving these objectives and to minimise pressure on existing forests.

National Forest Policy, 1988 also provides for the following rights and concessions to the local communities:

- The rights and concessions, including grazing whose carrying capacity should be optimised by increased investment, silvicultural research and development of the area. Stall-feeding of cattle should be encouraged. The requirements of the community, which cannot be met by the rights and concessions so determined, should be met by development of social forestry outside the reserved forests.
- The holders of customary rights and concessions in forest areas should be motivated to identify themselves with the protection and development of forests from which they derive benefits. The rights and concessions from forests should primarily be for the *bona fide* use of the communities living within and around forest areas, specially the tribal communities.

- As the life of tribal and other communities within and near forests revolves around forests, the rights and concessions enjoyed by them should be fully protected.
- Similar consideration should be given to scheduled castes and other poor living near forests.

Having regard to the symbiotic relationship between the tribal people and forests, a primary task of all agencies responsible for forest management is to associate the tribal people closely in the protection, regeneration and development of forests as well as to provide gainful employment to people living in and around forests. While safeguarding the customary rights and interests of such people, forestry programmes are required to pay special attention to the following:

- Protection, regeneration and optimum collection of minor forest produce along with institutional arrangements for the marketing of such produce;
- Undertaking integrated area development programmes to meet the needs of the tribals, and their livelihood in and around the forest areas, including the provision of alternative sources of domestic energy on a subsidised basis, to reduce pressure on the existing forest areas.

2. National Environment Policy, 2006: This policy seeks to achieve balance and harmony between conservation and development. The policy is intended to mainstream environmental concerns in all development activities. This policy is based on the theme that conservation of environmental resources is necessary to secure livelihoods and well-being of all, the most secure basis for conservation is to ensure that people dependent on particular resources obtain better livelihoods from conservation than from degradation of the resources. The principal objectives of this policy *inter alia* include:

a) To protect and conserve critical ecological systems and resources, and invaluable natural and man-made heritage, which are essential for life support, livelihoods, economic growth, and human well-being.

b) To ensure equitable access to environmental resources and quality for all sections of society, and in particular, to ensure that poor communities, which are most dependent on environmental resources for their livelihoods, are assured secure access to these resources.

c) To ensure judicious use of environmental resources to meet the needs and aspirations of the present and future generations.

d) To integrate environmental concerns into policies, plans, programmes, and projects for economic and social development.

e) To apply the principles of good governance (transparency, rationality, accountability, reduction in time and costs, participation, and regulatory independence) to the management and regulation of use of environmental resources.

3. National Agroforestry Policy, 2014: The policy underlines the environmental contribution of agroforestry by preventing deforestation, and promoting carbon storage, biological diversity conservation, and soil and water conservation. Agroforestry also provides livelihood opportunities to the rural as well as urban communities. The basic objectives of the National Agroforestry Policy are:

- To encourage and expand tree plantation in complementarily and integrated manner with crops and livestock to improve productivity, employment, income and livelihoods of rural households, especially the small holder farmers.
- To protect and stabilize ecosystems, and promote resilient cropping and farming systems to minimize the risk during extreme climatic events.
- To meet the raw material requirements of wood-based industries and reduce import of wood and wood products that serves to reduce the likelihood of displacement of emissions.
- To supplement the availability of agroforestry products, such as the fuel-wood, fodder, non-timber forest produces and small timber for the rural and tribal populations, thereby reducing the pressure on existing natural forests.
- To complement achieving the target of increasing forest/tree cover.
- To promote ecological stability, especially in the vulnerable regions.

4. Indian Forest Act, 1927: Indian Forest Act promotes conservation of natural forests and its

biological diversity by protecting flora and fauna on lands defined as forests and through the practice of sustainable management of forests. The Act enables recognition of rights and privileges on forest resources to the people and thereby serve to protect their rights. The act prohibits the tilling and occupation of forest lands thus discourages encroachment.

5. Wildlife (Protection) Act, 1972 (amended in 1993): Act provides for the protection of wild animals, birds and plants and their habitats through:

- selection of areas to be declared as sanctuaries, national parks, and closed areas and the administration thereof,
- formulation of the policy of protection and conservation of wildlife and specified plants,
- relation to the measures to be taken for harmonizing the needs of the tribals and other dwellers of the forest with the protection and conservation of wildlife, and
- prohibition of picking, uprooting of specified plants.

6. Forest (Conservation) Act, 1980: Forest (Conservation) Act, 1980 is a unique piece of legislation, and a regulatory mechanism that reflects the collective will of the nation to protect its rich biological diversity and natural heritage and that permits only unavoidable use of forest land for various developmental purposes. This Act was enacted to reduce indiscriminate diversion of forest land for non-forestry purposes. The Act empowers the Union Government to regulate the diversion of forest for non-forestry use. With the enactment of this act, the deforestation and conversion of forest lands to non-forestry use has been drastically checked. Now forests are diverted only for the urgent national developmental needs after rigorous scrutiny to ensure that adverse impact on the environment is minimised.

7. The Environment (Protection) Act, 1986: This is an umbrella act to provide for the protection and improvement of environment and deals with the prevention of hazards to human beings, other living creatures, plants and property. It empowers the Central Government to take necessary measures for the purpose of protecting and improving the quality of environment and preventing, controlling and abating environmental pollution.

8. The Panchayats (Extension to the Scheduled Areas) Act 1996: This act serves to strengthen the role of tribal communities in the decision-making processes. Under this Act, every *Gram Sabha* falling under the tribal dominated areas in the country (except North eastern India where even more stringent provisions apply) has the power to approve plans and programmes for social and economic development of the villagers, to identify persons as beneficiaries under these programmes and to safeguard and preserve the traditions and customs of people, their cultural identity, and community resources. For any acquisition of land in these areas approval of *Gram Sabha* is needed.

9. The Biological Diversity Act, 2002: This Act deals with the conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources and their knowledge. The Act is aimed at conservation of biological resources and incentivisation of associated knowledge as well as facilitating access to them in a sustainable manner and through a just process. It also aims at extending the benefit of traditional knowledge of use of the biological diversity to the local communities. The Act recognises the rights of local communities on traditional use related to use of local biological diversity, and also supports conservation of biological diversity.

The National Biodiversity Authority, State Biodiversity Boards and Biodiversity Management Committees form the operational arms for the Act and Rules at national, state and local levels respectively. Biodiversity Management Committees are constituted at local level for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.

10. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006: The Act recognizes and vests the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded. This act includes the responsibilities and authority for sustainable use, conservation

of biological diversity and maintenance of ecological balance and thereby strengthening the conservation regime of the forests while ensuring livelihood and food security of the forest dwellings scheduled tribes and other traditional forest dwellers. Forest rights include:

(a) Right to hold and live in the forest land under the individual or common occupation for habitation or for self-cultivation for livelihood by a member or members of a forest dwelling scheduled tribe or other traditional forest dwellers;

(b) Community rights;

(c) Right of ownership, access to collect, use, and dispose off minor forest produce which has been traditionally collected within or outside village boundaries;

(d) Other community rights of uses or entitlements such as fish and other products of water bodies, grazing (both settled or transhumant) and traditional seasonal resource access of nomadic or pastoralist communities;

(e) Rights including community tenures of habitat and habitation for primitive tribal groups and pre-agricultural communities;

(f) Rights in or over disputed lands under any nomenclature in any State where claims are disputed;

(g) Rights for conversion of *Pattas* or leases or grants issued by any local authority or any State Government on forest lands to titles;

(h) Rights of settlement and conversion of all forest villages, old habitation, un-surveyed villages and other villages in forests, whether recorded, notified or not into revenue villages;

(i) Rights to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use;

(j) Rights which are recognised under any State law or laws of any Autonomous District Council or Autonomous Regional Council or which are accepted as rights of tribal under any traditional or customary law of the concerned tribes of any state;

(k) Right of access to biological diversity and community right to intellectual property and traditional knowledge related to biological diversity and cultural diversity;

(l) Any other traditional right customarily enjoyed by the forest dwelling Scheduled Tribes or other traditional forest dwellers excluding the traditional right of hunting or trapping or extracting a part of the body of any species of wild animal; and

(m) Right to *in-situ* rehabilitation including alternative land in cases where the scheduled tribes or other traditional forest dwellers have been illegally evicted or displaced from forest land of any description without receiving their legal entitlement to rehabilitation prior to the 13th December 2005.

11. The Compensatory Afforestation Fund Act, 2016: In order to promote conservation of forests, the Forest (Conservation) Act, 1980 provides for diversion of forestlands for non-forest purposes only after rigorous procedural scrutiny and as a last resort option. The Act ensures availability of funds for compensatory creation of forests through afforestation/ reforestation over an equal extent of non-forest lands or twice the extent in degraded forest lands when it becomes imperative to divert forest lands for taking up developmental projects. The Compensatory Afforestation Fund Act, 2016 ensure to provide for the establishment of funds under the public accounts of India and the public accounts of each State and crediting thereto the monies received from the user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, net present value and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980; constitution of an authority at national level and at each of the State and Union territory Administration for administration of the funds and to utilise the monies so collected for undertaking artificial regeneration (plantations), assisted natural regeneration, protection of forests, forest related infrastructure development, Green India Programme, wildlife protection and other related activities and for matters connected there with or incidental thereto.

12. National Working Plan Code-2014: Forest Working Plan is a main instrument of forest planning based on sound principles of sustainable management of forests in the country. It is a very useful document for evaluating the status of forests and biological diversity and natural resources of a Forest Division, assessing the impact of past management practices and deciding about suitable management interventions for future.

To sustainably manage, conserve and utilize the forest resources and to bring uniformity in forest management and planning across the country and ensuring environmental stability, biological diversity management, restoration of ecological balance, climate change mitigation and adaptation, protective functions of the forest resources, sustained flow of ecosystem services and NTFP based socio-economic benefits, Ministry of Environment, Forest and Climate Change, Government of India adopted the National Working Plan Code in 2014.

National Working Plan Code-2014 specifically mandates that the implementation of REDD+ requires mechanisms to measure forest carbon stocks, interventions and payments to local people in addition to alternative activities such as fodder development to avoid lopping of tree branches, efficient cooking energy devices etc. This helps to address issues of displacement of emissions in the implementation of REDD+ activities.

13. Joint Forest Management: National Forest Policy, 1988 recognized people's participation in using and protecting forests and suggested that forest communities should develop and conserve forests together with the State Forest Departments. Joint Forest Management (JFM) is a care and share approach wherein State Forest Departments work with the local forest dwelling and forest fringe communities for the protection and management of forests and share the benefits arising from the forests. Joint Forest Management Committees (JFMCs) mainly target conversion of low-productive forests to high productive forests. JFMCs can play a very important role in the stakeholder participation in the implementation of REDD+ activities.

Besides the above-mentioned Policies, Laws and Regulations (PLRS), there are some other PLRs (National Policy for Farmers, 2007; National Water Policy, 2012, the Protection of Plant Varieties and Farmers' Rights Act, 2001, the Right to Information Act, 2005 and National Green Tribunal Act, 2010) which are indirectly associated in addressing and respecting some of the Cancun safeguards.

Existing governance arrangements addressing Cancun safeguards

(i). Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements (Safeguard 'a'): This safeguard ensures that REDD+ actions do not conflict with the objectives of national policies, laws and regulations (PLRs) as well as with the state-specific laws, rules and regulation aimed at conservation and sustainable management of forests, and with the objectives of international conventions and agreements related to environment, forest and biodiversity ratified by India. The relevant sections of existing PLRs addressing this safeguard are listed below:

S.No.	Policy, Laws and Regulations	Relevant Sections (s) of the PLR
1.	National Forest Policy, 1988	Section 2. Basic Objectives Section 3. Essentials of Forest Management Section 4.3 Management of State Forests
2.	National Environment Policy, 2006	Section 3. Objectives of the National Environment Policy Section 5.2.3. Forests and Wildlife
3.	Indian Forest Act, 1927	Chapter 2 of Reserved Forest Chapter 3 of Village Forest Chapter 4 of Protected Forest
4.	Forest (Conservation) Act, 1980 (amended in 1988)	Section 2. Restriction on the dereservation of forests or use of forest land for non-forest purpose Section 6. Application of Forest (Conservation) Act, 1980

India is Party of relevant international conventions (UNFCCC, CBD, UNCCD) and agreements, and implementation of REDD+ actions shall complement and consistent with their objectives.

(ii). Transparent and effective national forest governance structures, taking into account national legislation and sovereignty (Safeguard 'b'): This safeguard ensures transparency and access to information, effectiveness and efficiency of system feedback, oversight and accountability. Forests are under the *Concurrent List* of the Constitution of India, and Ministry of Environment, Forest and Climate Change, Government of India is responsible for planning, promotion, coordination and overseeing the implementation of the various policies and programmes. Forest governance in India is vested with State Forest Departments, who are also responsible for the protection, conservation, administration and development of forests at the state level through Forest Circles, Forest Divisions and Forest Ranges.

Indian Forest Act, 1927, Wildlife (Protection) Act, 1972, Forest (Conservation) Act 1980, Biological

Diversity Act, 2002, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 etc. along with National Forest Policy, 1988, National Environment Policy, 2006, National Agroforestry Policy, 2014 ensure good and just forest governance structure. Right to Information Act, 2005 ensures transparency in the governance structure. Forest Working Plans prepared in accordance with the National Working Plan Code-2014 are the main instrument for scientific management of forests in India. All forests are to be sustainably managed under the prescriptions of forest working plans. The National Forest Policy of 1988 clearly mandates that "*No forest should be permitted to be worked without an approved working plan by the competent authority*". Transparent and effective national forest governance structure is thus in place in India. The relevant sections of existing PLRs addressing this safeguard are listed below:

S. No.	Policy, Laws and Regulations	Relevant Sections (s) of the PLR
1.	National Forest Policy, 1988	Section 4.3. Management of State Forests Section 4.13. Personnel Management Section 4.15. Legal Support and Infrastructure Development
2.	National Environment Policy, 2006	Section 3. Objectives of the National Environment Policy, Sub-section 3(vi) Environmental Governance Section 5.1 Regulatory Reforms 5.1.3. Substantive Reforms (i) Environment and Forests Clearances
3.	National Agroforestry Policy, 2014	Section 5.1. Establishment of Institutional Setup at National level to promote Agroforestry Section 5.2. Simple regulatory mechanism
4.	Indian Forest Act, 1927	Chapter 2 of Reserved Forest Chapter 3 of Village Forest Chapter 4 of Protected Forest Chapter 12 Subsidiary Rules Chapter 13 Miscellaneous
5.	Wildlife (Protection) Act, 1972 (amended in 1993	Chapter II. Authorities to be appointed or constituted under this Act
6.	Forest (Conservation) Act, 1980 (amended in 1988)	Section 2. Restriction on the de-reservation of forests or use of forest land for non-forest purpose Section 6. Application of Forest (Conservation) Act, 1980
7.	Biological Diversity Act, 2002	Chapter - III. National Biodiversity Authority Chapter - IV. Functions and Powers of the National Biodiversity Authority Chapter - VI. State Biodiversity Board Chapter - IX. Duties of the Central and the State Governments Chapter - X. Biodiversity Management Committees
8.	Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	Chapter IV. Authorities and Procedure for Vesting of Forest Rights

In view of the government's general policy of transparency and openness development and other projects as well as processes of introduction of new policy or legislative instruments undergo a thorough exercise of stakeholders' consultation through use of media, including web and other electronic media.

(iii). Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples (Safeguard 'c'): In India

tribals, forest dwellers and other local communities have several safeguards to exercise their customary rights and traditions ensuring respect for rights of local communities as stated in the Constitution of India, national laws like Panchayat (Extension to Scheduled Areas) Act, 1996, Biological Diversity Act, 2002 and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. India has accepted United Nations Declaration on the Rights of Indigenous Peoples with the clarification that after the end of colonial period in India all people are indigenous. The relevant sections of existing PLRs addressing this safeguard are listed below:

S.No.	Policy, Laws and Regulations	Relevant Sections (s) of the PLR
1.	National Forest Policy, 1988	Section 3.5. Minor forest produce provides sustenance to tribal population and to other communities residing in and around the forests. Such produce should be protected, improved and their production enhanced with due regard to generation of employment and income. Section 4.2. Afforestation, Social Forestry & Farm Forestry Section 4.3.4 Rights and Concessions Section 4.6 Tribal People and Forests
2.	National Environment Policy, 2006	Section 3. Objectives of the National Environment Policy ii. Intra-generational Equity: Livelihood Security for the Poor vii. Enhancement of Resources for Environmental Conservation Section 4. Principles i. Human Beings are at the Centre of Sustainable Development Concerns, ii. The Right to Development Section 5. Strategies and Actions Section 5.2.4 Biodiversity, Traditional Knowledge, and Natural Heritage
3.	National Farmer Policy, 2007	4.6.2 (i) Documentation of traditional knowledge through community bio-diversity registers with the involvement of women, who hold much of this knowledge.
4.	Forest (Conservation) Act, 1980 (amended in 1988)	Section 6. Application of Forest (Conservation) Act, 1980
5.	Panchayats (Extension to the Scheduled Areas) Act Addresses Safeguards	Section 4 on safeguarding traditional practices of communities
6.	Biological Diversity Act, 2002	Chapter X. Biodiversity Management Committees
7.	Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	Chapter II. Forest Rights Chapter III. Recognition, Restoration and Vesting of Forest Rights and Related Matters

(iv). The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities (safeguard 'd'): India has a very successful programme of involving local communities and tribal groups in forest protection and management. Concept of Joint Forest Management (JFM) was introduced in 1990 for people's participation in forest management. JFM has also contributed to increase in productivity of the degraded forests. The relevant sections of existing PLRs addressing this safeguard are listed below:

S.No.	Policy, Laws and Regulations	Relevant Sections (s) of the PLR
1.	National Forest Policy, 1988	Section 4.2. Afforestation, Social Forestry & Farm Forestry (Sub-section 4.2.3) Sub-section 4.3.4. Rights and Concessions Section 4.6. Tribal People and Forests
2.	National Environment Policy, 2006	Section 3. Objectives of the National Environment Policy vii. Enhancement of Resources for Environmental Conservation Sub-section 5.6. Partnerships and Stakeholder Involvement

3.	National Agroforestry Policy, 2014	Section 5.5. Improving famers' access to quality planting material Section 5.7. Facilitating increased participation of industries dealing with agroforestry produce Section 5.8. Strengthening farmer access to markets for tree products
4.	Indian Forest Act, 1927	Chapter 3 of Village Forest
5.	Panchayats (Extension to the Scheduled Areas) Act 1996	Section 4 on safeguarding traditional practices of communities

(v). Actions are consistent with the conservation of natural forests and biological diversity, ensuring that REDD+ activities are not used for the conversion of natural forests, but are instead used to incentivise the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits (safeguard 'e'): REDD+ actions should incentivize protection and conservation of natural forests, and enhance ecosystem goods and services as well as other environmental and social benefits of forests. Various acts and legislations in India are a testimony of country's strong commitment to forest conservation. REDD+ action shall be consistent with provisions of National Forest Policy, 1988, Wildlife (Protection Act), 1972, Forest (Conservation) Act, 1980, Panchayat (Extension to Scheduled Areas) Act, 1996, Biological Diversity Act, 2002, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, National Working Plan Code - 2014, etc. The relevant sections of existing PLRs addressing this safeguard are listed below:

S.No.	Policy, Laws and Regulations	Sections (s) of the PLR
1.	National Forest Policy, 1988	Section 2. Basic Objectives Section 3. Essentials of Forest Management Section 4.5. Wildlife Conservation
2.	National Environment Policy, 2006	Section 3. Objectives of the National Environment Policy I. Conservation of Critical Environmental Resources iv. Integration of Environmental Concerns in Economic and Social Development v. Efficiency in Environmental Resource Use vii. Enhancement of Resources for Environmental Conservation
3.	National Farmer Policy, 2007	4.6.2 (xiii) Participatory management of national parks, biosphere reserves and gene sanctuaries. 8.2 Mega Bio-diversity Areas Local communities would be involved in the conservation of mega bio-diversity areas such as Western and Eastern Ghats, eastern Himalayan region, other North East and tribal areas.
4.	National Agroforestry Policy, 2014	Section 3. Goal Section 4. Basic Objectives Section 5.9. Incentives to farmers for adopting agroforestry
5.	Indian Forest Act, 1927	Section 3. Power to reserve forests Section 28. Formation of village forests Section 29. Protected forests Section 35. Protection of forest for special purpose
6.	Wildlife (Protection) Act, 1972	Chapter III. Hunting of Wild Animals Chapter-IIIA. Protection of Specified Plants Chapter IV. Sanctuaries, National Park, and Closed Areas
7.	Forest (Conservation) Act, 1980	Section 2 Restriction on the dereservation of forests or use of forest land for non-forest purpose
8.	Biological Diversity Act, 2002	Chapter - II Regulation of Access to Biological Diversity

(vi). Actions to address the risks of reversals (safeguard 'f'): Risk of reversals means non-permanence of mitigation of climate change and other benefits of REDD+ activities, which are land use based. There may be risk of reversals of emission reductions, carbon sequestration actions, water regimes, community livelihood, biodiversity and other environmental and social benefits. This safeguard ensures that REDD+ results in long-lasting permanent actions and ensuring benefits. Pragmatic Forest Policies, Legislations, Acts and Rules are in place and are being implemented in India which contribute to minimize the possibility of a reversal of expected REDD+ actions and benefits including carbon service from either natural disturbance (e.g., fires, disease, pests, and unusual weather events), or from any untoward human actions.

Compensatory Afforestation Fund Act, 2016 provides for setting up of the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) at both Central and State level to ensure expeditious and transparent utilization of amounts released in lieu of forest land diverted for non-forestry purposes. The utilization of funds is expected to compensate for the loss of forests and mitigate the impact of diversion of such forest land, under Forest (Conservation) Act, 1980. The Act requires that non-forest land, equal to the size of the forest being diverted, shall be afforested. Various programmes and research activities are also underway to minimise the forest losses due to fire and diseases and insect pest attacks. Regular reviews through stakeholder consultations etc. further help to reduce risks of reversal of benefits of REDD+ activities. The relevant sections of existing PLRs addressing this safeguard are listed below:

S.No.	Policy, Laws and Regulations	Sections (s) of the PLR
1.	National Forest Policy, 1988	Section 3. Essentials of Forest Management (sub-section 3.1, 3.3, 3.4, 3.5) Section 4.3. Management of State Forests
2.	National Environment Policy, 2006	Section 4. Principle, iv. The Precautionary Approach, xiii. Preventive Action Section 5. Strategies and Actions 5.1 Regulatory Reforms 5.2 Enhancing and Conserving Environmental Resources
3.	National Agroforestry Policy, 2014	Section 4. Basic Objectives
4.	Indian Forest Act, 1927	Section 26 (a). preventing encroachments Section 26 (b). Forest fire prevention
5.	Water (Prevention and Control of Pollution) Act, 1974	Chapter 5 Prevention and Control of Water Pollution
6.	Forest (Conservation) Act, 1980	Section 2. Restriction on the dereservation of forests or use of forest land for non-forest purpose
8.	Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	Chapter V. Offences and Penalties

(vii). Actions to reduce displacement of emissions (safeguard 'g'): REDD+ actions should address drivers of deforestation and forest degradation rather than shift them from activity area to outside. Also, conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks resulting from REDD+ activities should not lead to displacement of emissions. In accordance with its National REDD+ Strategy, India intends to implement REDD+ at national level and initially as an interim measure REDD+ shall be implemented at Sub-national level considering physiographic zone as a sub-national unit. REDD+ when implemented at national level will minimise the chances of displacement of emissions because any displacement would be automatically captured and measured at its place of occurrence. When implemented at sub-national level, special monitoring will be put in place to reduce the chances of displacement of emissions. Further, policies, legislations, acts and rules as mentioned below contribute directly or indirectly to the issue related to displacement of emissions:

S.No.	Policy, Laws and Regulations	Sections (s) of the PLR
1.	National Forest Policy, 1988	Section 4.8. Damage to Forests from Encroachments, Fires and Grazing
2.	National Environment Policy, 2006	Section 3. Objectives of the National Environment Policy, v. Efficiency in Environmental Resource Use Section 5. Strategies and Actions, 5.2. Enhancing and Conserving Environmental Resources
3.	National Agroforestry Policy, 2014	Section 4. Basic Objectives
4.	Indian Forest Act, 1927	Section 35. Protection of forest for special purpose Section 36. Protection to assume management of forests

Safeguards Information System: REDD+ has the potential to provide carbon and non-carbon benefits out of its implementation besides various other co-benefits to the participating communities. It can also pose several environmental and social risks during its implementation. To protect against environmental and social risks to be anticipated from REDD+ actions, country Parties to the UNFCCC have adopted a set of seven safeguards, which are known as Cancun safeguards. These safeguards need to be addressed and respected in implementation of REDD+ activities. Cancun Agreements mandate the country Parties to have an information system that demonstrate how the Cancun safeguards are being addressed and respected while implementing REDD+ activities. Development of a safeguards information system (SIS) is one of the key requirements for obtaining result-based payments from REDD+ activities.

India has more than 150 year long history of scientific management of forests and due care has been given to the environmental and social safeguards in forest management practices. Over the period of time, the priorities of forest management in India have changed which have also been amply reflected in the National Forest Policies the country has had so far. The distinct feature has been gradual shift in priorities of forest management from production forestry to the conservation and participatory forestry. The extant Policies, Laws and Regulations (PLRs) pertaining to forest conservation and management address, directly and indirectly, environmental and social concerns for successful implementation of the forestry programmes in the country. A SIS through combination of, and building on existing forest governance structures, *i.e.,* existing legal and institutional frameworks and sources of information need to be developed to meet its objectives as per the UNFCCC requirement for implementation of REDD+ activities. National REDD+ Strategy, 2018 of India endorsed that Cancun safeguards principles shall be adhered to during the implementation of REDD+ activities, and SIS shall be developed building on existing policies, laws and regulations of forest governance.

Objectives: Basic objective of SIS is to demonstrate that the Cancun safeguards are being addressed and respected in implementation of the REDD+ activities.

In Indian scenario, adequate safeguards have already been provided within the existing policies, laws and regulations, and need to be leveraged appropriately to meet the requirements of the SIS. These instruments address the sustainable management of forests in the country while taking care of conservation of biological diversity, maintenance of ambient environment and the rights of local communities on forests.

The SIS will help in developing the ownership of REDD+ activities among stakeholders by increasing transparency and encouraging their participation at local, state, regional and national level. Participation and involvement of different stakeholders will ensure that the REDD+ activities are appropriate to regional and national circumstances and contribute towards the national development goals while complying with the international agreements/ commitments.

The objectives of the SIS can be summarised as under:

- To meet the national objectives of forest management, conservation of biological diversity, environment protection and sustainable development.
- To meet the objectives of National REDD+ Strategy.
- To demonstrate that Cancun safeguards are being addressed and respected in implementation of the REDD+ activities.

Functions: Functions of the SIS are described as under:

- To collect and compile the data/ information on safeguards from the field on periodical basis.
- To analyse the compiled data/ information on safeguards and their interpretation.
- To prepare a summary of information on safeguards for onward submission to UNFCCC on periodical basis.

Institutional arrangements: Apart from existing PLRs as mentioned in the Chapter 3, a well-structured institutional arrangement is already in place for implementation of the PLRs related to forests. As per the National REDD+ Strategy, National Governing Council for REDD+ (NGC-REDD+) at the national level will coordinate and guide REDD+ related actions at national level. For implementation of REDD+ activities, Ministry of Environment, Forest and Climate Change, Government of India has constituted a National Designated Entity for REDD+ (NDE-REDD+) to serve as a liaison between the UNFCCC Secretariat and the relevant bodies under the Convention and also with the State Forest Departments (SFDs).

The National REDD+ Strategy devolves major responsibility for execution of REDD+ activities to the SFDs. It places high priority on capacity building at all levels of the SFDs, other line departments and local communities to enable proper implementation of REDD+ activities. Each state will create a REDD+ Cell in the Forest Department, and nominate/ appoint a Nodal Officer to coordinate the activities of the State REDD+ Cell. Notification for creation of the State REDD+ Cell to the states has already been issued by the Ministry of Environment, Forest and Climate Change, Government of India. Institutional framework for collection, compilation and analysis of information on safeguards and their submission to UNFCCC is given in Fig. 2. An institutional arrangement for implementation of the Safeguards Information System (SIS) is as under:

Ministry of Environment, Forest and Climate Change, Government of India:

National Designated Entity for REDD+: NDE-REDD+ will oversee the implementation of the REDD+ Safeguard Information System and submission of summary of information on safeguards to UNFCCC on periodical basis in accordance with the relevant COP decisions.

REDD+ Technical Working Group and Thematic Advisory Group: As per the National REDD+ Strategy, a REDD+ Technical Working Group has been constituted to advise the National Governing Council for REDD+ (NGC-REDD+) on the matters related to safeguards, policy, finance, management and capacity building. Indian Council of Forestry Research and Education (ICFRE) has a lead role in the REDD+ Technical Working Group. ICFRE will provide necessary support to National Designated Entity-REDD+ (NDE-REDD+) for compilation, analysis and preparation of summary of information on safeguards.

As per the National REDD+ Strategy, a Thematic Advisory Group has also been constituted to advise NGC-REDD+ and to oversee the MRV aspects, national forest monitoring system and forest reference level. Forest Survey of India (FSI)

has key role in the Thematic Advisory Group. FSI will provide necessary support to NDE-REDD+ for forest inventory related tasks.

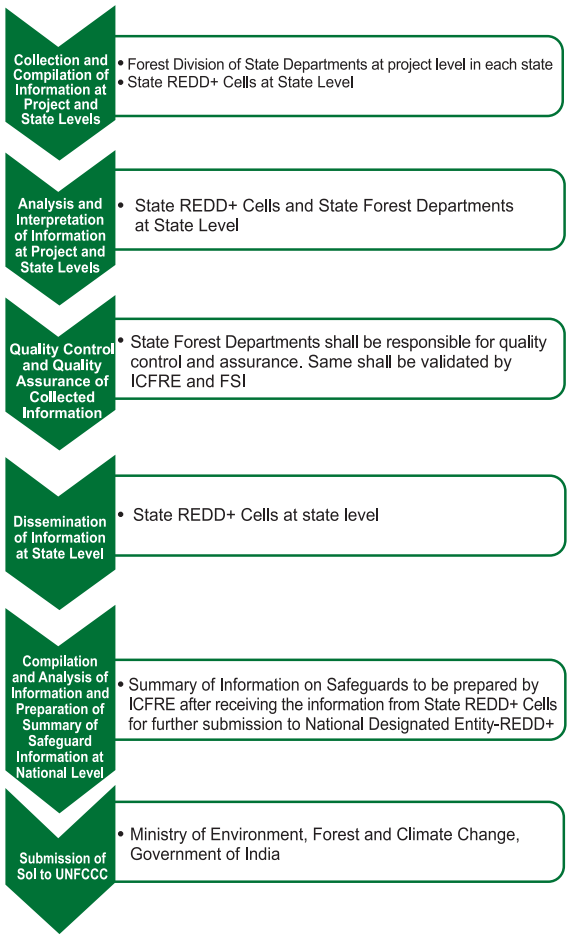


Fig. 2: Institutional framework for collection, compilation and analysis of information on safeguards and their submission to UNFCCC

State Government Departments: State REDD+ Cell shall be responsible for implementation of SIS, collection of data on safeguards from the field, ensure quality control and quality assurance of the data. State REDD+ Cells shall submit necessary data on safeguards to the NDE-REDD+, Ministry of Environment, Forest and Climate Change, Government of India.

State Biological Diversity Boards will provide necessary assistance in ensuring the effective compliance of biological diversity related safeguards through Biological Diversity Management Committees in implementation of REDD+ activities.

Indicators to be used for collection of information on Cancun safeguards: In order to mitigate the potential risks from implementation of REDD+ activities, Cancun safeguards are intended to be addressed by leveraging various existing policies, laws and regulations governing forest management in the country. Indicators for these safeguards have been identified for collection of information on how the safeguards are being addressed and respected.

Safeguard 'a': Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements

Indicator 1: Consistency or complementarity of REDD+ actions with the objectives of national forest policy and programmes at planning stage

Indicator 2: Consistency or complementarity of REDD+ actions with the objectives of national forest policy and programmes during implementation

Indicator 3: Consistency or complementarity of REDD+ actions with the objectives of relevant international conventions and agreements ratified by India (UNFCCC, CBD, UNCCD and CITES etc.) at planning stage

Indicator 4: Consistency or complementarity of REDD+ actions with the objectives of relevant international conventions and agreements ratified by India (UNFCCC, CBD, UNCCD and CITES etc.) during implementation.

Safeguard 'b': Transparent and effective national forest governance structures, taking into account national legislation and sovereignty

Indicator 5: Adequate institutional and legal framework for forest management **Indicator 6:** Number of capacity building programme on forest governance related issues organised for personnel of State Forest Department, other line departments and local communities.

Safeguard 'c': Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples

Indicator 7: Documentation of traditional/ indigenous knowledge of local communities

Indicator 8: Documentation of present use and claims over forest land / resources of different stakeholders including local communities

Indicator 9: Status of Biodiversity Management Committees and People's Biodiversity Registers

Indicator 10: Integration at planning stage of local community knowledge and rights in REDD+ Action Plan

Safeguard 'd': The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities

Indicator 11: Identification of all relevant stakeholders

Indicator 12: Efficacy of stakeholder participation process

Safeguard 'e': The actions are consistent with the conservation of natural forests and biological diversity, ensuring that the 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

Indicator 13: Condition and extent of natural forest land parcels and biological diversity

Indicator 14: Prevalence of exotics and invasive alien species

Indicator 15: Status of vulnerability to forest fires, pests and diseases

Indicator 16: Status of encroachment

Safeguard 'f': Actions to address the risks of reversals

Indicator 17: Identification of potential drivers (fire, encroachment, illicit felling, grazing etc.) for risks of reversal

Indicator 18: Measures taken to address the risks of reversal

Safeguard 'g': Actions to reduce displacement of emissions

Indicator 19: Identification of potential events, actions and causes of displacement of emissions and strategies to address displacement of emissions

Indicator 20: Efficacy of strategies developed to address displacement of emissions

Reporting formats for collection of information/ data on safeguards from field are as under:

Reporting Formats for Collection of Data on REDD+ Safeguards

Project Title:
Project Locations (Name of Forest Beat, Block, Range, Division, Circle and State with Geo-coordinates):
Brief Description of the proposed project activities:

Safeguards 'a': *Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements*

Indicator 1: Consistency or complementarity of REDD+ actions with the objectives of national forest policy and programmes at planning stage

S.No.	**Complementarity/consistency at project planning stage**			
	REDD+ actions complement or are consistent with the national and state forest policies & programmes	**Yes**	**No**	**Please specify briefly**
Frequency of data collection: Once				

Indicator 2: Consistency or complementarity of REDD+ actions with the objectives of national forest policy and programmes during implementation

S.No.	**Consistency/ complementarity during project implementation**				
	REDD+ actions complement or are consistent with the national and state forest policies & programmes	**Year**	**Yes**	**No**	**Please specify briefly**
Frequency of data collection: Every Two Years					

Indicator 3: Consistency or complementarity of REDD+ actions with the objectives of relevant international conventions and agreements ratified by India (UNFCCC, CBD, UNCCD and CITES etc.) at planning stage

S. No.	Consistency/ complementarity at project planning stage	Yes	No	Please specify briefly
i.	REDD+ action complement or are consistent with the objectives of UNFCCC			
ii.	REDD+ actions complement or are consistent with the objectives of CBD			
iii.	REDD+ actions complement or are consistent with the objectives of UNCCD			
iv.	REDD+ actions complement or are consistent with the objectives of other conventions and agreements ratified by India			
Frequency of data collection: Once				

Indicator 4: Consistency or complementarity of REDD+ actions with the objectives of relevant international conventions and agreements ratified by India (UNFCCC, CBD, UNCCD and CITES etc.) during implementation

S. No.	Consistency/ complementarity during project implementation	Year	Yes	No	Please specify briefly
i.	REDD+ actions complement or are consistent with the objectives of UNFCCC				
ii.	REDD+ actions complement or are consistent with the objectives of CBD				
iii.	REDD+ actions complement or are consistent with the objectives of UNCCD				
iv.	REDD+ actions complement or are consistent with the objectives of other conventions and agreements ratified by India				
Frequency of data collection: Every Two Years					

Safeguard 'b': ***Transparent and effective national forest governance structures taking into account national legislation and sovereignty***

Indicator 5: Adequate institutional and legal framework for forest management

S. No.	Institutional framework	Yes	No	Please specify briefly
i.	Adequate legal framework with Acts, Rules, Regulations and procedures for forest governance exists			
ii.	Adequate institutional framework for forest management exists			
iii.	Adequate hierarchy of human resource for forest management is in place			
iv.	Forest governance structure is transparent			
v.	Grievance redressal mechanism exists			
Frequency of data collection: Once at the inception stage				

Indicator 6: Number of capacity building programme on forest governance related issues organised for personnel of State Forest Department, other line departments and local communities

S. No.	Name of the training programme	Date & duration	Number of staff/ community members participated		Remarks
			Male	Female	
Frequency of data collection: Every Two Years					

Safeguard 'c': *Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples*

Indicator 7: Documentation of traditional/ indigenous knowledge of local communities

S.No.	Name of the village/ community	Indigenous traditional knowledge documented (specify briefly)

Frequency of data collection: Once at the inception stage

Indicator 8: Documentation of present use and claims over forest land / resources of different stakeholders including local communities

S.No.	Name of the village/ community	Traditional rights of local communities documented (specify briefly)

Frequency of data collection: Once at the inception stage

Indicator 9: Status of Biodiversity Management Committees (BMC) and record of People's Biodiversity Register (PBRs)

S.No.	Year	BMC		PBR	
		Name of BMC	Functional status	Name of the village	Functional status

Frequency of data collection: Every two years

Indicator 10: Integration at planning stage of local community knowledge and rights in REDD+ Action Plan

S.No.	Integration in REDD+ Action Plan	Yes	No	Briefly specify
i.	Integration of local community knowledge in REDD+ Action Plan			
ii.	Integration of local community rights in REDD+ Action Plan			

Frequency of data collection: Once at inception stage

Safeguard 'd': *The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities*

Indicator 11: Identification of all relevant stakeholders

S. No.	Name of the stakeholder group (Line departments, Gram Sabha, community members, JFMCs, SHGs, right holders, NGOs, industry etc.)	Number of representatives of each stakeholder group

Frequency of data collection: Every two years

Indicator 12: Efficacy of stakeholder participation process

S. No.	Date of consultation	Names of the participating stakeholder groups	Number of representatives of each stakeholder group participated	Number of female participants	Whether stakeholders' concerns documented and addressed	Specify briefly

Frequency of data collection: Every two years

Safeguard 'e': ***The actions are consistent with the conservation of natural forests and biological diversity, ensuring that the 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***

Indicator 13: Condition and extent of natural forest land parcels and biological diversity

Reporting Year	Status of natural forests					
	Area of Natural Forest (ha)				Area of natural Grasslands (ha)	Area of Plantation (ha)
	VDF	MDF	OF	Total		
Frequency of data collection: Inception year and every two years						

	Status of Faunal Diversity		
Faunal Diversity	**Number of species**	**Number of rare and endangered species**	**Perceived effect of REDD+ activities on rare and endangered species (please specify)**
Mammals			
Reptiles			
Birds			
Others (specify)			
Frequency of data collection: Once at inception stage and at five year interval			

	Status of Floral Diversity			
Floral Diversity	**Number of species**	**Number of exotic species**	**Number of identified rare and endangered species**	**Perceived effect of REDD+ activities on rare and endangered species (please specify)**
Trees				
Shrubs				
Herbs				
Climbers				
Frequency of data collection: Once				

Indicator 14: Prevalence of exotics and invasive alien plant species

Year	Name of exotic plant species	Name of invasive alien plant species	Forest area infested with invasive alien plant species	Whether affected area decreased or not (Y/N), please specify
Frequency of data collection: Inception year and every two years				

Indicator 15: Status of vulnerability to forest fires, pest and diseases

Year	Number of fire events	Total forest area affected (ha)	Whether affected area decreased or not (Y/N), please specify
Frequency of data collection: Inception year and every two years			

Year	Number of pest and diseases incidences	Total forest area affected by pest and diseases (ha)	Whether affected area decreased or not (Y/N), please specify
Frequency of data collection: Inception year and every two years			

Indicator 16: Status of encroachment

Year	Number of encroachment cases	Total forest area encroached (ha)	Control measures adopted, please specify
Frequency of data collection: Inception year and every two years			

Safeguard 'f': *Actions to address the risks of reversals*

Indicator 17: Identification of potential drivers (fire, encroachment, illicit felling, grazing etc.) for risks of reversal

Potential Drivers	Identified (Yes/ No)	Whether control measures prescribed (Yes/ No)
1. Forest Fire		
2. Weeds Invasion		
3. Grazing		
4. Encroachment		
5. Illicit felling		
6. Others specify		
Frequency of data collection: Once at the inception stage		

Indicator 18: Measures implemented to address the risks of reversal

Potential Drivers	Control measures implemented		Remarks
	Yes	No	
1. Forest Fire			
2. Weeds Invasion			
3. Grazing			
4. Encroachment			
5. Illicit felling			
6. Others specify			
Frequency of data collection: Every two year			

Safeguard 'g': *Actions to reduce displacement of emissions*

Indicator 19: Identification of potential events, actions and causes of displacement of emissions and strategies to address displacement of emissions

Potential events, actions and causes of displacement identified	Strategy developed to address the events, actions and causes	Remarks
Frequency of data collection: At the inception and every two year		

Indicator 20: Efficacy of strategies developed to address displacement of emissions

S. No.	Name of the strategy	Strategy implemented (Yes/ No)	If yes, year of implementation	Is the strategy effective?	Remarks, if any
Frequency of data collection: At the inception and every two year					

Grievance redressal mechanism related to safeguards: In order to address grievances related to application of safeguards in implementation of REDD+ activities, three grievance redressal committees shall be established at national, state and forest division level for addressing the grievances (if any) of stakeholders on application of Cancun's safeguards in implementation of REDD+ actions.

1. A National Level Grievance Redressal Committee shall be established at Ministry of Environment, Forest and Climate Change, Government of India. Most complaints and grievances are likely to be resolved at the State level, but some may escalate to the National level for which the committee shall meet as and when required. The composition of the National Level Grievance Redressal Committee shall be as follows:

1. Inspector General of Forests (Forest Policy), MoEFCC: Chair
2. Dy. Inspector General of Forests (Forest Policy), MoEFCC: Vice Chair
3. Representative of National Biodiversity Authority: Member
4. A representative of a Civil Society: Member to be nominated by the DGF
5. Assistant Inspector General of Forest (Forest Policy), MoEFCC: Member Secretary

Additional Director General of Forests (FC), MoEFCC shall be the Appellate Authority.

Functions of National Level Grievance Redressal Committee shall be:

1. To issue the necessary guidelines to the State Grievance Redressal Cell for timely resolving the grievance with respect to Cancun's safeguards implementation
2. To address the grievances of the stakeholders with respect to Cancun's safeguards implementation
3. To take necessary corrective measures for disposal of grievances
4. To prepare summary of grievances and their resolution at national level
5. To prepare the annual report of the grievance's redressal for submission to National Designated Entity for REDD+

2. A State Level Grievance Redressal Committee shall be established at State Forest Departments under the chairmanship of Chief Conservator Forests dealing with Forest Policy. The composition of the State Level Grievance Redressal Committee shall be as follows:

1. Chief Conservator of Forests (dealing with Forest Policy in the office of PCCF): Chair
2. Conservator of Forests (dealing with policy and law in the office of PCCF): Vice Chair
3. Representative of State Biodiversity Board: Member
4. Representative of the Panchayati Raj and Rural Development Department: Member
5. Representative of Civil Society: Member (to be nominated by the PCCF)
6. Dy. Conservator of Forests (Hqs): Member Secretary

An officer of the level of Additional Principal Chief Conservator of Forests nominated by Principal Chief Conservator of Forests & Head of Forest Force shall be the Appellate Authority.

Functions of State Level Grievance Redressal Committee shall be:

1. To issue the necessary guidelines to the Forest Division Level Grievance Redressal Cells for timely resolving the grievance with respect to Cancun's safeguards implementation
2. To address the grievances of the stakeholders (if any) with respect to Cancun's safeguards implementation at state level
3. To take timely necessary corrective measures for disposal of the grievances at state level

4. To prepare summary of grievances and their resolution at state level for submission to the State REDD+ Cell
5. To prepare the annual report of the grievance's redressal for submission to State REDD+ Cell, National Designated Entity for REDD+ and Member Secretary, National Level Grievance Redressal Committee

This committee shall meet as and when required to redress the grievances.

3. A Forest Division Level Grievance Redressal Committee shall be established in each Forest Division under the chairmanship of the concerned Divisional Forest Officer. The composition of the Forest Division Level Grievance Redressal Committee shall be as follows:

1. Divisional Forest Officer: Chair
2. Representative of Panchayati Raj and Rural Development Department: Member
3. Representatives of JFMC: Members to be nominated by chair
4. Representative of Civil Society: Member to be nominated by chair
5. Assistant Conservator of Forests: Member Secretary

Chief Conservator of Forests/ Conservator of Forests of respective territorial circle shall be the Appellate Authority.

Functions of Forest Division Level Grievance Redressal Committee shall be:

1. To address the grievances of the stakeholders (if any) with respect to REDD+ safeguards implementation at Forest Division level
2. To take timely necessary corrective measures for disposal of the grievances at Forest Division level
3. To prepare summary of grievances and their resolution at Forest Division level for submission to the State Level Grievance Redressal Committee
4. To prepare the annual report of the grievances redressal for submission to State REDD+ Cell

Management of Information on Safeguards: Data/ information on safeguards from field will be collected using the standard processes and tools for further compilation, analysis and report preparation. A web module on SIS can be developed for collection of data/ information on REDD+ safeguards. The State REDD+ Cells will provide necessary information/ data on REDD+ safeguards. Further, access of state wise data/ information will be communicated to ICFRE for further compilation, analysis and preparation of the summary of information on safeguards for submission to the NDE-REDD+, Ministry of Environment, Forest and Climate Change, Government of India. Use of web module will be helpful in management of the data/ information on safeguards as well as to ensure the consistency, quality and timely collection of the data/ information. An outline of the web-based web module on Safeguards Information System is given in Fig. 3. Ministry of Environment, Forest and Climate Change, Government of India will provide the necessary financial support to ICFRE for maintenance and regular updation of the web module as well as compilation, analysis and interpretation of safeguards data/ information and preparation of the summary of information on safeguards.

Future Vision: Further Improvement and Development

Presently, the data/ information on safeguards from field shall be collected using the standard processes and tools for the purpose. However, gradually a system of automation to save the time, energy, and human and financial resources will be introduced. For example, a web module can be developed for collection of necessary information/

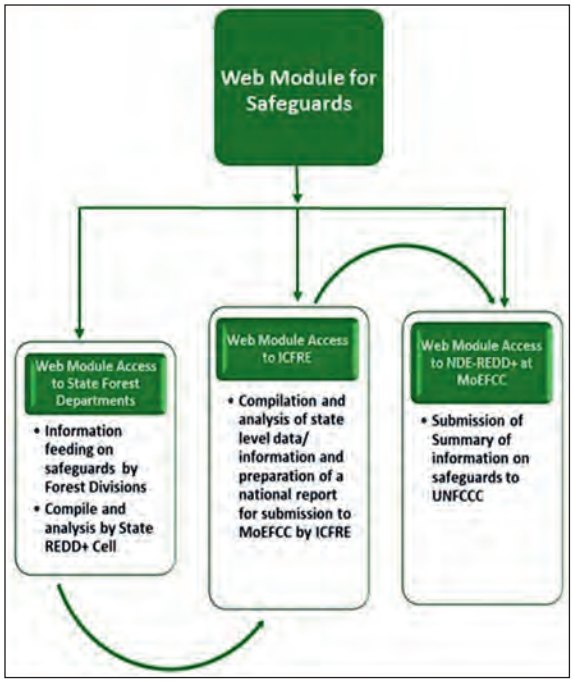


Fig. 3: An Outline of the Safeguards Information System

data on REDD+ safeguards from the states. Use of web-based computer application will help in avoiding duplication of information as well as quality control of the data. This will not only reduce the resources, efforts and time but also improve work efficiency and transparency in processing information on safeguards.

Analysis of constraints and gaps in implementation of Safeguards Information System need to be done at sub-national level. Fulfilment of the Safeguard Information System in implementation of REDD+ activities further need:

1 Capacity buildings of State Forest Departments for collection of information/ data required for preparation of summary of information on safeguards

2 Capacity buildings of stakeholders on various aspects of REDD+ including safeguards

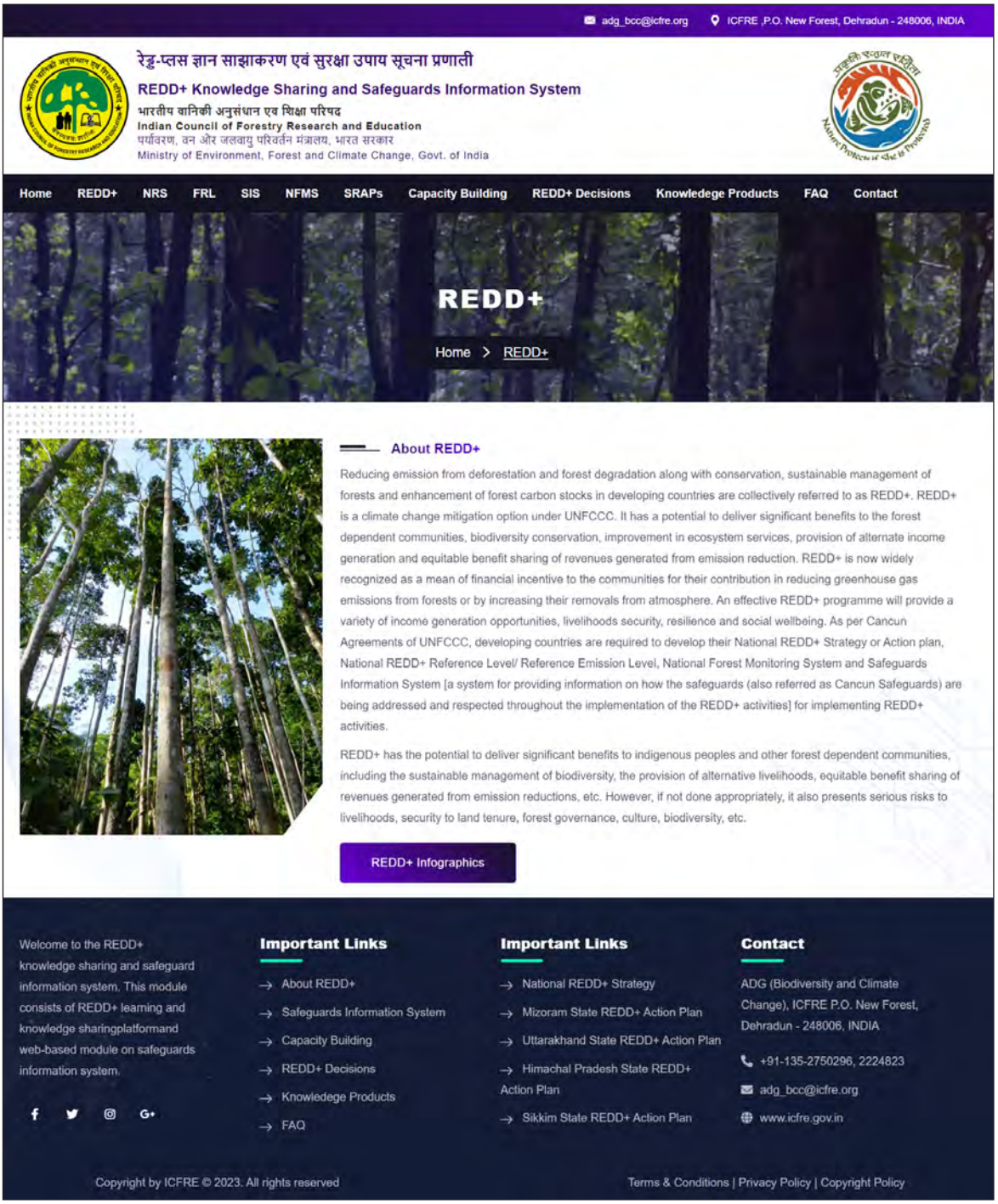
3 Adequate financial arrangement for effective implementation of SIS at all levels

Information on safeguards compliance in implementation of REDD+ activities from state levels shall be compiled. Summary of information (SoI) on how the safeguards are addressed and respected in implementation of REDD+ activities will be finalized by National Designated Entity for REDD+ at Ministry of Environment, Forest and climate Change, Government of India for submission to the UNFCCC periodically in biennial update reports and national communication or other means of communication as agreed by the UNFCCC. The SoI would, *inter alia*, clearly indicate whether the safeguards are being addressed and respected during the implementation of REDD+ activities, and if any deficiency is noted in adherence to the safeguards, same would also be highlighted along with ways and means of overcoming the same. Monitoring and evaluation of the SIS functioning will be done with a view to effecting further improvement in the safeguards information system.

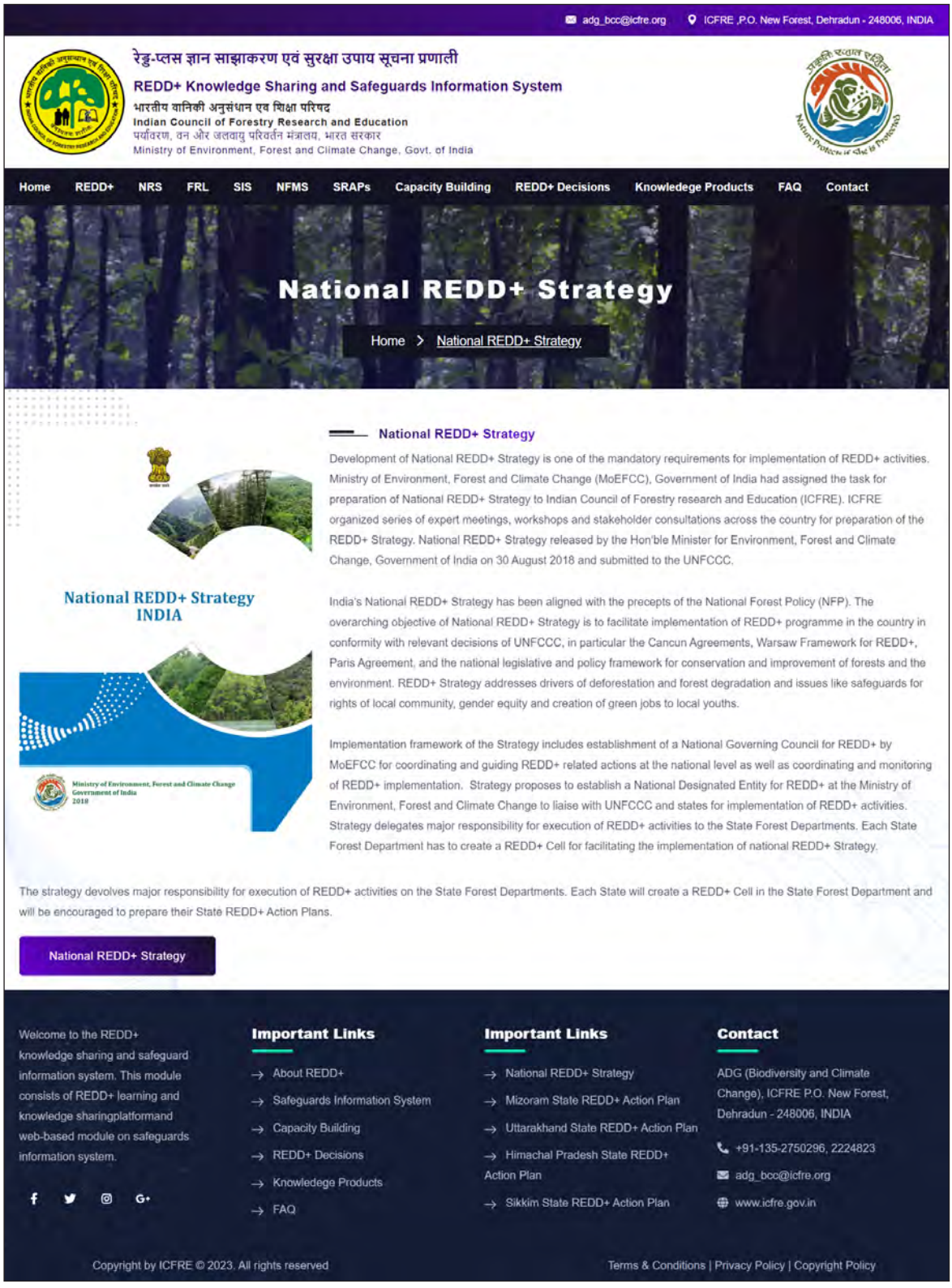
2. Development of REDD+ Knowledge Sharing and Safeguards Information System

The REDD+ Knowledge Sharing and Safeguards Information System (https://reddplus.icfre.gov.in) developed which is consists of REDD+ learning and knowledge sharing platform and web-based module on safeguards information system. This portal is developed mainly for sharing the knowledge on REDD+ for capacity building of State Forest Departments and other stakeholders on REDD+. Web based SIS module support in collection of data on REDD+ safeguards for preparation of summary of information on safeguards. REDD+ Knowledge Sharing and Safeguards Information System consist of the following:

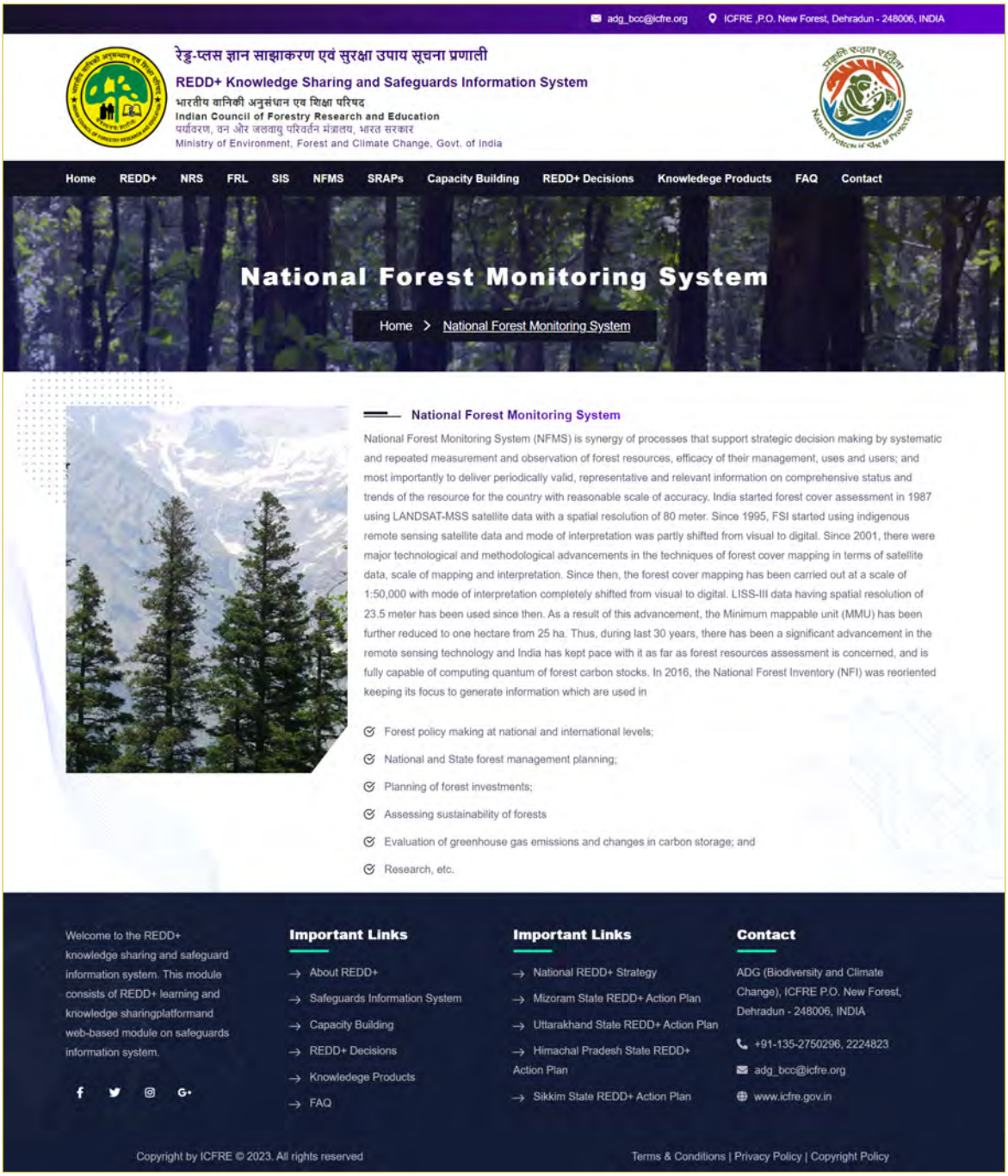
REDD+: Reducing emission from deforestation and forest degradation along with conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries are collectively referred to as REDD+. REDD+ is a climate change mitigation option under UNFCCC. It has a potential to deliver significant benefits to the forest dependent communities, biodiversity conservation, improvement in ecosystem services, provision of alternate income generation and equitable benefit sharing of revenues generated from emission reduction. REDD+ is now widely recognized as a mean of financial incentive to the communities for their contribution in reducing greenhouse gas emissions from forests or by increasing their removals from atmosphere. Infographics on Deforestation is a critical problem affecting people, the environment and the climate, and How does REDD+ measurement, reporting and verification work? Are also given for ease of the stakeholders.



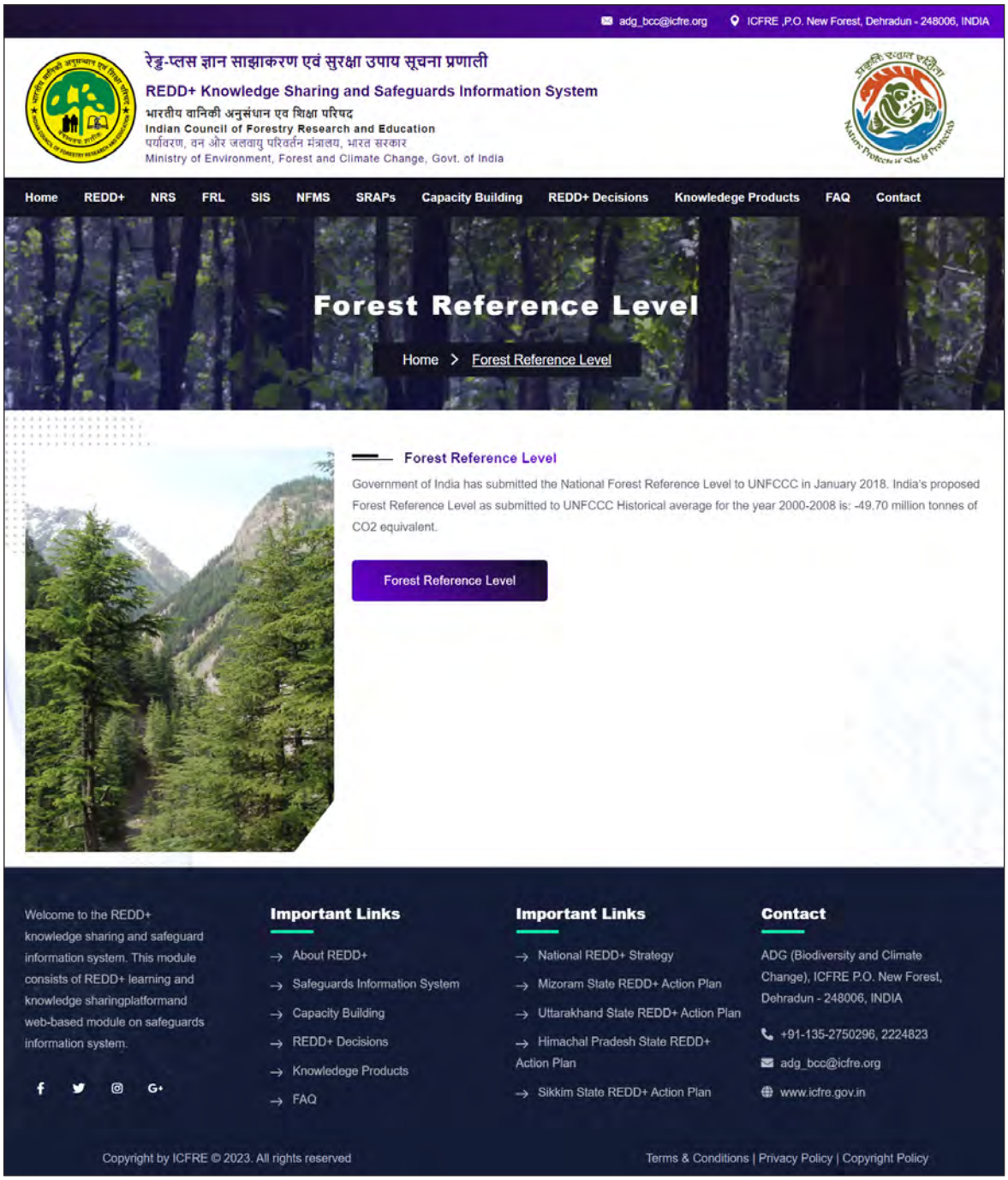
National REDD+ Strategy: National REDD+ Strategy released by the Hon'ble Minister for Environment, Forest and Climate Change, Government of India on 30 August 2018 and submitted to the UNFCCC. Strategy delegates major responsibility for execution of REDD+ activities to the State Forest Departments. Each State Forest Department has to create a REDD+ Cell for facilitating the implementation of national REDD+ Strategy.



National Forest Monitoring System: National Forest Monitoring System is synergy of processes that support strategic decision making by systematic and repeated measurement and observation of forest resources, efficacy of their management, uses and users; and most importantly to deliver periodically valid, representative and relevant information on comprehensive status and trends of the resource for the country with reasonable scale of accuracy. In 2016, the National Forest Inventory was reoriented keeping its focus to generate information which are used in i) Forest policy making at national and international levels; ii) National and State forest management planning; iii) Planning of forest investments; iv) Assessing sustainability of forests v) Evaluation of greenhouse gas emissions and changes in carbon storage; and vi) Research, etc.

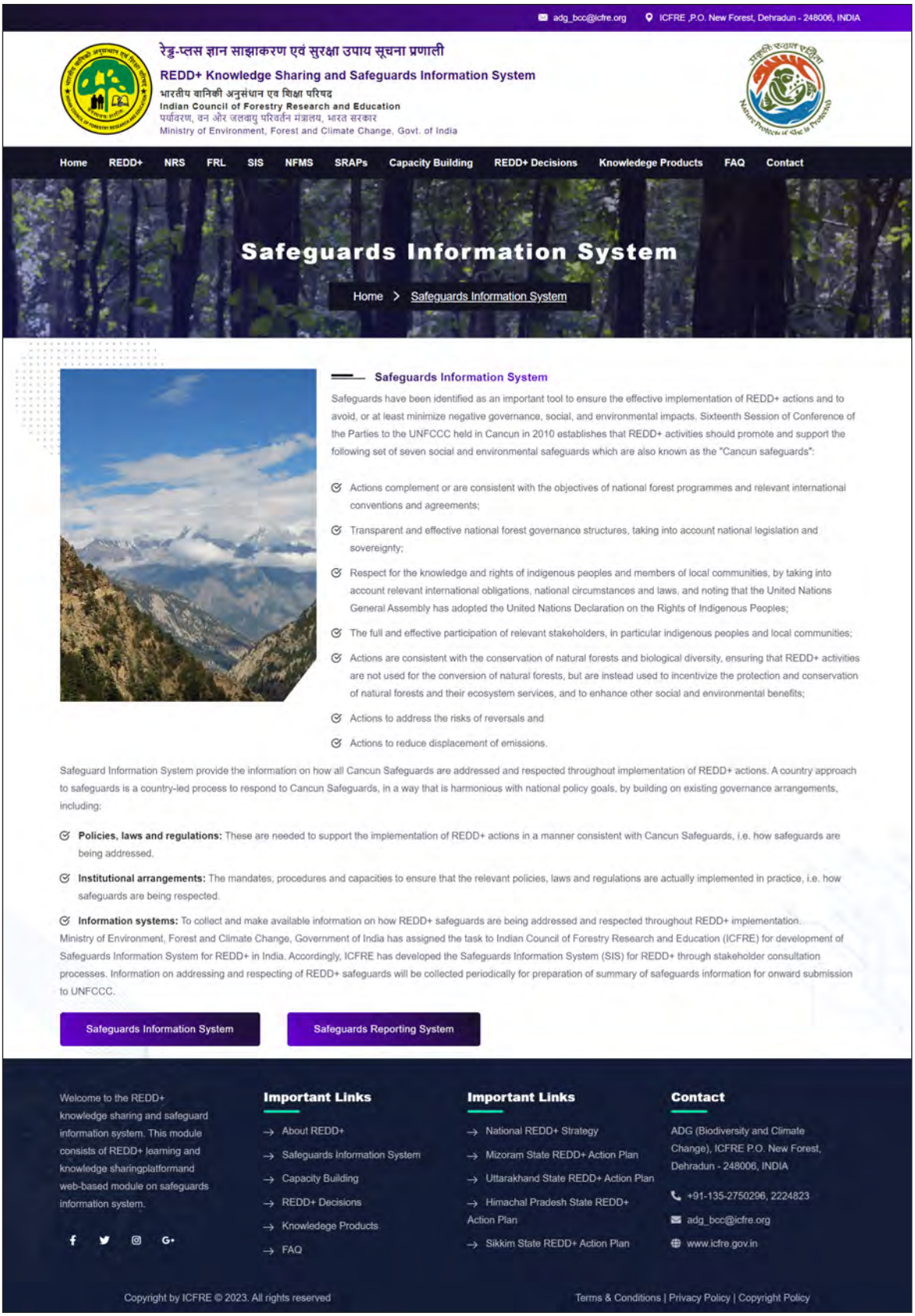


Forest Reference Level: Government of India has submitted the National Forest Reference Level to UNFCCC in January 2018. India's proposed Forest Reference Level as submitted to UNFCCC Historical average for the year 2000-2008 is: -49.70 million tonnes of CO_2 equivalent.

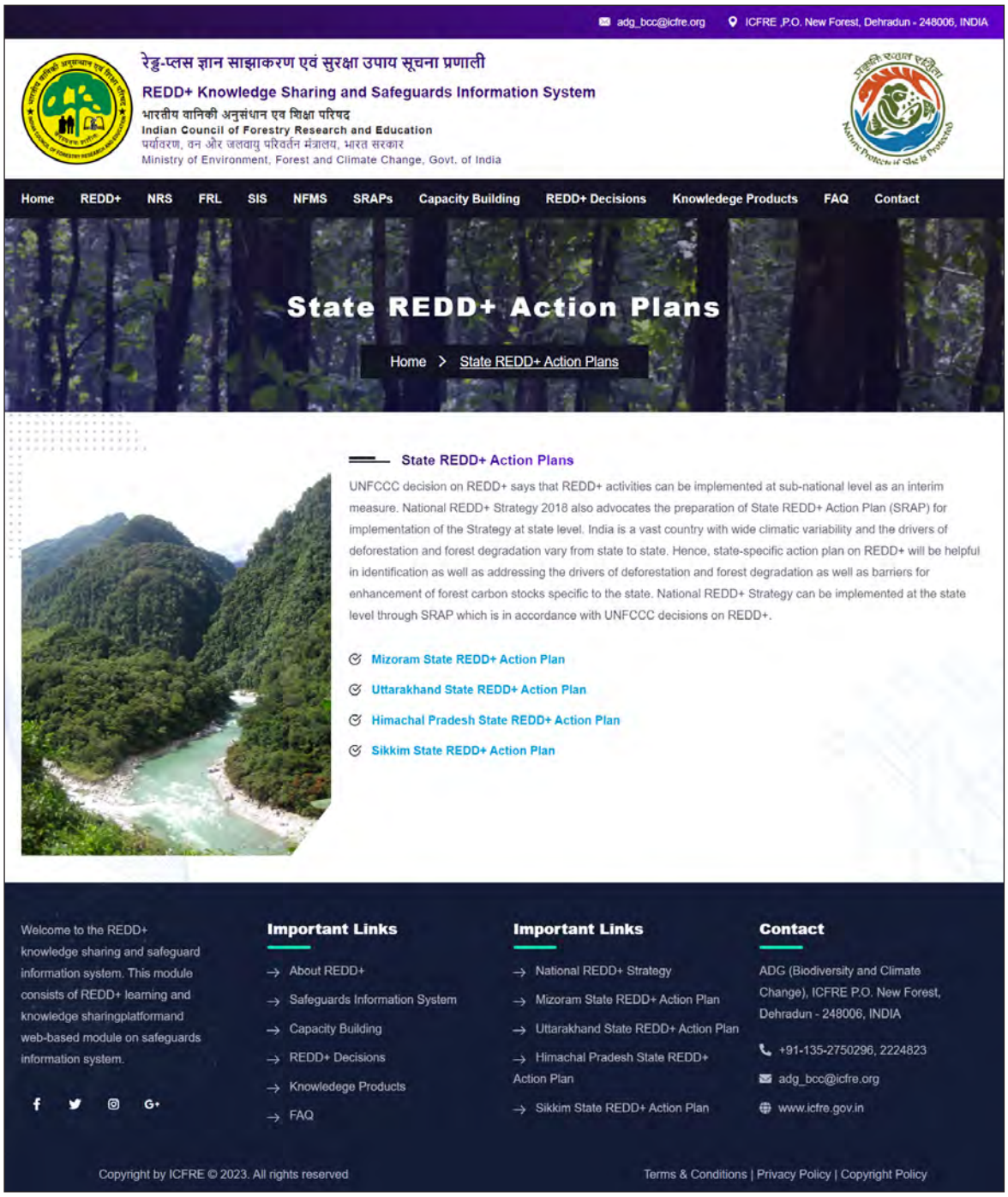


Safeguards Information System: Safeguards have been identified as an important tool to ensure the effective implementation of REDD+ actions and to avoid, or at least minimize negative governance, social, and environmental impacts. Sixteenth Session of Conference of the Parties to the UNFCCC held in Cancun in 2010 establishes that REDD+ activities should promote and support a set of seven social and environmental safeguards which are also known as the "Cancun safeguards". Safeguard Information System provide the

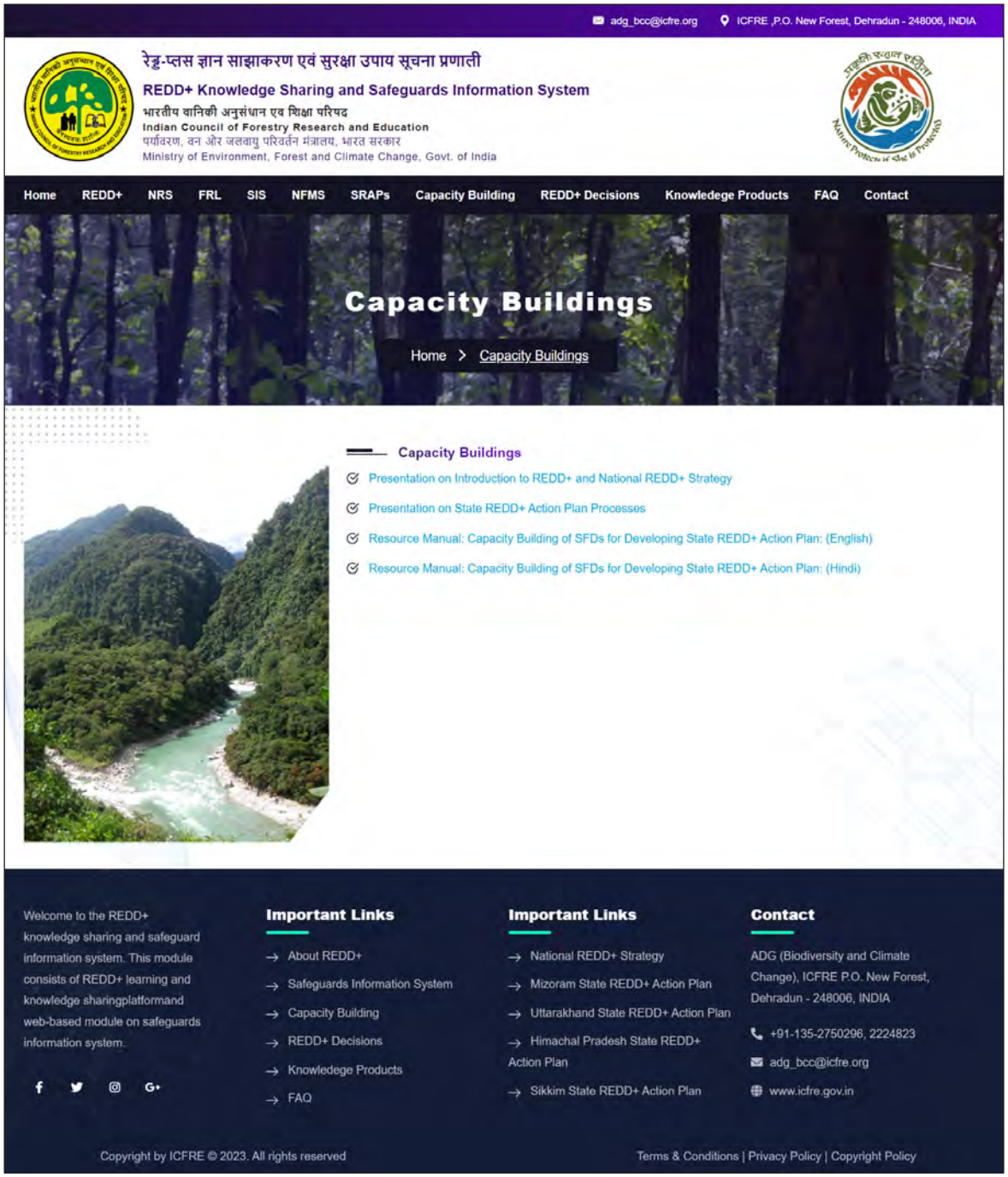
information on how all Cancun Safeguards are addressed and respected throughout implementation of REDD+ actions. Data on safeguards can be collected through Safeguards Reporting System.



State REDD+ Action Plans: UNFCCC decision on REDD+ says that REDD+ activities can be implemented at sub-national level as an interim measure. National REDD+ Strategy 2018 also advocates the preparation of State REDD+ Action Plan (SRAP) for implementation of the Strategy at state level. India is a vast country with wide climatic variability and the drivers of deforestation and forest degradation vary from state to state. Hence, state-specific action plan on REDD+ will be helpful in identification as well as addressing the drivers of deforestation and forest degradation as well as barriers for enhancement of forest carbon stocks specific to the state. National REDD+ Strategy can be implemented at the state level through SRAP which is in accordance with UNFCCC decisions on REDD+. State REDD+ Action Plans developed so far are uploaded for the capacity building and knowledge sharing of the State Forest Departments and other stakeholders.



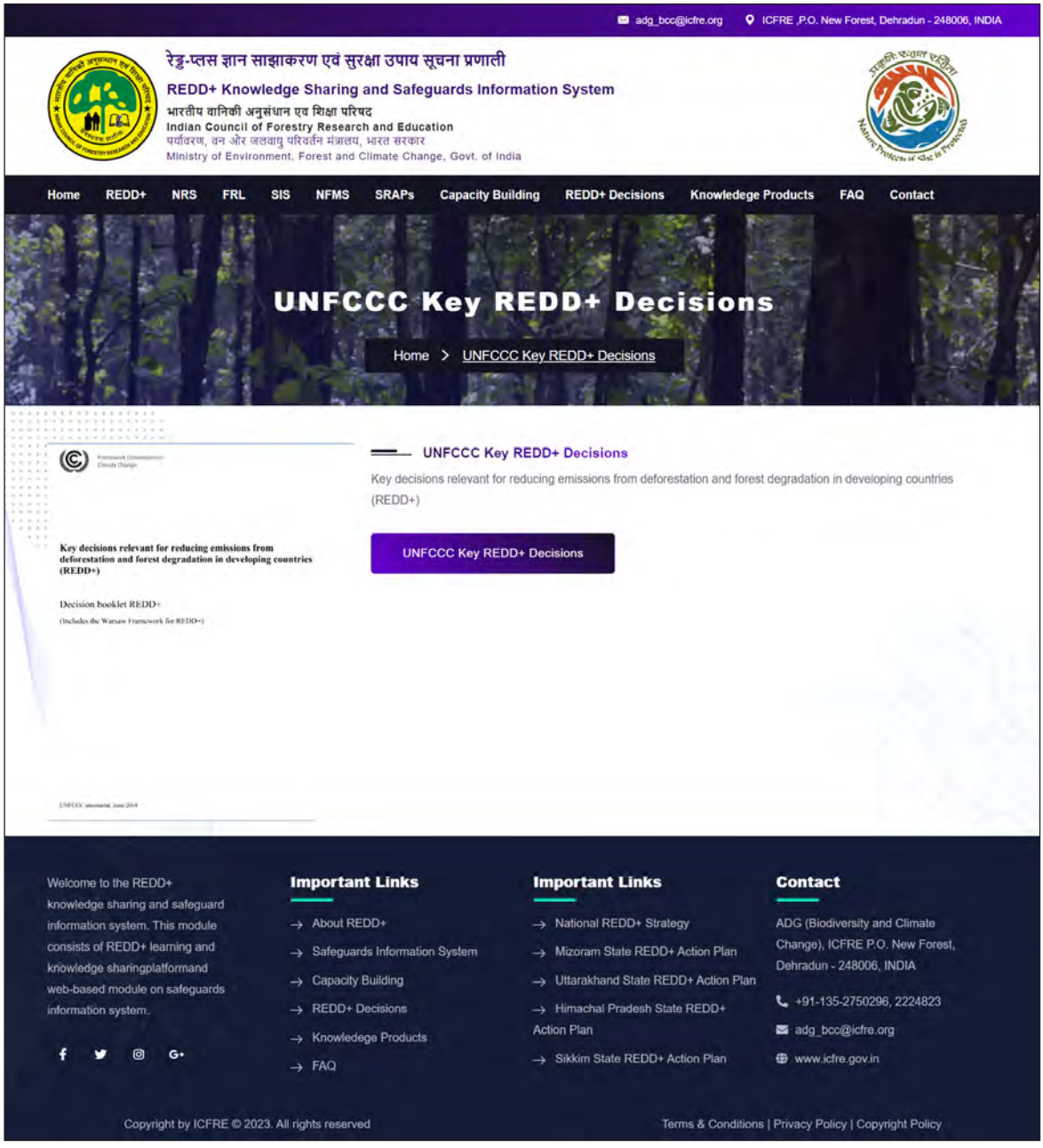
Capacity Buildings: Resource manuals and necessary presentations for developing the capacity of the State Forest Departments for developing State REDD+ Action Plan are uploaded for the capacity building of SFDs and other stakeholders.



UNFCCC Key REDD+ Decisions: Following key decisions on REDD+ are uploaded for the capacity building of SFDs and other stakeholders.

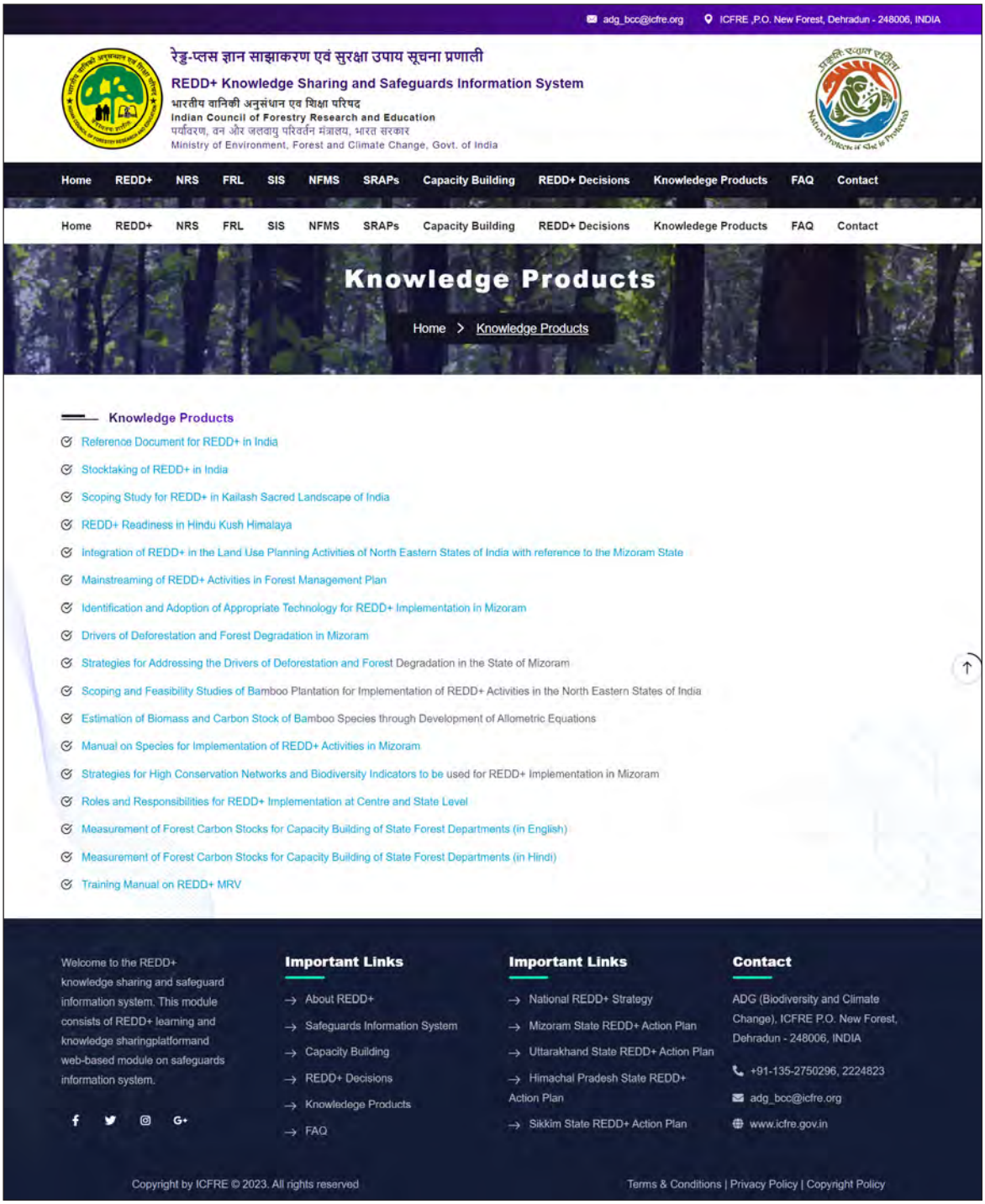
1. 2/CP.13 Reducing emissions from deforestation in developing countries: approaches to stimulate action
2. 4/CP.15 Methodological guidance for activities relating to reducing emissions from management of forests and enhancement of forest carbon stocks in developing countries

3. 1/CP.16 The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention
4. 2/CP.17 Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention
5. 12/CP.17 Guidance on systems for providing information on how safeguards are addressed and respected and modalities relating to forest reference emission levels and forest reference levels as referred to in decision 1/CP.16
6. 1/CP.18 Agreed outcome pursuant to the Bali Action Plan
7. 9/CP.19 Work programme on results-based finance to progress the full implementation of the activities referred to in decision 1/CP.16, paragraph 70
8. 10/CP.19 Coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries, including institutional arrangements
9. 11/CP.19 Modalities for national forest monitoring systems



10. 12/CP.19 The timing and the frequency of presentations of the summary of information on how all the safeguards referred to in decision 1/CP.16, appendix I, are being addressed and respected
11. 13/CP.19 Guidelines and procedures for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels
12. 14/CP.19 Modalities for measuring, reporting and verifying
13. 15/CP.19 Addressing the drivers of deforestation and forest degradation

Knowledge Products: Knowledge products developed so far by the MoEFCC and ICFRE on REDD+ are uploaded for sharing the knowledge on REDD+.



Frequently Asked Questions (FAQs) on REDD+: Considering REDD+, various general questions arise in the minds of readers and researchers regarding the REDD+ nature of work, methodological guidance, decisions on REDD+, financing mechanism etc. The following FAQs will not only provide basic and crisp knowledge of REDD+ but will also help people and individuals dealing with REDD+ and above all the researchers who are on the learning platform, will get to know more about REDD+ and climate change.

1. How much area of the earth is covered by forests?

As per Global Forest Resources Assessment (2020), forests cover about 4.06 billion hectares i.e. 31% of the total land area globally. In other words, each person on the earth has around 0.52 hectare of forest. Only five countries in the world cover more than half (i.e. 54%) of the world's forests [Russian Federation (20%; 815 million ha), Brazil (12%; 497 million ha), Canada (9%; 347 million ha), US (8%; 310 million ha) and China (5%; 220 million ha)]. The rest of the world covers 46% (1,870 million ha) forests. As per ISFR (2019), India with its 2% contribution in the total global forest area, ranks 10th among the 10 highest forest area covering countries.

2. How speedily are forests declining?

It has been projected that due to deforestation, a loss of 420 million ha of forests have been observed worldwide since 1990. The rate of deforestation during the 1990-2005 was 13 million ha (1,30,000 km^2) per year. During 2010-2015, the annual rate of deforestation was estimated at 12 million ha which further reduced to 10 million ha in 2015-2020. A significant reduction in the rate of forest loss has been observed over the period 2010-2020 due to afforestation and natural regeneration of forests (FAO, 2020).

3. What is the difference between 'deforestation' and 'forest area net change'?

According to FAO, 'deforestation' can be defined as the conversion of forest to other land uses (agriculture, construction etc.). On the other hand, 'forest area net change' is the sum of all forest losses (deforestation) and all forest gains (forest expansion) in a given period. Depending on whether forest gain exceed forest loss or vice versa, the net change can be either positive or negative. On one hand where deforestation is about loss in forest area, forest area net change addresses both loss and gain in forest area (FAO, 2020).

4. What is the role of forests in the developing world?

Forests act as provisioners of ecosystem goods and services. The forest catchments are accountable for more than three quarters of the world's available freshwater. However, the quality of water depends on the forest cover, forest condition, and can further be impacted due to natural calamities such as floods, landslides, and soil erosion (MEA, 2005).

Forests play a vital role in providing a stable economy for millions of people who sustain on them for collection of fuelwood and useful non-timber forest products (NTFPs). It has been estimated that over 3.3 billion cubic meters of wood/timber are annually collected from the forests. This collected wood includes 1.8 billion cubic meters of fuelwood, charcoal, and non-timber forest products (MEA, 2005). Approximately 1.15 billion ha of the global forests are largely managed for the purpose of production of wood and NTFPs, out of which 749 million forests which were earlier managed for multi-purpose use and production of wood, are now mostly used for wood production. Forests also act as provisioners of social services such as tourism, recreation, educational research and conservation of cultural sites which include the usage of more than 180 million ha of forests (FRA, 2020). Dependency of rural poor on forest resources is evident as more than 300 million people depend on forest ecosystems for their sustenance. More than 60 million of indigenous forest dwellers are dependent on forest resources and are also greatly influenced by the health of forest ecosystems (MEA, 2005).

5. Who own these forests?

It has been estimated that nearly 73% of the world's forests are publicly owned whereas only 22% are privately owned. The remaining 1% of the world's forests are generally disputed lands or lands in transition, hence considered as either 'unknown' or 'other' forest lands. However, since 1990 a global decrease in the percentage of publicly owned forests and an increase in percentage of privately-owned forests has been observed (FAO, 2020). In India, the state and central government are jointly responsible for management of public forests. Practically, the State Forest Departments are the actual guardians of the public forests and manage them as per the forest management plans, which is later submitted to the central government. The Indian Forest Act of 1927 states that the state governments can also declare an area as a Reserve Forest, Protected Forest or a Village Forest.[1]

6. What is carbon footprint? Why is it significant and how it affects environment?

A carbon footprint is defined as the amount of GHGs (mainly CO_2) released into the atmosphere by a certain human activity. The lesser bio-capacity of the atmosphere in absorbing the carbon emissions emitted from the burning of fossil fuels, causes accumulation of carbon in the atmosphere. Thus, making carbon footprint an important component of the Ecological Footprint.

Carbon footprint varies with source i.e. either from creation of larger carbon footprint from a country's deforestation activities or to an individual's home where smaller carbon footprint is created from the increased use of air conditioner, electricity, heat and transportation. Thus, larger carbon footprints result in increased GHG emissions which spur further climate change.

7. Which country has the largest and the smallest carbon footprint?

In 2019, China was the biggest total CO_2 emitter with the largest carbon footprint (9,839 $MtCO_2$ per year), followed by US (5,270 $MtCO_2$ per year), India (2,467 $MtCO_2$ per year), The Russian Federation (1,693 $MtCO_2$ per year) and Japan (1,205 $MtCO_2$ per year). The lowest carbon footprint producing country as in 2019 was Tuvalu with zero $MtCO_2$.

8. What is the relation between forests and climate change?

Forests act as a stabilizing force for the climate as they help in regulating ecosystems, protecting biodiversity as well as play an essential role in the carbon cycle, along with supporting livelihoods and acting as providers of ecosystem goods and services that overall help in driving sustainable growth. The world's total land area comprises 31% of the forest cover (FAO and UNEP, 2020) out of which 424 million ha of world's forests are mainly selected for conserving biodiversity. However, the recent observations have shown slowed rate of growth in biodiversity conservation areas since last ten years. Likewise, the world's total growing stock of trees have been decreased from 560 billion m^3 in 1990 to 557 billion m^3 in 2020 as a result of net decline in forest area. The total biomass of the world's forests has also reduced since 1990 (FAO, 2020).

Forests play a dual role in climate change by acting both as a source and a sink for greenhouse gas (GHG) emissions. As per UN's Intergovernmental Panel on Climate Change (IPCC), the global contribution of the deforestation and forest degradation is approximately 17% of all GHG emissions (IPCC, 2007). The land sector being the second largest source of GHG emissions after energy sector, alone contributes nearly 25% of global GHG emissions. Approximately half of the emissions from land sector (5-10 $GtCO_2e$ yearly) are contributed by deforestation and forest degradation. On the other hand, the proportion of carbon stock in forest pools constitutes maximum forest carbon in the living biomass (44%) and soil organic matter (45%), with the remaining in dead wood (4%) and litter (6%). The total carbon stock in forests has been found to be reduced from 668 Gt in 1990 to 662 Gt in 2020 (FAO, 2020).

Although, a reduction in the net loss of forest area has been observed since 1990, however due to the continuous deforestation and forest degradation activities, biodiversity is suffering a significant loss. Thus, it can be concluded that the track to meet the target of the United Nations Strategic Plan for Forests i.e. 3% global increment in forest area by 2030, is still a long way to go (FAO and UNEP, 2020).

9. What are the global impacts of climate change?

Climate change puts forth multiple pressure on our environment as well as on our economic, social and political arrangements. Every country faces the impact of changing climate and the most impacted ones are the poor people for whom each day is a new challenge. The over exploitation of natural resources along with climate change is the new challenge for sustenance in front of mankind. With the rising impacts of climate change, increased frequencies and intensity of extreme weather events (such as droughts, floods, heat waves, wildfires) have endangered global food resources, increased migration, threatened livelihoods and on the environmental aspect, it has increased the rate of soil loss and land degradation.

Likewise, increased amount of atmospheric CO_2 reduces food's nutritional quality, hence threatening the agriculture sector. As a result of reduced yields and lost lands due to climate change induced soil erosion, desertification etc., accessibility to sustenance has also been threatened. In total, climate change destabilizes progressive gains and lead to food and water scarcity. Also, increased deforestation for agriculture purposes, cattle rearing etc. has increased GHG emissions resulting in propelled climate change.

10. How crucial are forests in mitigating climate change?

One of the most significant keys for addressing impacts of climate change are forests as they act as a sink of carbon dioxide (CO_2) in the atmosphere. As the forests grow, carbon is absorbed in the wood, leaves and soil, hence removing carbon from the atmosphere. However, if these forests are burnt, degraded or cut down due to various anthropogenic activities such as agriculture expansion, construction etc., the stored carbon gets released back to the atmosphere. It has been estimated that about 2.6 billion tonnes of CO_2 (including one-third of the CO_2 which is contributed by burning fossil fuels) is sequestered by forests each year. However, findings have also shown that about 2 billion hectares of the degraded lands globally, provide restoration opportunities. Thus, enhancing and preserving forests is therefore an essential key to climate change.

11. Who is more vulnerable to climate change?

The people residing in the world's poorest countries along with world's 2.5 billion smallholder farmers who are dependent on climate and natural resources for their economic stability and sustenance are amongst the most vulnerable groups. Studies have revealed that three out of four people living under poverty are more dependent on agriculture and natural resources for their survival. The impacts of changing climate which can be observed in the form of erratic weather patterns, natural disasters, reduced natural resources including water scarcity, changes in seasonal patterns etc., are actually a threat to people's livelihoods pertaining to climate change. It has been estimated that by 2050, the number of people at risk due to changing climate induced food insecurity will be increased by 20%. Additionally, it has been predicted that sustained climate change related impacts will not only create risk for food security, fresh air and clean drinking water sources but on the other hand, it will also be responsible for taking lives of 2,50,000 people every year because of starvation, heat stress, and other diseases.

12. What roles have international agreements played in addressing climate change?

The role of international agreements in bringing all nations on a single platform to take necessary mitigation and adaptation actions for tackling climate change by reducing GHG emissions is very vital. The United Nations Framework Convention on Climate Change (UNFCCC) was formed in 1992 with the objective for reducing GHG emissions which was later signed by many nations as an agreement to their participation in it. Likewise, the second phase of agreement i.e. Kyoto Protocol (1997), was the first global commitment which bound countries with emission reduction targets. However, the Paris agreement (2015) is a landmark environmental accord which addresses climate change and its adverse impacts, and has been adopted by each nation. The UNFCCC is familiar with the significant role of forests in mitigating climate change, hence it focuses on forestry activities with an aim of enhancing REDD+ actions (reducing emissions from deforestation; forest degradation; conservation of forest carbon stocks; sustainable management of forests and enhancement of forest carbon stocks) on mitigation in the forest sector.

13. What is REDD?

Reducing Emissions from Deforestation and Forest Degradation (REDD) is the mechanism which encourages developing countries to take necessary actions against climate change by the means of protecting, managing and making sustainable use of their forest resources. REDD approaches are aimed to halt deforestation and forest degradation by creating financial incentives for the carbon stored in the standing trees. After the assessment and quantification of the stored carbon, REDD involves the developed nations for paying carbon offsets to the developing countries for their conserved forests. Thus, REDD is a milestone in forestry enterprise which aims at reducing GHG emissions by the means of sustainable forest management along with creating financial stability concerning economic, environmental and social challenges such that biodiversity, forest dwellers, communities and nations may get benefitted. REDD was first introduced during the 11th Conference of Parties (COP) to the UNFCCC in 2005.

14. Where did the idea of REDD+ come from?

In 2007, during Bali Action Plan i.e. COP 13, the idea of REDD+ was mentioned for the first time. The plan was conferred in five sections (a) shared vision for long-term cooperative action; (b) mitigation; (c) adaptation; (d) technology and (e) finance. However, the impression of adding '+' in REDD (or REDD+) was generated under section (b) i.e. 'mitigation' as per the 'Decision 1/CP.13' laid out as following:

"Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries"

The same statement was commented in Paragraph 70 of Cancun Agreement during COP 16 (2010), which determined the foundation of REDD+:

"Encourages developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances:

(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."

15. What is the difference between REDD and REDD+?

REDD refers to reducing emissions from deforestation and forest degradation. While, the '+' in REDD denotes addition of (i) conservation of forest carbon stocks, (ii) sustainable management of forests, and (iii) enhancement of forest carbon stocks.

REDD was mainly focused on mitigation purposes by the means of encouraging developing countries to lessen their emissions as a result of deforestation and forest degradation activities, while REDD+ mechanism is focused on creating financial incentives for results-based actions in developing nations and compensating their governments, companies or forest dwellers for measurable, reportable and verifiable reductions in GHG emissions from activities in forest sector.

16. How will India benefit from REDD+?

India has taken its way forward in global REDD+ approach through enhancing its forest cover and

forest carbon stocks by the means of sustainable forest management and conservation efforts, thus expecting for compensation for its conservation activities as well as provisions for providing incentives/ benefits to the local communities who are involved in forest protection and management, thus avoiding deforestation. It is estimated that a REDD+ programme for India could provide capture of more than 1 billion tonnes of additional CO_2 over the next 3 decades and provide more than $3 billion as carbon service incentives under REDD+ (Sharma and Chaudhary, 2013).

17. What is REDD+ readiness?

REDD+ readiness is the collective efforts that a nation undertakes for supporting and building capacity by providing multilateral or bilateral initiatives in REDD+ mechanism.

18. Everybody knows not to cut down trees, so why is implementation of REDD+ significant?

The main objective of REDD+ is to offer benefits to the important stakeholders who are actually involved in protection, enhancement and forest restoration activities, on the basis of their performance in REDD+ implementation activities. Later, these protected and enhanced forest carbon stocks will be undergone through the process of verification to obtain carbon credits through bilateral and multilateral finance programs, thus mobilizing funding incentives which will be later disbursed among stakeholders.

19. What is the procedure for assessing carbon stored in the forests?

The process of Measurement, Reporting and Verification (MRV) helps to assess country's total forest carbon stocks as well as other benefits from REDD+. Later, the measured carbon stocks from field inventory data will be combined with remote sensing data to estimate GHG inventories in order to lay down Reference Emission Levels (RELs) of the country. Forest Survey of India (FSI) is the nodal agency dealing with forest carbon stocks assessment in India.

20. What is National Forest Monitoring System (NFMS)?

The methodological decision on REDD+ (4/CP.15) requests developing country Parties to take certain guidance into account for the 5 REDD+ activities, in particular those relating to *"To establish, according to national circumstances and capabilities, robust and transparent national forest monitoring systems and, if appropriate, sub-national systems as part of national monitoring systems that:*

- *Use a combination of remote sensing and ground-based forest carbon inventory approaches for estimating, as appropriate, anthropogenic forest related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes;*
- *Provide estimates that are transparent, consistent, as far as possible accurate, and that reduce uncertainties, considering national capabilities and capacities;*
- *Are transparent and their results are available and suitable for review as agreed by the Conference of Parties."*

Therefore, a national forest monitoring system must be:

- designed to measure, monitor and report forest resources at a national scale, although with the possibility to measure and report at sub-national levels;
- relied on both remote sensing and ground based national forest inventory approaches;
- the final goal is to estimate anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks.

The system of Measurement, Reporting and Verification (MRV) is the effective process to establish NFMS and also to validate the reductions in deforestation, forest degradation and enhancement in forest carbon stocks in the country in a transparent, steady and precise manner.

21. Why do we need MRV under REDD+?

MRV for REDD+ refers to a set of transparent, reliable, steady and accurate data regarding the Measurement, Reporting and Verification (MRV) of country's forest carbon stocks such that GHG estimates (emissions and removals) along with their changes over a time period, can be made in order to establish National Forest Greenhouse Gas Inventories. Overall, the MRV system include:

- A National Forest Inventory (Emission Factors) i.e. a national system to evaluate changes in forest carbon stocks;

- A national remote sensing system to evaluate changes in land uses through a satellite system;
- A National Forest Greenhouse Gas Inventory system i.e. country's estimations on forest emissions and absorptions associated to the forest sector; and
- Estimation of Forest Reference Emission Levels and/or Forest Reference Levels (FREL/FRL).

22. What is the relationship between REDD+ and National Communication?

All the mechanisms, including REDD+, that fall under UNFCCC are meant to be included in the National Communications of Parties. As per UNFCCC, one person or institution (who is also legally accountable in front of UNFCCC) is selected on behalf of the respective country for submitting communication. The activities implemented for REDD+ must be done in agreement by the means of better communication with individual/institution responsible for the National Communication.

23. What is the methodological guidance for REDD+ activities in developing countries?

As per decision 2/CP.13, following guidance related to measuring and reporting has been given:

- To identify drivers of deforestation and forest degradation resulting in emissions and also the means to address these;
- To identify activities within the country that result in reduced emissions and increased removals, and stabilization of forest carbon stocks;
- To use the most recent Intergovernmental Panel on Climate Change (IPCC)guidance and guidelines as adopted by Conference of Parties (COP), as a basis for estimating anthropogenic forest related GHG emissions by sources and removals of sinks, forest carbon stocks and forest area changes;
- To establish robust national forest monitoring systems and, if appropriate, sub-national systems as part of national monitoring systems.

24. What elements are needed to be developed for implementation of REDD+ activities in developing countries?

Following elements are required to be developed by the developing countries for implementing REDD+ related activities:

- To develop a national strategy or action plan;
- To develop a forest reference emission level (FREL)/forest reference level (FRL);
- To develop a robust and transparent national forest monitoring system (NFMS) for monitoring and reporting of REDD+ activities;
- To develop a system for providing information on how the safeguards are being addressed and respected throughout the implementation of REDD+ activities.

25. What are the proposed phases for REDD+ implementation?

A three-phased approach has been defined by UNFCCC at COP-16 in Cancun Agreements as:

Phase 1 (Readiness): Development of national REDD+ strategy or action plans; implementation of REDD+ strategy through capacity building; work on policies and measures for REDD+ implementation and design demonstration activities.

Phase 2 (Implementation): Implementation and testing of national strategies and action plans as proposed in Phase 1; results-based demonstration activities; technology development and transfer.

Phase 3 (Results-based actions): Implementation of results-based REDD+ actions at national levels with results being fully measured, reported and verified (MRV).

26. What are the essential elements of national REDD+ framework in India?

As per the decision, the essential elements of a national REDD+ framework should comprise of a national strategy of actions, a national reference level and a transparent monitoring and reporting system. Following framework has been developed by India:

- **National REDD+ Strategy:** The National REDD+ Strategy of India aims at increasing and improving forest and tree cover of the country by significantly enhancing the inflow of forest ecosystem services (such as fuelwood, fodder, NTFPs etc.) towards the local communities.
- **Institutional mechanism for REDD+ at national level:** The REDD+ Cell established in the Ministry of Environment, Forest and Climate Change (MoEFCC) is responsible for (i) managing REDD+ actions at the national

level, (ii) guiding and working with State Forest Departments (SFDs) for collecting, processing and managing significant data related to accounting of forest carbon stocks of the country. The REDD+ Cell also helps in guiding design, development, funding, execution, monitoring and assessing REDD+ activities at sub-national level, in addition of supporting MoEFCC for developing and implementing suitable REDD+ implementation policies at national level.

- **Institutionalization of national level forest carbon stocks accounting:** The Forest Survey of India (FSI) is the nodal agency for estimating forest carbon stocks at national level. FSI also involves Indian Council of Forestry Research and Education (ICFRE) as a part of its networking approach.
- **Capacity building of State Forest Departments (SFDs):** As per the National REDD+ Strategy of India, since it is much feasible for SFDs to cover a greater number of sample points rather than FSI (due to many limitations such as lack of time, finances, technical experts, etc.), hence it is the responsibility of SFDs for carrying out estimation of forest carbon stocks along with assessment of forest & tree cover, for the overall purpose of improving precision level of carbon stocks assessment in the country. As per future aspects, SFDs may utilize the facilities of Remote Sensing by the help of FSI which will further help in capacity building of SFDs in view of self-reliant forest carbon accounting and forest carbon inventories, respectively.
- **Local communities and co-benefits of forest ecosystem services including carbon service:** The Government of India provides full provisions regarding supply of REDD+ financial incentives to the local communities, along with promoting gender-based equal representation among the local communities. Since the country is basically focused on full provisioning of ecosystem services, thus adding the carbon services incentives as an additional benefit to the local communities.
- **National Forest Reference Level:** India has entered the final phase of its results-based actions i.e. MRV, for which the National Forest Reference Level (for baseline and incremental carbon stocks in tree and forest cover) of the country has been fixed.

27. What are safeguards? How are they being addressed?

REDD+ implementing activities along with delivering social, environmental and emission reduction benefits, may also deliver negative social and environmental effects. Thus, in order to avoid risk of getting negative effects from REDD+ activities, UNFCCC agreed on a specific set of safeguards known as "Cancun Safeguards" for bringing additional benefits. The seven Cancun safeguards have been listed below:

- Actions should complement or are consistent with the objectives of national forest programmers and relevant international conventions and agreements;
- Transparent and effective national forest governance structures, considering national legislation and sovereignty;
- Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking account of relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
- Full and effective participation of relevant stakeholders, especially indigenous peoples and local communities;
- Actions consistent with the conservation of natural forests and biological diversity, promotion of ecosystem services, and avoidance of conversion of natural forest;
- Actions to address the risk of 'reversals';
- Actions to reduce the risk of 'displacement' of emissions.

Thus, it is anticipated that the developing countries will follow safeguards for ensuring complete involvement of indigenous peoples, local communities and relevant stakeholders for conservation and enhancement of forests, and biodiversity for implementation of REDD+ activities. Thus, the role of Safeguards Information System (SIS) becomes significant as it addresses that how the safeguards are being addressed and valued in REDD+ activities. The SIS must provide an updated transparent and reliable information which should be accessible by all appropriate stakeholders. A summary of information should be provided

periodically by the developing country Parties regarding how the safeguards are being addressed and respected in the REDD+ activities, and the summary should be further voluntarily included in the national communications through the UNFCCC REDD+ Web Platform.

28. How it can be guaranteed that forest-dependent communities in developing countries, for instance India, will gain benefit from REDD+?

REDD+ clearly aims to benefit the indigenous peoples by safeguarding/protecting their rights and India is fully dedicated for providing financial benefits from REDD+ activities to the forest-dependent and tribal communities which can be ensured due to following causes:

(i) The local communities in India already enjoy provisioning goods and services, therefore India considers REDD+ as an additional advantage to the already existing benefits.

(ii) The acts, policies and guidelines provided by central and state governments further ensure that REDD+ activities will only work for benefit disbursements among the local communities, along with preserving their privileges over forests.

(iii) The international REDD+ agreements respect national regulations regarding safeguarding rights of indigenous peoples and local communities, hence also ensures their involvement towards enactment and monitoring of REDD+.

Also, the design of the National REDD+ Strategy of India includes safeguards which ensure that the benefits received from REDD+ reach the communities who maintain, protect the forests and biodiversity. The strategy mentions involvement of local stakeholders during the REDD+ implementation process, as they are the actual ones who will be benefitted from protecting forests along with improving livelihoods.

29. What is meant by results-based payments?

As a result of REDD+ activities implemented by the developing countries for halting deforestation, forest degradation and enhancing carbon, financial incentives are created which are paid by the developed nations to the developing nations in the form of results-based payments. In other words, results-based payment means the money which is meant to be paid by one country to the other on the basis of amount of additional carbon that has been stored inside the forests of the country receiving money, as a result of activities slowing down deforestation.

30. How will the benefits be shared?

When the REDD+ incentives will begin to flow, these 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.

31. Why is there so much interest in carbon, forestry and REDD+?

REDD+ has been established as one of the cost-effective ways of alleviating GHG emissions along with subjugating the 2°C rise in temperature. On the other hand, forests are not only carbon storage standing entities but are also the pillars of livelihood security and providers of habitat for biodiversity along with ecosystem goods and services for many indigenous peoples and forest dwelling communities. Secondly, the focus is also to make monetary benefits by conserving the forests and natural resources by the means of establishing markets and mechanisms for generating financial incentives. Thus, if designing of REDD+ is done in a proper manner, financial inflow can be directly made by developing nations along with the forest dependent communities for delivering forest-based carbon storage services.

32. Do REDD+ gives exemption to the developed nations from reducing their own emissions?

REDD+ alone cannot efficiently mitigate or reduce impacts of climate change. Hence, co-existence of REDD+ with other substantial emission reduction programmes in both developed and developing countries, may restrict climate change.

33. Where does the funding come from?

There are bilateral, multilateral and private funding mechanisms which support REDD+ activities at various levels. There multilateral funding mechanisms such as World Bank's Forest Carbon Partnership Facility (FCPF), the UN-REDD Programme and Forest Investment Programme and Green Climate Fund support readiness activities for implementing REDD+.

34. Who is governing the funding agencies?

Since the funding agencies work independently of each other as well as have different procedures and participatory process for different projects, thus nobody governs them. Information is shared through REDD+ Web Platform and Voluntary REDD+ Database.

35. Where India stands on REDD+ in current global negotiations?

India was amongst those pioneering countries who believed that REDD was needed to be seen in the broader context of REDD+. Following this inspiration, India has been insisting on following a comprehensive and holistic approach in realizing full potential of mitigation in forestry sector. This finally resulted in acceptance of India's historical stand in 13th COP meeting at Bali (Bali Action Plan) where the addition of '+' i.e. conservation, sustainable management of forests and enhancement of forest carbon stocks, in the definition of REDD and adopting it as REDD+ was marked.

36. What challenges do REDD+ countries have in common, where do they differ?

The countries are however developing their own approaches towards REDD+, but the challenges they face in avoiding deforestation remain largely the same. The countries struggle with policy design and its implementation, institutional conflicts, governance, less public commitment, covering REDD+ objectives etc. These circumstances have led REDD+ to be seen as a project but not as policy development in most of the countries.

37. What are the other non-carbon benefits that developing countries (such as India) and local communities can gain from REDD+ mechanism?

Forests not only store carbon but are also the providers of ecosystem goods and services which comprise water regulation, soil protection, non-timber forests products including food and fiber, climate regulation and biodiversity. Thus, REDD+ in India can help in various ways to deliver ecosystem and societal benefits to indigenous communities and forest dependent people. India is continuously working in the area of REDD+ along with understanding the benefits, challenges and risks associated with REDD+ implementation in the country.

38. What are the strategies to identify and address drivers of deforestation and forest degradation?

For identifying the drivers of deforestation and forest degradation (D&FD), socio-economic and feasibility studies are the main source of information. The data collected from such studies help to assess various direct and indirect drivers of D&FD such as fuel wood usage, policies, tenure systems, population advancements, pressure from agricultural activities, settlement, infrastructure, etc.

39. What is India currently doing as part of its National REDD+ Strategy?

India is playing a positive role and has taken a firm stance in favor of a comprehensive REDD+ approach. Many national programmes and projects such as Green India Mission (2014) under the National Action Plan on Climate Change (2008), Nagar Van project (2020) have shown India's ambitions towards meeting its NDC targets. India is underlying the following initiatives related to REDD+:

- developed National REDD+ Strategy.
- developed Forest Reference Level.
- developed Safeguards Information System
- National Forest Monitoring System is under development phase.
- State REDD+ Cells are being established.

40. What are India's climate change mitigation targets and plans for 2020 and beyond?

While continuing its support for REDD+ readiness at country level, India's strategy for 2020-2030 makes a strategic shift to focus on providing capacity support, technical needs in areas such as MRV, stakeholder engagement and equitable benefits sharing at the national level. India's national climate action plans, known in UN as nationally determined contributions (NDCs), under the Paris Agreement set three major goals: increase the share of non-fossil fuels to 40% of the total electricity generation capacity, to reduce the emission intensity of the economy by 33-35% by 2030 from 2005 level, and to create an additional carbon sink of 2.5-3 billion tonnes of CO_2 equivalent through additional forest and tree cover.

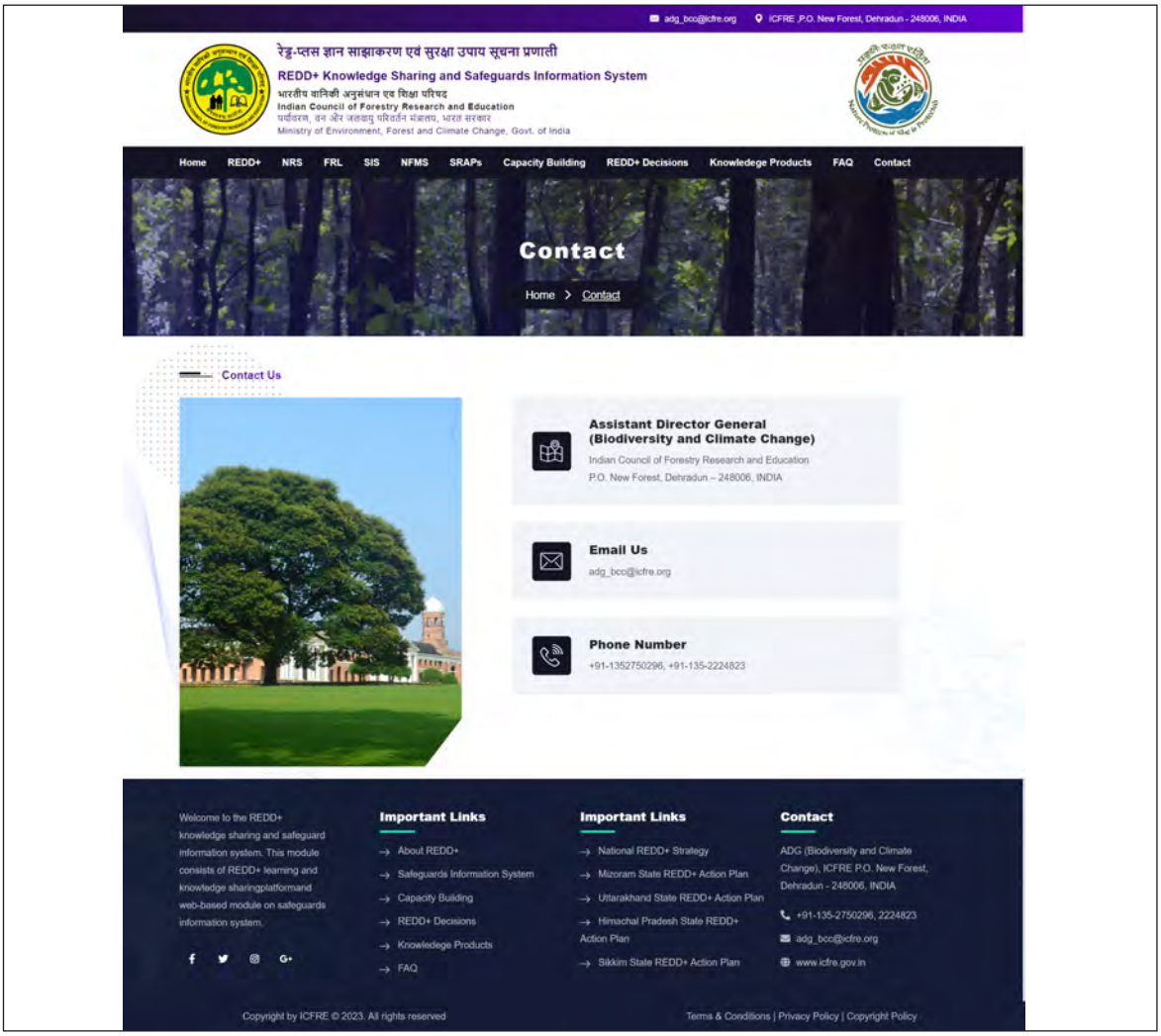
41. How might REDD+ be relevant for achievement of Sustainable Development Goals (SDGs)? How can REDD+ work in gender equality?

Though REDD+ is explicit to the forest sector but it can be regarded as a medium that can meet many SDGs such as SDG 13 (climate change mitigation), SDG 15 (sustainability of terrestrial ecosystems) and SDG 7 (access to energy). Since REDD+ has benefits other than carbon offsets i.e. biodiversity conservation (due to halting deforestation) and socio-economic benefits (alternative livelihood options, recognition of forest rights to lands, etc.) towards forest dependent communities, thus REDD+ can also help to achieve SDG 1 (poverty eradication) and SDG 2 (sustainable food security). Furthermore, if REDD+ is designed and implemented in a gender-responsive manner along with the inclusion of rights and concerns of indigenous communities, equitably including women and men, it can enhance the progress in attaining SDG 5 i.e. gender equality and women's empowerment.

42. How Gender-sensitive REDD+ action is supported under the UNFCCC?

REDD+ ensures fair, transparent, broad and effective mechanism, and as a result of its development under UNFCCC, REDD+ is considered as a technical climate financial mechanism. As a result of this, UNFCCC REDD+ decisions have encouraged and approved gender-sensitive REDD+ policies and actions.

Decision 1/CP.16, at COP16 in Cancun (2010), directed countries for addressing gender considerations, while developing and executing their REDD+ national strategies or action plans. As a result of this guidance, Decision 12/CP.17 (at COP 17 in Durban Outcomes) further guided countries to respect gender considerations while addressing safeguards through Safeguard Information System (SIS).



3. Capacity building of the stakeholders on various aspects of REDD+ including safeguards

Capacity building workshop for officers of State Forest Department and other stakeholders of Chhattisgarh on development of State REDD+ action Plan was organised under Ecosystem Services Improvement Project. Trainings for the State Forest Departments on Development of State REDD+ Action Plans were organised under the Component 4: Capacity Building of State Forest Departments for Developing State REDD+ Action Plan under CAMPA funded ICFRE scheme titled 'Strengthening Forestry Research for Ecological Sustainability and Productivity Enhancement'. Different aspects of the REDD+ including safeguards were also covered under the trainings. Two days training workshop on REDD+ for IFS officers of the country was also organised. Different aspects on the REDD+ were covered in the first session of the stakeholder consultation workshops. Therefore, trainings on REDD+ was not organised under this project to avoid the duplication.

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Annexure-1

PRESENTATION ON REDD+ READINESS IN INDIA

REDD+ SIS Stakeholders Consultation

REDD+ Readiness in India

V.R.S. RAWAT
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Forests & Climate Change

- Forests play a critical role in global carbon cycle
- Forests contribute about 20-25 % of global CO_2 emissions (year 2005)
- Forest ecosystems are vulnerable to projected climate change
  - Likely to have adverse impacts on forest biodiversity and biomass production
  - Thus need to assess impacts and develop adaptation strategies
- Forests provide a large mitigation opportunity to stabilize GHG concentration in the atmosphere along with significant co-benefits

United Nations Framework Convention on Climate Change (UNFCCC)

June 1992 at Earth Summit

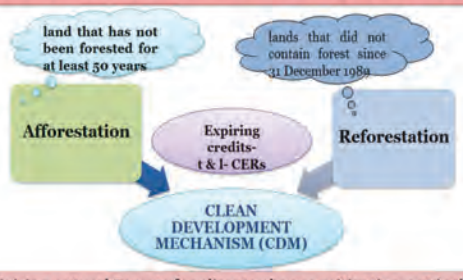
adopted and signed by 155 Nations

195 countries around the world have joined the international treaty that sets general goals and rules for confronting climate change

Enjoys universal acceptance

UNFCCC and Kyoto Protocol have made Carbon a tradable commodity

Eligible forestry activities under Kyoto Protocol



Incentivising natural Forests for climate change mitigation not included

FAO FIAT PANIS

Deforestation causes 25% of greenhouse gas emissions says FAO

Rhett A. Butler, mongabay.com

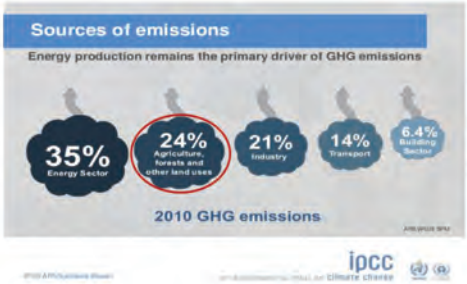
December 9, 2005

Yesterday the Food and Agriculture Organization of the United Nations (FAO) offered to provide forestry data and technical assistance to countries looking to mitigate greenhouse gas emissions through the reduction of forest loss.

IPCC 4th Assessment Report (2007)

Share of different sectors in total anthropogenic GHG emissions in 2004 in terms of CO_2 equivalent

Energy Supply	25.9%
Industry	19.4%
Forestry	17.4%
Agriculture	13.5%
Transport	13.1%
Residential and Commercial building	07.9%
Waste and Wastewater:	02.8%



REDD: Reducing Emissions from Deforestation and Forest Degradation

Background of Negotiations

The Agenda of REDD

- Avoided Deforestation was discussed in the side events of UNFCCC in COP 9 (2003)
- Agenda Item on "Reducing emissions from deforestation in developing countries: Approaches to stimulate action" first presented in COP 11 Montreal (2005) in response to request of Papua New Guinea and Costa Rica
- COP 11 invited parties and accredited observers to submit views on related issues and also to organize a workshop

REDD since 2005

Avoided Deforestation

Compensated Reduction

Reducing Emissions from Deforestation in Developing Countries (REDD)

Compensated Conservation?

"Compensated Reduction"

Financial incentives to Non Annex 1 countries

for

reducing present annual deforestation rate and stabilizing it in future

India made its stand clear in subsequent UNFCCC Workshop on REDD and COP-12 in Nairobi (2006)

- Nations not managing forests in a sustainable manner stand to benefit from the proposal
- Thereby favouring only avoidance of deforestation goes against very preamble of UNFCCC and Kyoto Protocol (sustainable development)
- Reducing deforestation only defers emissions
- Capable of shifting attention of Annex I countries from crucial domestic action for GHG reduction
- Nations who have implemented strong conservation regulations put at disadvantage

2 March 2007

ENGLISH/FRENCH/SPANISH ONLY

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
Twenty-sixth session
Bonn, 7–18 May 2007

Item 5 of the provisional agenda
Reducing emissions from deforestation in developing countries

2.2 Proposed Policy Approach and Incentives

Proposed concept of Compensated Reduction favours the countries with high deforestation rates, with the quantum of compensation likely to be proportionate to the reduction effected in current rate of deforestation.

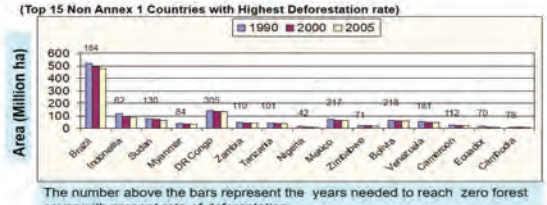
India, therefore, as deliberated in COP 12 at Nairobi, proposes a new potential policy approach based on socio-political commitment and technological capabilities of the country. India proposes that the countries like India that have implemented strong conservation measures and regulations be suitably compensated. The proposed mechanism of Compensated Conservation is intended to compensate the countries for maintaining and increasing their forests as carbon pools as a result of conservation and increase improvement in forest cover backed by verifiable monitoring systems. The conservation in India and other countries has been achieved, and is being sustained at huge costs on account of revenue loss from harvests and non-conversion to other more profitable land uses.

Forested Nations can be divided into two groups

- Nations with decreasing Forest Cover
- Nations with increasing Forest Cover

Nations with decreasing Forest Cover

(Top 15 Non Annex 1 Countries with Highest Deforestation rate)

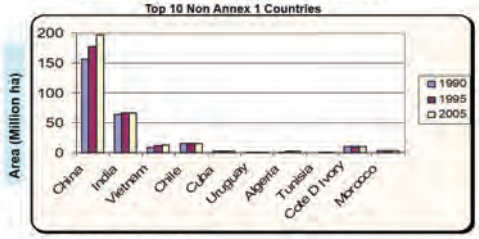


The number above the bars represent the years needed to reach zero forest cover with present rate of deforestation

Source: FRA 2005 (FAO 2005)

Nations: Increasing Forest Cover

Top 10 Non Annex 1 Countries



Source: FRA 2005 (FAO, 2005)

Indian Viewpoint on REDD

Comprehensive REDD

Carbon Saved and Carbon Added

- Reducing Deforestation & Degradation
- Conservation, Sustainable Management of Forests, Increase in Forest Cover (A&R)

Indian submission incorporates above and seeks incentives on incremental and Baseline stocks

UNFCCC COP 13 (December 2007) Bali

Bali Action Plan: "*...Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries...*"

[Para 1b (iii) of BAP] (Decision 1/CP.13)

Bali and after

Main issues under discussion

REDD+: a slow progress under UNFCCC

- Copenhagen
- Cancun
- Durban
- Doha
- Warsaw
- Lima
- Paris

Copenhagen Accord (2009) and REDD

There was clear intent in the Copenhagen Accord to get REDD going without delay. The accord called for the "immediate establishment of a mechanism including REDD-plus".

Cancun Forestry decisions

Decision 1/CP.16 Scope of REDD plus finally agreed by parties (Cancun Agreements)

(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;

Cancun forestry decisions....

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).

Key Elements of REDD+ and UNFCCC Decisions (Cancun Agreements Para 71)

REDD+ countries have to respect....

The Seven (7) REDD+ Safeguards (Cancun Safeguards)

(a) Objectives of national forest programs and other relevant agreements and conventions.
(b) Transparent and effective structures of national forest governance.
(c) Respect for knowledge and rights of Indigenous Peoples and local community members.
(d) Full and effective participation of relevant stakeholders.
(e) Conservation of natural forests and biological diversity
- Not used for the conversion of natural forests,
- Protect and conserve natural forests and ecosystem services,
- Improve social & environmental benefits.

(f) Actions dealing with risks of reversal
(g) Actions to reduce displacement of emissions.

Cancun forestry decisions: Safeguards.....

That actions are consistent with the conservation of natural forests and biological diversity, ensuring that the (REDD Plus) 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

Safeguards...

- Respect for the knowledge and rights of indigenous peoples and members of local communities,
- The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the (REDD plus) actions

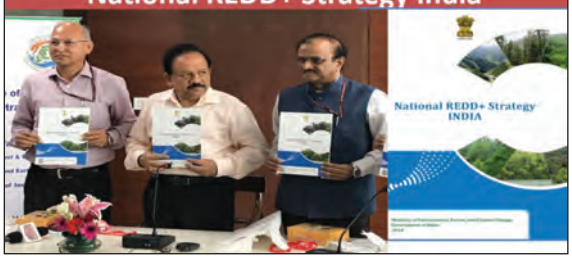
Warsaw Framework for REDD Plus

1. Results-based finance for the full implementation of activities in Decision 1/CP.16, Paragraph 70 (REDD+)
2. Coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries, including institutional arrangements

Methodological guidance for activities relating to REDD+

1. National forest monitoring systems
2. Measuring Reporting and Verification (MRV) of REDD + activities
3. Technical assessment of Reference Emission levels/ Reference Levels submitted by Parties
4. Timing and frequency of submission of summary of information on how Safeguards are addressed and respected
5. Addressing drivers of deforestation and forest degradation

National REDD+ Strategy India



National REDD+ Strategy: Building blocks

National REDD+ Strategy is one of the elements to be developed for implementing REDD+ activities at National level

- Highly dependent upon national circumstances
- Development and implementation of national strategies address, *inter alia:*
  - drivers of deforestation and forest degradation,
  - Implementation of REDD+ activities
  - forest governance issues, gender considerations and
  - the REDD+ Safeguards (full and effective participation of relevant stakeholders, *inter alia* Indigenous peoples and local communities)

Kev Elements of REDD+

Developing country parties aiming to undertake REDD+ activities to develop the following elements:

ICFRE asked by MoEF&CC for Institutionalisation of the technical issues of REDD+

Task of preparing National REDD+ Strategy was completed in March 2018 following a series of meetings/ workshops and stakeholders consultation

National REDD+ Strategy: Structure

4 Sections

1. Introduction and the Context
2. Legal and policy framework in India
3. The Strategy
4. Implementation Framework

The Strategy: 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).

Funding under UNFCCC mechanism for phased approach
GCF, UN-REDD, Bilateral, multilateral, Public, private

The Strategy: REDD+ Activities to be considered

- Reducing emissions through deforestation
- Reducing emissions through forest degradation
- Conservation of Forest carbon Stocks
- Sustainable Management of Forests
- Enhancement of Forest carbon Stocks

The Strategy: Sub-national REDD+ Approach: At Physiographic zone

Forest Survey of India has divided country into 14 Physiographic zones

1. Western Himalayas
2. Eastern Himalayas
3. North East:
4. Northern Plains
5. Eastern Plains
6. Western Plains
7. Central Highlands
8. North Deccan
9. East Deccan
10. South Deccan
11. Western Ghat
12. Eastern Ghat
13. West Coast
14. East Coast

A physiographic zone: geographic areas that exhibit broad similarity in the factors responsible for tree growth (e.g., altitude, geographic location, soil, precipitation, temperature, soil moisture, etc.) and thus support fairly homogenous tree vegetation.

The Strategy……describes about

- Infrastructure required
- Trained human resource and Capacity building
- Creating a new cadre of Community Youth
- Green Skill Development Programme
- Finance for the Actions

Section 3: The Strategy…… Finance

- REDD+ country level programme
- Additionally need support from international donors
- Finance will be mobilised internally by allocation through GIM, CAMPA, *Namami Gange Programme*, Green Highways Policy, etc.
- The deficit in finance to meet REDD+ implementation will be sourced through external funding from Green Climate Fund (GCF) under UNFCCC mechanism.

Green India Mission:
Strategy proposes to revisit the GIM objectives and time frame in the light of new developments under global climate change regime, especially India's NDCs to UNFCCC

Section 3: The Strategy: Addressing Drivers of Deforestation and Forest Degradation

The effective policy, legal and management framework for managing these drivers

Providing alternatives of forest use to the local community, income generation activities and also by ensuring sustainable management of local forest resources through preparation and implementation of community centered micro plans.

Prime Ministers Ujjwala Scheme to provide free LPG connections

Promoting Use of improved cook stove

Key to sustainability will be, meeting the challenge of addressing and managing the unplanned drivers and activities which are mainly the anthropogenic removals of forest products
Illegal logging and mining activities within forest, besides losses

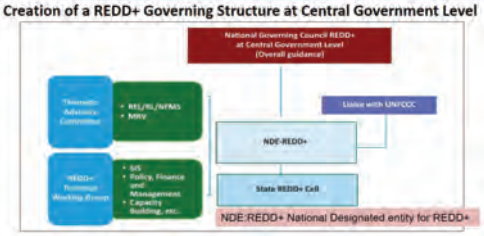
Section 4: Implementation Framework

- Conformity with UNFCCC decisions

- Conformity with national policy, legal framework and National Circumstances

Section 4: Implementation Framework

Creation of a REDD+ Governing Structure at Central Government Level



Section 4: Implementation Framework

Composition of National Governing Council (NGC-REDD+) shall be as follows

1.	Union Minister for Environment, Forest and Climate Change:	Chair
2.	State Minister for Environment, Forest and Climate Change:	Co-Chair
3.	Secretary, Ministry of Environment, Forest and Climate Change:	Member
4.	Director General of Forests and Special Secretary, MoEFCC:	Member
5.	Director General, ICFRE:	Member
6.	Additional Director General of Forests (FC), MoEFCC:	Member
7.	Additional Secretary (Climate Change), MoEFCC:	Member
8.	Director General, FSI:	Member
9.	Inspector General of Forests (NAEB), MoEFCC:	Member
10.	Joint Secretary (Climate Change), MoEFCC:	Member
11.	Joint Secretary, Ministry of Agriculture and Farmers Welfare:	Member
12.	Joint Secretary, Ministry of Tribal Affairs:	Member
13.	Principal Chief Conservator of Forests (4) (nominated by MoEFCC):	Member
14.	REDD+ Experts (2) (nominated by MoEFCC):	Member

National Designated Entity for REDD+ (NDE-REDD):

Director General of Forests and Special Secretary, MoEFCC:	Chairman
Additional Director General of Forests (FC), MoEFCC:	Member
Additional Secretary (Climate Change), MoEFCC:	Member
Inspector General of Forests (Forest Policy), MoEFCC:	National REDD+ Focal Point & Member
Inspector General of Forests (NAEB), MoEFCC:	Member
Joint Secretary (Climate Change), MoEFCC:	Member
Joint Secretary (Green India Mission), MoEFCC:	Member
Director General, ICFRE/Representative of ICFRE :	Member
Director General, FSI/Representative of FSI :	Member
External REDD+ Experts (2) nominated by the Chair:	Member
Representative of SFD (2) nominated by the Chair:	Member
Dy. Inspector General of Forests (Forest Policy), MoEFCC:	Member Convener

Section 4: Implementation Framework

State REDD+ Cell to be established

The strategy devolves major responsibility for execution of REDD+ activities and measurement of their performance on the State Forest Departments.
States will create a REDD+ Cell in the State Forest Department, and appoint a Nodal Officer to coordinate the activities of the State REDD+ Cell

Section 4: Implementation Framework

State REDD+ Cell

The strategy devolves major responsibility for execution of REDD+ activities and measurement of their performance on the State Forest Departments. States will create a REDD+ Cell in the State Forest Department, and appoint a Nodal Officer to coordinate the activities of the State REDD+ Cell

1. Principal Chief Conservator of Forests & HoFF:	Chairman
2. Principal Chief Conservator of Forests (Planning/Budget) :	Member
3. PCCF/APCCF (nominated by Chairman):	Member
4. APCCF/ CCF (Monitoring):	Member
5. Regional APCCF, MoEFCC or his representative:	Member
6. Two REDD+ Experts (Nominated by Chairman):	Member
7. Representative of prominent NGO:	Member
8. APCCF/CCF/CF (In-charge of Afforestation):	Nodal Officer

States to develop their S-RAP

Section 4: Implementation Strategy

Key Players:

- **FSI** will be responsible for MRV of forest carbon stocks
- **ICFRE** for capacity building of stakeholders in the country

Strengths and infrastructure of existing forestry Institutions:
FSI, IGNFA, IIFM, SFDs, State Forest Research Institutes and Forestry Universities in building capacity of stakeholders will be mobilised

Local Communities: will discharge the responsibility of protecting, regenerating and managing forests, and also share the responsibility of measuring forest carbon with the SFDs.
A capacity building and skill development programme for communities will be undertaken with an aim of addressing all REDD+ activities

National REDD+ Strategy....

Generating Green Jobs in forestry activities

Skill development of community youths for activities like:

- Assisted Natural Regeneration
- Raising Tree nurseries,
- soil and moisture conservation,
- fire protection,
- weed, insects and pests, (Forest hygiene)
- agro forestry, tree fodder production, NTFP management,
- bioenergy production, and
- biodiversity and ecotourism management activities

Implementation Roadmap

- Establishment of a NGC-REDD+ coordinating and guiding REDD+
- Creation of a REDD+ Cell in the State Forest Departments
- Capacity building of all cadres of the SFDs
- Skill development of community youths for activities like ANR, tree nurseries, soil and moisture conservation, fire protection, weed, insects and pests, agro forestry, tree fodder production, NTFP management, bioenergy production, and biodiversity and ecotourism management activities
- Creation of additional infrastructure for SFDs, technical expertise, trained manpower for forest C measurement
- Need to start pilot studies to test addressing different REDD+ activities
  Deforestation, degradation, Conservation, SMF, Enhancement of C stocks
- Results will also lead to form national policies on PES

India needs to do in light of Cancun/Durban/Warsaw agreements

- Implementing UNFCCC Decisions on REDD+
- Capacity Building Programmes on REDD+
- Preparedness of State Forest Departments
- Pilot/ Demonstration Projects on REDD plus
- Quantification of REDD plus benefit and sharing mechanism with REDD+ Communities
- Finance for REDD Plus actions
- Result based payments for emission reduction

For further detail pl Contact:
rawatvrs@icfre.org

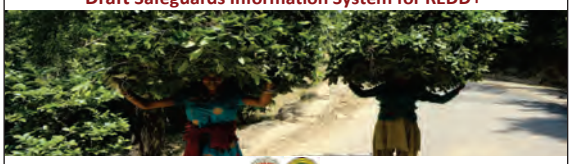
Thanks

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

Annexure-2

PRESENTATION ON DRAFT SAFEGUARDS INFORMATION SYSTEM FOR REDD+

Draft Safeguards Information System for REDD+



Dr. R. S. Rawat, Scientist
Indian Council of Forestry Research and Education, Dehradun

Expert Committee for drafting of the Safeguards Information System

- Sh. A.S. Rawat, DG, ICFRE : Chairman
- Dr. Jagdish Kishwan, Former ADGF WL, MoEFCC: Member
- Dr. Promode Kant, Director, Institute of Green Economy: Member
- Dr. Subhash Ashutosh, DG, FSI: Member
- Dr. Mohit Gera, PCCF & HoFF, J&K: Member
- Dr. Sanjay Srivastava, APCCF, Jharkhand: Member
- Dr. Jagmohan Sharma, APCCF, Karnataka: Member
- Sh. Noyal Thomas, IGF, Forest Policy, MoEFCC: Member
- Mr. Anurag Bhardwaj, Director (IC), ICFRE: Member
- Dr. T.P. Singh, CCF, Haryana: Member
- Dr. Parag M. Dhakate, CCF, Uttarakhand: Member
- Mr. V.R.S. Rawat, Scientist/ ADG Retd., ICFRE: Member
- Dr. R.S. Rawat, Scientist, ICFRE: Member Secretary

REDD+

UNFCCC encourages developing countries to contribute in climate change mitigation through forestry sector by undertaking:

Reducing Emissions from Deforestation and Forest Degradation, } REDD
Role of Conservation of Forest Carbon Stocks, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks } +

Implementation of REDD+

REDD+ activities need to be implemented in three phases:

1. Development of National Strategy or Action Plan and measures, and capacity-building
2. Implementation of National Strategy or Action Plan and results-based demonstration activities
3. Developing results-based actions that should be fully measured, reported and verified

Four Key Elements Required for Implementation of REDD+ Activities

CP 15: Copenhagen - 2009; CP 16: Cancun - 2010; CP 17: Durban - 2011; CP 19: Warsaw- 2013

Safeguards

REDD+ has the potential to provide carbon and non-carbon benefits

However, REDD+ implementation may have some environmental and social risks

REDD+ Safeguards are required to reduce the risks from REDD+ implementation and help to deliver environmental and social benefits

A set of seven safeguards agreed under the UNFCCC, that should be promoted and supported in implementation of REDD+ activities (Cancun Safeguards)

Safeguards Information System: A system to provide information on how all Cancun safeguards are being addressed and respected

Cancun Safeguards

a. REDD+ actions complement or are consistent with the objectives of national forest programmes and relevant international conventions & agreements
b. Transparent and effective national forest governance structures, taking into account national legislation and sovereignty
c. Respect for the knowledge and rights of local communities
d. Full and effective participation of relevant stakeholders
e. REDD+ actions are consistent with the conservation of natural forests and biodiversity
f. REDD+ actions to address the risks of reversals
g. REDD+ actions to reduce displacement of emissions

Safeguards Information System

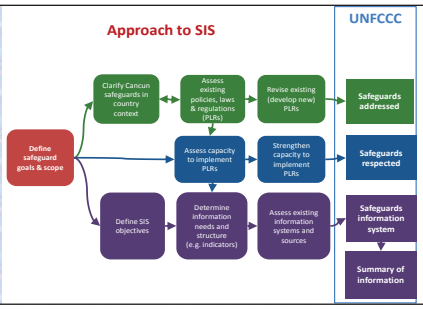
Safeguards Information System should:

- provide information on how all the Cancun safeguards are being addressed and respected in implementation of REDD+ activities
- provide transparent and consistent information which is accessible by all relevant stakeholders and updated regularly
- be transparent and flexible to allow scope for improvements over time
- be country-driven and implemented at the national level
- build upon existing systems, as appropriate

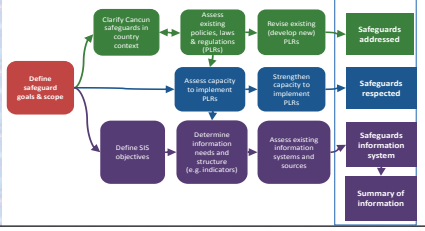
(Durban Guidance 12/CP.17)

Processes are being followed for developing SIS

Approach to SIS



Approach to SIS



Structure of Draft SIS Document

1. Introduction
2. Background
   - REDD+ safeguards requirements
   - India's approach to safeguards
   - Goals, scope and scale of safeguards application
   - Assessing the benefits and risks of REDD+ actions
   - Specifying Cancun Safeguards in accordance with national circumstances
   - Major Global Convention and Agreements Ratified by India
3. Existing Governance Arrangements in India for Addressing Cancun Safeguards
4. Safeguards Information System
   - Objectives
   - Functions
   - Institutional Arrangements
   - Principles, Criteria and Indicators (PCI) for collection of information on Safeguards
   - Grievance Redressal Mechanism related to Safeguards
   - Summary of Information on Safeguards
5. Way Forward

Existing Governance Arrangements for Addressing Cancun Safeguards

- National Forest Policy, 1988
- National Environment Policy, 2006
- National Water Policy, 2012
- National Agroforestry Policy, 2014
- Indian Forest Act, 1927
- Forest (Conservation) Act, 1980
- Wild Life (Protection) Act, 1972
- Water (Prevention and Control of Pollution), 1974
- Air (Prevention and Control of Pollution) Act, 1981
- Environmental (Protection), 1986
- Panchayat (Extension to Scheduled Areas) Act, 1996
- Protection of Plant Varieties and Farmers' Rights Act, 2001
- Biological Diversity Act, 2002
- Forest Rights Act, 2006
- Right to Information Act, 2005

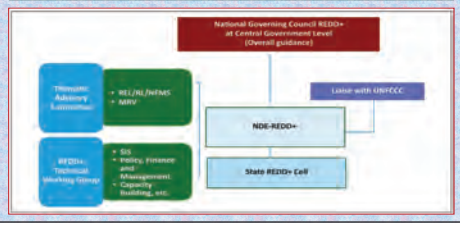
Existing PLRs addresses all the Safeguards

Objectives of SIS

The objectives of the SIS are:

- To meet the national objectives of forest management, forests & biodiversity conservation, environment protection and sustainable development
- To meet the objectives of National REDD+ Strategy
- To demonstrate that Cancun Safeguards are being addressed and respected in implementation of REDD+ activities
- To prepare periodically a summary of information on safeguards for submission to UNFCCC

Institutional Framework for Implementation of National REDD+ Strategy



State REDD+ Action Plans

Institutional Arrangements for SIS

National Designated Entity for REDD+ (NDE-REDD+), MoEFCC: Oversee the implementation of SIS and submission of SOI on safeguards

ICFRE: Provide support to NDE-REDD+ for compilation of information at national level and preparation of SOI

FSI: Provide support to NDE-REDD+ for forest inventory related tasks

NBA: For ensuring the effective compliance of biological diversity related safeguards through SBB

State REDD+ Cells: Responsible for implementation of SIS and data collection, quality control and quality assurance of the data/ information, and further submission to ICFRE

State Biological Diversity Boards : Responsible for ensuring the effective compliance of biological diversity related safeguards through BMC

Forest Divisions provide the data on safeguards to the State REDD+ Cell

Principle, Criteria and Indicators (PCIs) to be used for collection of information on Cancun Safeguards

Safeguard a: Actions complement or are consistent with objectives of National Forest Programmes and relevant international conventions and agreements

Principle: REDD+ activities shall comply with national PLRs and international conventions/ agreements related to environment, forest, biodiversity, other natural resources and peoples right, and shall be consistent with the objectives of national forest programme(s)

Criteria (2)	Indicators (6)
1. Consistency and complementarity of REDD+ actions with national policies, laws and objectives of national forest programmes	1) Planning stage: Grading on 0 to 9 scale with 9 indicating best consistency and complementarity 2) Implementation stage: Grading on 0 to 9 scale with 9 indicating best consistency and complementarity 3) Number of approved Forest Working Plans for management of forests 4) Whether REDD+ action plan vetted by State REDD+ Cell
2. Consistency and complementarity of REDD+ actions with international conventions and agreements ratified by India	5) Planning stage: Grading on 0 to 9 scale with 9 indicating best consistency and complementarity 6) Implementation stage: Grading on 0 to 9 scale with 9 indicating best consistency and complementarity

PCIs *contd ...*

Safeguard b: Transparent and effective national forest governance structures, taking into account national legislation and sovereignty

Principle: Demonstration of transparent and effective national forest governance structures for implementation of REDD+ Actions

Criteria (3)	Indicators (6)
3. Adequacy of institutional framework for management of REDD+ activities	7) Grading on 0 to 9 scale with 9 indicating best or most adequate institutional framework 8) Number of capacity building programmes for forest staff and local communities organised
4. Adequacy of institutional framework for dialogue across stakeholders and with management	9) Grading on 0 to 9 scale with 9 indicating best or most adequate institutional framework 10) Number of meetings/workshops etc. organised between stakeholders and management
5. Grievance redressal mechanism	11) Whether mechanism exists 12) Effectiveness of mechanism: Number of meetings held/ Number complaints received and disposed/ Number of repeat complaints of same nature

PCIs *contd ...*

Safeguard c: Respect for the knowledge and rights of indigenous peoples and members of local communities by taking into account relevant international obligation, national circumstances and laws

Principle: REDD+ activities shall respect the knowledge and rights of local communities

Criteria (2)	Indicators (5)
6. Identification of all local communities, their knowledge and rights	13) All local communities documented 14) Rights of local communities documented 15) Knowledge of local communities documented (number PBR etc.)
7. Integration of local community knowledge and rights in REDD+ Action Plan	16) Grading on 0 to 9 scale with 9 indicating best

PCIs *contd ...*

Safeguard d: The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities

Principle: REDD+ activities shall identify the relevant stakeholders including local communities and ensure their participation in implementation

Criteria (3)	Indicators (7)
8. Identification of relevant stakeholders and defining their role and relevance	17) Whether all stakeholders have been listed: Y/N 18) Whether the relevance and prospective role of the stakeholders has been documented: Y/N
9. Effectiveness of participation	19) Number of meetings held 20) Number/ Percentage of stakeholders participated 21) Number/ Percentage of women participated 22) Issues related to participation of the relevant stakeholders i/c local communities in REDD+ implementation, raised by stakeholders during meetings, and redressal thereof (Y/N)
10. Capacity building of stakeholders	23) Number of capacity building programmes conducted for stakeholders

PCIs *contd ....*

Safeguard e: The actions are consistent with the conservation of natural forests and biological diversity, ensuring that the 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

Principle: REDD+ activities shall ensure the conservation of natural forest, biological diversity and enhance ecosystem services and social & environmental benefits

Criteria (3)	Indicators (11)
11. Mechanism to observe that actions are consistent with the conservation of natural forests and biological diversity, is in place	24) Whether initial status/ assessment recorded 25) Whether it has been integrated in planning stage 26) Whether it is being monitored 27) Periodic monitoring of growing stock, extent of forest & tree cover, and biological diversity
12. Contribution to ecosystem vitality	28) Whether natural regeneration has improved 29) Whether weed invasion has been reversed 30) Whether grazing pressure has been reduced 31) Whether vulnerability to forest fires has been contained 32) Flow of ecosystems services from forests has been enhanced
13. Incentivization	33) Whether incentives are built into planned benefits to stakeholders 34) Whether stakeholders find the incentives attractive

PCIs *contd ....*

Safeguard f: Actions to address the risks of reversals

Principle: REDD+ activities shall seek to reduce the risk of reversal through appropriate means and activities at regional level and through policy initiatives at national level

Criteria (1)	Indicators (4)
14. REDD+ activities should include measures to address the potential drivers of reversals	35) Potential drivers for risk of reversal identified (fire, encroachment, grazing etc.) 36) Management measures/ policy interventions taken to address and mitigate the risk of reversal 37) Active participation of local community in forest protection 38) Extent of alternate eco-friendly and clean energy sources to the local communities

PCIs *contd ....*

Safeguard 7: Actions to reduce displacement of emissions

Principle: REDD+ activities shall include strategies to reduce displacement of emission from one area to another

Criteria (2)	Indicators (3)
15. Identify the activities that has potential to shift from REDD+ project area	39) Check the displacement of activities (if any) from project area to other nearby places and effective addressal thereof
16. Increase in extent and quality of forest and tree cover	39) Trends in forest and tree cover 40) Increase in carbon stocks due to increase in forest and tree cover

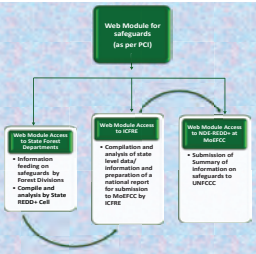
Grievance Redressal Mechanism related to Safeguards

State REDD+ Cell shall be responsible for addressing the grievances and disputes of stakeholders regarding application of REDD+ safeguards

Functions of State REDD+ Cell for Grievance Redressal:

- To address the grievances of the stakeholders with respect to REDD+ safeguards
- To take timely necessary corrective measures for disposal of the grievances
- To prepare action taken report for submission to the NDE-REDD+
- To prepare summary of grievances and their resolution at state level
- To prepare the annual report of the grievances redressal for submission to the NDE-REDD+

Outline of the web-based application for SIS



Thanks for kind attention and valuable inputs!

Comments/suggestions/inputs are most welcome, kindly send at
rsbrawat@gmail.com, 0135-2224803

PROCEEDINGS OF THE STAKEHOLDER CONSULTATION WORKSHOPS ON DRAFT SAFEGUARDS INFORMATION SYSTEM

1. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Karnataka, Andhra Pradesh and Goa

The first stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 16 September 2020 at Institute of Wood Science and Technology (IWST), Bengaluru. The workshop was attended by a total of 65 participants from State Forest Departments of Karnataka, Andhra Pradesh and Goa, Indian Institute of Science, Agricultural Universities, Research Institutions, retired foresters and non-governmental organisations.

Dr. M.P. Singh IFS, Director, IWST welcomed the participants of the stakeholder consultation workshop, and briefed the purpose and importance of the workshop and requested for active participation in the form of inputs and discussion on the draft SIS document.

Shri A.S. Rawat IFS, Director General, ICFRE during his opening remarks appreciated the members of the Expert Committee for preparation of the draft SIS document and further stated that certain criteria and indicators have been proposed which would be modified and improved on inputs and suggestion of the stakeholders.

Shri Sanjay Mohan IFS, Principal Chief Conservator of Forests & Head of Forest Force, Karnataka Forest Department said that a State REDD+ Cell has been established in the state recently. The state is taking up planting activity in 55-60 thousand hectares every year, 30-40 million seedlings have been distributed every year to people under various afforestation programmes/schemes. This has successfully brought about an increase in forest cover in the state of Karnataka.

Shri Sanjay Gupta IFS, Principal Chief Conservator of Forests (Working Plan), Andhra Pradesh Forest Department stated that draft SIS document has been prepared with good mapping of statistics and existing policy. However, the documents need to specify guidelines on the 0-9 grading system and also timeline for implementation of SIS. He also stated that the biggest drawback at present is the lack of capacity of the states.

Shri Subash Chandra, IFS, Principal Chief Conservator of Forests, Goa Forest Department stated that draft SIS document has good inputs for protection. Further he said that State Biodiversity Boards may be involved to provide real value to conservation efforts.

Dr. Jagmohan Sharma IFS, Member of the Expert Committee presented an overview of SIS for implementation of REDD+ in India.

Dr. R.S. Rawat, Scientist, Biodiversity and Climate Change Division, ICFRE & Member Secretary of the Expert Committee presented the draft document on SIS for implementation of REDD+ in India.

Mrs. Ritu Kakkar, Principal Chief Conservator of Forests (Evaluation, Working Plan, Research and Training, Climate Change), Karnataka Forest Department stated that availability of funds for implementation of REDD+ activities is a big challenge.

Shri Nagesh Hedge, Journalist and Farmer stated that information should be shared to stakeholders in local language for making it more effective. The inputs from local/ indigenous stakeholders may also be considered. He mentioned that excessive weeds and encroachment by wildlife should also be addressed.

Shri R. K. Suman, Additional Principal Chief Conservator of Forests, Andhra Pradesh Forest Department stated that language of the SIS document should be simple and user friendly. Since REDD+ is a mandate of all departments, not forest department alone.

Dr. Devagiri, Forestry College, Shimogga stated that continuous monitoring of carbon stock being an important aspect of REDD+ implementation; a dedicated agency would be an essentiality.

Dr. M. H. Swaminath (Retd. IFS) pointed out that risk factor should be emphasized and taken care of leakages like fire, logging policy, desertification etc.

Dr. Suresh, Indian Institute of Science, Bengaluru indicated that there is a need for a long-term research component on the safeguards, especially to record data of species wise performance on carbon stock improvement.

Shri H. Venuprasad IFS, Deputy Director, Forest Survey of India (FSI), Bengaluru mentioned that it is important to generate assessment reports periodically for REDD + implementation, for which FSI's reports on carbon stocks can be utilized.

Suggestions given by the participants for each safeguard are as under:

Safeguard 1: The 0-9 grading system may be reduced since it is at a project level. Parameters are not specified and measuring will become a huge task or retain 0-9 grading but each grade may be defined.

Policies /acts considered here may be mentioned and scoring may be done based on list of policies

Safeguard 2: Criteria 3 and 4 are part of institutional framework for planning, implementation and monitoring. It can be clubbed. As far as possible indicators may be borrowed from National Working Plan Code, so that implementation at Forest Division level is made possible. 0-9 grading may be removed.

Safeguard 3: Knowledge of local communities to be derived from people biodiversity register since it is documented and ready for use and fresh/separate collection of information is not required.

Safeguard 4: Criteria 9 may be removed, as participation of stakeholders is already covered. Identify specific stakeholders since it is very wide ranged.

Safeguard 5: For Indicator 24, Criteria 11, information may be taken from existing data of forest department to avoid subjectivity and better quantification. Local level data helps to increase credibility of information since source will be authentic with statistical data. Biodiversity status information for a state such as, number of species per acre/ha is very important for evaluation.

Safeguard 6: Benefit sharing can be a part of this safeguard

Safeguard 7: Monitoring of displacement activity to be added as a criterion without increasing project cost for which as far as possible and wherever possible indicators may be taken from existing documents.

Criteria 16 may be reframed to only plug leakage and not measure extent of forest /tree cover, as it may increase the cost of monitoring.

2. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Madhya Pradesh, Chhattisgarh and Maharashtra

The second stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 30 September 2020 at Tropical Forest Research Institute (TFRI), Jabalpur (Madhya Pradesh). The workshop was attended by a total of 53 participants from State Forest Departments and other line departments such as Agriculture, Horticulture, Rural Development, Social Welfare, Renewable Energy, Soil and Water Conservation, Research and Academic Institutions, NGOs and Joint Forest management Committees.

Dr. G. Rajeshwar Rao, Director, TFRI, Jabalpur in his welcome address briefed about the role of Indian forests and country's stand in reducing emissions. He welcomed all the stakeholders enunciating the objective of the workshop to provide their valuable suggestions and comments on the draft Safeguards Information System for REDD+ prepared by ICFRE.

Shri A. S. Rawat IFS, Director General, ICFRE welcomed all the participants from different parts of the country. He further elaborated the formulation of safeguards information system that should encompass national needs, safely implementable on the field and should be within the existing legal and institutional framework. He spoke on the importance of SIS for risk reduction in order to get REDD+ benefits.

Shri Rakesh Chaturvedi IFS, Principal Chief Conservator of Forests & Head of Forest Force, Chhattisgarh informed that state of Chhattisgarh initiated the process for creation of State REDD+ Cell. He further shared his ABC concept on REDD+ like strategies, i.e., A - Appropriate entitlement regime, B - Benefit sharing that will result in C - Conservation of forests. He was of the opinion that if A and B are ensured then conservation goals will be automatically met. He highlighted the importance of involving Joint Forest Management Committees and Gram Panchayats, Van Sanrakshan Samitis and Biodiversity Management Committees at the state level and added that the SIS should be aligned with the provisions of Forest Rights Act and Biological Diversity Act.

Dr. N. Rambabu, Principal Chief Conservator of Forests & Head of Forest Force, Maharashtra shared the state's efforts in implementation of REDD+ and technological improvements made during the last two years. He also briefed about the arrangement of JFMCs with the Forest Department for various efforts like ensuring LPG supply to forest dwellers to reduce fuel wood extraction, providing alternate livelihood programmes wherein youths from the villages are diverted from forest-based activities to non-forestry activities aimed at reducing dependence on forests.

Shri V.R.S. Rawat, Former ADG (BCC), ICFRE and Member, Expert Committee delivered a detailed presentation on REDD+ readiness in India and discussed the elements of National REDD+ Strategy and national progress for development of the key elements of REDD+ implementation.

Dr. R.S. Rawat, Scientist-D, BCC Division, ICFRE & Member Secretary of the Expert Committee presented the Draft Safeguards Information System for REDD+. He discussed in details all 16 criteria and their underlying 40 indicators for all the seven safeguards.

Shri Anurag Bharadwaj, IFS, Director, International Cooperation, ICFRE suggested that SIS is a reporting system to check risks and negative impacts of REDD+ implementation.

Dr. Promode Kant, Member of the Expert Committee suggested that all the participants should provide their valuable inputs on the draft document for further improvement.

Each safeguard was taken up for detailed discussion and feedback of stakeholders was sought as under:

Safeguard 1: Prof. Bhaskar Sinha, IIFM, Bhopal suggested to reduce the number of indicators and emphasised that the legal position of land where the projects have to be implemented needs to be reflected in criteria 1.

Safeguard 2: Prof. Bhaskar Sinha, IIFM, Bhopal brought out that Indexing should follow analytic hierarchy process in order to have a composite index. Hence, he suggested to either follow relative ranking or absolute score while grading.

Dr. Jagmohan Sharma, Member of the Expert Committee clarified that developing index is to assess the project once it is implemented. It should act as a surface guidance for interpretation and implementation. He assured that the grading system is yet to be finalised and 0-9 scales are yet to be defined.

The number of institutions as well as the mechanism through which the institutions will be involved needs to be incorporated under Criteria 3 and Criteria 4 of this safeguard.

Safeguard 3: Dr. Promode Kant, Member of the Expert Committee appreciated the importance of the safeguard and informed that the country is fortunate to have laws such as Forest Rights Act. The Provisions of the Panchayats (Extension to the Scheduled Areas) Act in order to respect rights of the indigenous people. Additionally, the Forest Working Plans have provisions to protect the rights of the communities.

Dr. Jagmohan Sharma, Member, Expert Committee suggested that People Biodiversity registers, which are the store house of knowledge of local people, will qualify as an indicator of documentation of local knowledge under Criteria 6 of this safeguard.

Prof. Bhaskar Sinha, Professor, IIFM, Bhopal suggested that number of people practising indigenous knowledge will be a strong indicator of knowledge base.

Safeguard 4: Dr. Promode Kant, Member Expert Committee suggested that number of stakeholders should be changed as percentage of stakeholders instead of numbers.

Safeguard 5: It has been suggested that indicators 24 and 25 can be merged as both are of similar nature, and similarly indicator 26 and 27 can be merged.

Criteria 12: It was suggested to shift this criterion from Safeguard 5 to an appropriate place.

It has been suggested that indicator 30 can be removed because grazing pressure questions people rights. Indicator 32: Ecosystem services/ environmental benefits are difficult to measure and introduce a risk; hence it should also be removed. A new indicator can be added: Improvement in soil and moisture conservation.

Criteria 13: This criterion is the biggest challenge for implementation and indicators are not very well worded. The word 'incentivization' to be reworded. The indicators have to be quantitative and in measurable terms.

Safeguards 7: It was suggested to remove Criteria 16 as Criteria 15 very well captures the essence of Safeguard 7.

Shri Anurag Bhardwaj, Director (International Cooperation), ICFRE in his closing remarks said that ICFRE would help the states in developing capacities related to preparation of State REDD+ Action Plans and REDD+ safeguards. He also assured that the comments of all the stakeholders will be duly considered and ICFRE will come up with a template, much understandable to everyone.

3. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Himachal Pradesh, Jammu & Kashmir and Ladakh

The third stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 09 October 2020 at Himalayan Forest Research Institute (HFRI), Shimla (Himachal Pradesh). The workshop was attended by a total of 74 participants from State Forest Departments and other line departments of Himachal Pradesh, Jammu & Kashmir and Ladakh such as Agriculture, Horticulture, Rural Development, Social Welfare, Renewable Energy, Soil and Water Conservation, Research and academic institutions, progressive farmers, non-governmental organisations and local community members.

Dr. S.S. Samant, Director, HFRI, Shimla extended a warm welcome to all the participants and requested all the participants to provide their valuable suggestions and comments on the draft Safeguards Information System for REDD+ Implementation in India.

Shri A. S. Rawat, IFS, Director General, ICFRE, Dehradun in his opening remarks extended a welcomed to all the officers and other participants participating from different parts of the region. He requested all the participants of the workshop to provide their valuable inputs on the draft safeguards information system for implementation of REDD+ in India.

Dr. Savita, Principal Chief Conservator of Forests & Head of Forest Force appreciated the efforts of ICFRE for formulating the comprehensive draft document on REDD+ Safeguard Information System. She also said that Himachal Pradesh is required to have 33% area under the forest cover by 2030 and the REDD+ activities are going to play a significant role to meet this ambitious target. She further added that coordination and association with local communities is very important and insisted that there should be a workable mechanism for sensitization of stakeholders at the grass root levels.

Shri V.R.S. Rawat, Former ADG (BCC) and Member, Expert Committee delivered a detailed presentation on REDD+ readiness in India.

Dr. R.S. Rawat, Scientist-D, BCC Division, ICFRE presented the Draft Safeguards Information System for REDD+ implementation in India

Dr. S.S. Samant, Director HFRI, Shimla emphasised that there is need to assess the status of forests, identify the degraded forests across the horizontal and vertical gradients, and also identify the suitable native species for plantation in the degraded forests. He emphasised for a strong network of Forest Departments, other Line Departments of the Government, NGOs and local institutions for achieving REDD+ goals.

Dr. Suresh Atri, Principal Scientific Officer, Department of Environment, Science & Technology HP, specifically touched upon the issue of Peoples Biodiversity Register preparation.

Shri Sandeep Khanwalkar, Senior Programme Director, Development Alternatives, New Delhi suggested that the Joint Forest Management Committees and community should be consulted while developing any REDD+ plan document.

Shri Mritunjay Madhav, Divisional Forest Officer, Una commented that as per his thinking REDD+ framework seems easy to implement, but at the

same time institutional strengthening is required. He also suggested that best practices need to be incorporated for making it a success.

Shri R. R. Bhalaik, representing an NGO, Sutlej Bachao Jiwan Bachao Smiti said that REDD+ implementation can conserve native biodiversity and also provide the benefits to the local communities.

Dr. Rajesh Sharma, Group Coordinator Research, HFRI Shimla also stressed on the need to promote indigenous and lesser known species to be taken up in the afforestation programmes for better adaptability and their socio-economic relevance.

Dr. R. K. Verma, Head, Forest Ecology and Climate Change Division HFRI, Shimla stated that the local communities need to be taken aboard during the consultative programmes under REDD+.

4. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Uttarakhand, Uttar Pradesh, Punjab, Haryana, Delhi and Chandigarh

The fourth stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 14 October 2020 at Forest Research Institute (FRI), Dehradun. The workshop was attended by a total of 42 participants from State Forest Departments and other line departments of Uttarakhand, Uttar Pradesh, Punjab, Haryana, Delhi and Chandigarh; Research and academic institutions and non-governmental organisations.

Shri Arun Singh Rawat, Director, FRI in his opening address briefed about the purpose of the workshop. He emphasized that the criteria and indicators of safeguards information system need to be developed to ensure the proper implementation of REDD+ activities. The field level conditions should be comprehensible so that it can be implemented and reported in a proper manner by the people who are working at the local level. He also stated that active cooperation from the forest department is needed as they will be the major stakeholders as far as the implementation of the safeguard information system is concerned.

Sh. V. R. S. Rawat, Member of the Expert Committee delivered his presentation on REDD+ and India's approach to REDD+ Safeguards. He opined that climate is changing and forest plays an important role in mitigating climate change.

Dr. R.S. Rawat, Scientist, ICFRE Dehradun delivered his presentation on Stakeholders Consultation on Draft Safeguards Information System for REDD+. He highlighted that in the present document on 'Draft Safeguards Information System for REDD+', 16 criteria and 40 indicators have been identified for Cancun safeguards. He requested all the participants to give their valuable inputs/ suggestion on the draft safeguards information system.

Sh. Ishwar Singh IFS, PCCF Delhi informed that creation of State REDD+ Cell for Delhi is under process. Safeguards number three and four are not applicable in the case of Delhi as every forest is a man-made forest which has now been naturalized in the form of natural forest. He also apprised that a Green app has been developed for tree felling complaints as well as tree transplanting.

Dr. K.K Joshi, Director Agriculture Uttarakhand stressed on breeding of elite animals so that pressure on forest will be reduce.

Sh. Kalyan Singh of Maiti Andolan, Dehradun stressed to involve women in Safeguards Information System for REDD+. He said that we need to give importance to the women as women have knowledge about the management of natural resources including forests. He also stated that kids need to be rooted and made aware about the environment at a young age through the activities such as Eco clubs.

Shri Raman Nautiyal, Former Scientist of ICFRE said that the demarcation of boundaries and information that comes from the field should have high integrity value. Use of technology should be used in the field.

Sh. Anurag Bhardwaj, Director, International Cooperation, ICFRE in his closing Remarks said that safeguards are mandatory. In the draft of Safeguards Information System for REDD+, the local community rights and traditional knowledge have been addressed. He also informed that a mechanism is already there to involve the women stakeholders. He also emphasized that urban forest needs to be looked at from a different perspective and will ensure to capture the urban forest and to address these issues. He informed that capacity building programme of the stakeholders on various aspect of REDD+ will be taken up.

5. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the North-Eastern states of India

The fifth stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 22 October 2020 at Rain Forest Research Institute (RFRI), Jorhat, Assam. The workshop was attended by a total of 21 participants from State Forest Departments and other line departments of North-Eastern states.

Dr. R. S. C. Jayaraj IFS, Director, RFRI, Jorhat welcomed the dignitaries and addressed the participants. In his welcome address, he highlighted about the diverse communities and tribes of North-Eastern states of India and the importance of conserving their traditional knowledge. He explained that the rights of the indigenous people should not suffer during the implementation REDD+ activities and this demands special attention in implementation of any developmental project/programme. He stated that land tenure system in the North-Eastern India is very complex.

In his opening remarks, Shri A. S. Rawat, IFS, Director General, ICFRE highlighted the four key elements of REDD+ viz. National REDD+ Strategy or Action Plan, National Forest Reference Level or Forest Reference Emission Level, National Forest Monitoring System and Safeguards Information System which are to be developed for implementation of REDD+ projects in the developing countries. He stated that REDD+ activities are not only the option of mitigating climate change by conservation or enhancement of carbon stock, but it provides financial incentives to the stakeholders as well.

Shri V.R.S. Rawat, Member of the Expert Committee delivered a presentation on 'REDD+ Readiness in India'. He stated that forests play a critical role in climate change mitigation and adaption and it contributes about 20- 25% of global CO2 emissions. He elaborated about the genesis of REDD+ under the umbrella of UNFCCC.

Dr. R.S. Rawat, Scientist-D, Biodiversity and Climate Change Division, ICFRE, presented the 'Draft Safeguards Information System' prepared by the Expert Committee constituted by the Director General, ICFRE. He requested the participants, to comment on the draft SIS document especially on 16 criteria and 40 indicators of SIS draft document.

Dr. R. K. Singh, IFS, Principal Chief Conservator of Forests & Head of Forest Force, Arunachal Pradesh stated that implementation of REDD+ activities do not have any problem and Arunachal Pradesh has already initiated various activities under REDD+ in the state. He opined that Safeguards Information System as prepared by ICFRE is in order but some issues need to be sorted out. Arunachal Pradesh is predominantly a tribal state where 80% forest is managed by tribal communities. There are a large number of tribes and sub-tribes which may face problem in documentation of traditional knowledge. Periodical monitoring of growing stock, extent of forest and tree cover, carbon stock and biological diversity may not be possible as the state is quite big and 80% area is forested. He informed that establishment of REDD+ cell in Arunachal Pradesh is in process.

Shri Hirdesh Mishra, IFS, Chief Conservator of Forests, Social Forestry, Assam informed that Assam has constituted the State REDD+ cell on 24 June, 2020. The first meeting focused on the state level strategies or action plans, Safeguards Information System and Forest Reference Level for REDD+. The mechanism of involvement of various stakeholders like educational institutes for implementation of REDD+ activities were also discussed. Shri Mishra opined that the primary strategy would be to focus on capacity building of the forest officials, mainly working plan officers and incorporation of REDD+ activities in the working plans. The training on NTFPs, nursery development, soil and moisture conservation etc. need to be given the highest priority.

Dr. Lokho Puni, IFS, Additional Chief Conservator of Forests (CC&FCA), Manipur, stated that REDD+ activities have already been initiated in Manipur through involvement of local communities and State REDD+ Cell is constituted. Capacity building to the forest officials of the State Forest department and stakeholders will be initiated at the earliest. In the preparation of working plan, necessary steps have been taken to protect the knowledge and rights of local communities in Manipur.

Shri S. M. Sahai IFS, Additional Chief Conservator of Forests (CCR&T), Meghalaya, stated that Meghalaya will constitute the REDD+ Cell within a very short time and Meghalaya is the pioneer in the implementation of REDD+ activities in this region. The existing forest working plans are going to expire and will be revised with incorporation of REDD+ activities.

Shri Temjenyapang Jamir IFS, Conservator of Forests (Publicity & Training), Nagaland, stated that REDD+ is a comparatively new concept for Nagaland and people's participation is important as most of the forest lands and resources belong to communities. He stated that proposal for constitution of REDD+ Cell in the state has already been submitted to Ministry of Environment, Forest and Climate Change, Govt. of Nagaland.

Dr. D. K. Sharma IFS, Principal Chief Conservator of Forests & Head of Forest Force, Tripura, stated that steps have taken for implementation of REDD+ activities in Tripura. All the 8 working plans of Tripura are in place and Department has started revising them to incorporate the REDD+ activities. About 1264 Biodiversity Management Committees have been created in Tripura with involvement of local communities and People's Biodiversity Registers are in place. He informed that proposal for constitution of REDD+ Cell has already been sent to Ministry of Environment, Forest and Climate Change, Govt. of Tripura.

Shri Jitendra Kumar IFS, Principal Chief Conservator of Forests, Mizoram and Shri Y.P. Gurung IFS, Secretary Forests, Sikkim appreciated the initiatives of ICFRE and informed that REDD+ activities in their respective states are in right track.

Prof. B.K. Tewari, North-Eastern Hill University (retired), Shillong appreciated the initiatives of ICFRE and briefed about the Mawphlang Khasi Hills Community REDD+.

Representatives of Community/NGOs, REDD+ Working Group for North-Eastern States of India Shri Tambor Lyngdoh, Chief Community Facilitator, Mawphlang Khasi Hills Community REDD+ project suggested that in order to ensure the historic and ongoing role of the communities involved in REDD+ project, developers must work with participating communities and local governments to fully implement the Forest Rights Act. He also suggested that in Sixth Schedule areas the project developers must involve local communities as willing and equal partners, respecting and fully recognizing the historic, customary forest rights and practices of the communities. Traditional institutions and indigenous governance bodies and their leadership should play an equal role in designing the project, and should be empowered with the technical and financial resources to implement it. At least 60 percent of all benefits from carbon offsets should be distributed to the participating communities.

6. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Rajasthan, Gujarat, Dadra & Nagar Haveli and Daman & Diu

The sixth stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 03 November 2020 at Arid Forest Research Institute (AFRI), Jodhpur, Rajasthan. The workshop was attended by a total of 35 participants from State Forest Departments and other line departments such as, Agriculture, Horticulture, Rural Development, Social Welfare, Research and Academic Institutions, NGOs and JFMCs from Rajasthan, Gujarat, Dadra & Nagar Haveli and Daman & Diu.

Sh. M.R. Baloch, Director AFRI, Jodhpur welcomed all the participants and briefed about the efforts of expert committee members on the draft Safeguard Information System for REDD+ and spelled out the agenda of meeting. In his welcome address briefed upon the role of Indian forests and country's stand in reducing emissions. He also talked about the history, origin of REDD+ and its immense possibilities on climate change mitigation and adaptation.

Shri A. S. Rawat, IFS, Director General, ICFRE welcomed all the participants and stated that clarity need to be developed about the implementation of REDD+ by various states and requested the concerned Principal Chief Conservator of Forests to nominate nodal officers to implement REDD+ activities in their respective states. He also said that the REDD+ is not only serves as a climate change mitigation option but also serves as a livelihood generation option to the local community. During his address he also highlighted the associated social and environmental risks while implementing the REDD+ activities. In order to minimize these risks involved in implementation of the REDD+ activities, seven Cancun safeguards need to be addressed and respected. The adoption of this REDD+ plan along with the implementation of the Safeguards will ensure a positive impact.

Shri Anurag Bhardwaj, Director (International Cooperation), ICFRE said that the efforts and intention of the Cancun safeguards are to minimize

the risk associated with the REDD+ implementation. He described safeguards as the mechanisms to ensure that the project framework under REDD+ does not have any social or environmental issues. He further said that the intention of these Safeguards is to ensure that REDD+ projects are focused towards forestry intervention activities. He also said that the REDD+ readiness plan involves various exercises for capacity building in terms of training programmes for facilitating the entire process.

Ms. Shruti Sharma, Principal Chief Conservator of Forests & Head of Forest Force, Rajasthan apprised that Rajasthan State Government is working to reframe the Forest Policy 2010, keeping the REDD+ safeguards and objectives into consideration. She also emphasized that the decision-making process should be transparent for the proper implementation of rules and regulations. An advanced feature of tracking various services and e-transactions done each day along with the cumulative report of the year is added in the Rajasthan's government site. Rajasthan state has already created State REDD+ Cell. In her address she mentioned the need of capacity building for implementing the REDD+ project activities and dissemination of information.

Dr. Sanjiv Tyagi, Additional, Principal Chief Conservator of Forests (R&T), Gujarat in his opening remarks emphasized the need of conservation and enhancement of carbon stock for efficient implementation of REDD+ in India. In Gujarat state the trees outside forest has outnumbered that within the forests which have resulted in the increased carbon stock and is beneficial in a long run. He also spoke about the ongoing Gujarat Forestry Development project running in its third stage after completing the first two stages. In the third stage focus is towards growing the grasslands which are very effective in absorbing CO2. The Gujarat state has also developed an online system which aids the real time monitoring of forests. Finally, he ended his words appreciating the REDD+ initiative and its strategies for their efficient implementation in states through capacity building and infrastructure development.

Sh. K. Ravichandran, Chief Conservator of Forests, Dadra & Nagar Haveli and Daman & Diu appreciated the efforts made by ICFRE for documenting the draft Safeguards Information System for REDD+ Implementation in India. He emphasized that the enhancement of carbon stock by increasing the forest cover, augmenting the existing forest cover on moderately dense forest besides taking up the plantation programmes is the need of the hour. In his address he said that the Safeguards Information System has 16 criteria and 40 indicators identified for the seven safeguards. Each principle, criteria and indicator develop a dataset which will useful for the department. Towards the end he said that for proper collection and dissemination of the information capacity building plays a key role wherein area based teams can be formed involving field experts.

Sh. N.K. Vasu, IFS, Ex Principal Chief Conservator of Forests & Head of Forest Force, Assam in his opening remarks said that the four key elements essential for implementation of REDD+ is very important. The climate change projects implemented at various states has impacted the overall environment. The REDD+ along with the safeguards, criteria and indicators needs critical understanding for their proper implementation and reporting at the ground level. He also focused on the necessary adaptations or refinements to be made in the safeguards, criteria and indicators as per the requirements through discussions at every level. During his address he said that the fifth safeguard is quite important with respect to conservation of forests and biological diversity.

Dr. Praveen Kumar Principle Scientist, CAZRI said that CAZRI is working on agriculture and agro-forestry but for the climate change issues AFRI and CAZRI shares a common platform. The harsh climatic conditions of the area enable us to focus on the arid lands. Afforestation helps to increase the carbon stock and proves to be one of the best options for climate change issues. He said that the forest fire is a major issue which needs attention.

Dr. V.P. Tiwari, Ex Director, HFRI, Shimla emphasized on the effective participation of local communities in formulation of the safeguards. He also said that for implementing the REDD+ activities adequate manpower and skill is the key issue which is fulfilled by the capacity building programme. He said that goal and scope of the SIS should be clarified.

Dr. Ranjana Arya, Retd. Scientist, AFRI, Jodhpur said that the creation of database by collection of the growth and soil status data is very essential and hence needs proper training of the State Forest Department field staff for effective dissemination

of information. The research institutes play an important role for providing the essential skill during the training programmes.

Shri S.R.V. Murthi IFS, Chief Conservator of Forests, Jodhpur said that there is a need to train lower forest staff on data collection. Capacity building of forest staff is required. Quantification of carbon sequestration in the afforestation area is required. Field specific criteria are needed for better functioning.

Sh. V.R.S. Rawat, Former ADG (BCC) and Member, Expert Committee delivered a detailed presentation on REDD+ readiness in India.

Dr. R.S. Rawat, Scientist-D, BCC Division, ICFRE presented the Draft Safeguards Information System for REDD+. He gave an overview of the REDD+ objectives, its key elements, its implementation strategy, associated risks which are addressed by the Cancun safeguards with the principles, sixteen criteria and forty indicators.

7. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Bihar, Jharkhand and West Bengal

The seventh stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 5 November 2020 at Institute of Forest Productivity, Ranchi (Jharkhand). The workshop was attended by a total of 45 participants from Tamil Nadu Forest Department, Kerala Forest and Wildlife Department and Environment and Forests Department of Andaman & Nicobar Islands participated in the consultation.

At the outset, Dr. Nitin Kulkarni, Director, IFP, Ranchi extended a warm welcome to all esteemed dignitaries. He introduced the purpose of the REDD+ consultation meeting and informed that REDD+ is a climate change mitigation option under UNFCCC. He said that the major responsibility for execution of REDD+ activities involved the State Forest Departments. He informed that Safeguard Information System for REDD+ has already been drafted and welcomed interaction among the dignitaries for further improvement. He invited suggestions and comments from the stakeholders for further improvement of the draft before final submission to the Ministry.

Dr. Sanjay Srivastava IFS, Additional Principal Chief Conservator of Forests (CAMPA), Jharkhand State Forest Department informed that in 2011 in the Cancun agreement came into being and they decided that the REDD+ activity should be contributing towards the stabilization of greenhouse gas emissions. He said that this programme will be providing the opportunities and livelihood support to the stakeholders at field level. He also explained the seven safeguards known as 'Cancun safeguards' and said that the whole purpose of making these safeguards was to ensure that negative impacts of anything, which will be implemented during the implementation of REDD+ action plan, would be avoided. Speaking on behalf of the Jharkhand State Forest Department, Dr. Srivastava said that before implementation of SIS, capacity building of the stakeholders is needed.

Shri A. S. Rawat, IFS, Director General, ICFRE, Dehradun welcomed the dignitaries and informed that this is the seventh consultation meeting on developing safeguards information system for REDD+. He impressed upon to get good and innovative suggestions and feedback from the participants of Jharkhand, Bihar and West Bengal on the draft document. He said that during implementation of REDD+ activities, there may be risks involved related to social and environmental. Safeguards are basically the tools to ensure effective implementation of REDD+ actions and to avoid and minimize governance, social and environmental risks of REDD+ implementation. He stressed that the REDD+ consultative meeting would be fruitful and would pave way for improvement in the SIS document.

Shri A. K. Pandey IFS, Principal Chief Conservator of Forests & Head of Forest Force, Bihar State Forest Department said that the State occupies 2.86% of country's geographical area and 12.06% of forest cover with huge population and tremendous pressure on forests, which are degraded. He informed that plantations have been done for extension of tree cover, mostly outside the forests and inside the forests too, but there is a huge gap of 2000 sq km inside recorded forest area as per FSI reports. He added that forests are under huge pressure by people residing in forest fringe villages. Removals are more than what is being supplemented. He informed that State REDD+ Cell has been created but there is lack of awareness

among the members about REDD+. He called for capacity building programmes to be conducted by ICFRE.

Shri Ravi Kant Sinha IFS, Principal Chief Conservator of Forests & Head of Forest Force, West Bengal Forest Department was concerned about lack of awareness at local level and the action plan or the way forward is to have more stakeholders' conferences, more stakeholders' awareness campaigns. He suggested that ICFRE should partner with institutions who can translate the technical benefits to local way of lives, so that local people can participate in a more meaningful manner. He said that the main focus of REDD+ was to prevent forest degradation and preserve our natural wealth. He pointed out that in the draft SIS document only targets trees and forest ecosystems, whereas the animals and wildlife are the best indicators of forest degradation. He also suggested for inclusion of funding pattern in the document format.

Shri V. R. S. Rawat, Former ADG (Biodiversity & Climate Change) and Member, Expert Committee on REDD+, ICFRE, Dehradun delivered a detailed presentation on "REDD+ Readiness in India".

Dr. Sanjay Srivastava IFS, Additional Principal Chief Conservator of Forests (CAMPA), Jharkhand State Forest Department concerned about funding support and was of the opinion that funds are difficult to get REDD+ finance from GCF. He also informed that funds from CAMPA were to be used as per specific Ministry acts and rules. He added that the funds from CAMPA cannot be supplemented to any other scheme. He queried about capacity building and technical support that could be provided by ICFRE before implementation of the action plan.

Sh. Anurag Bhardwaj, IFS, Director (International Cooperation), ICFRE, Dehradun said that with regard to the capacity building issue, ICFRE has supported in preparation of REDD+ action plan for the States of Mizoram, Himachal Pradesh, Uttarakhand and Sikkim as a part of ICIMOD funded project. He also said that the REDD+ resource manual for capacity building of State Forest Departments has been prepared and would be very helpful in preparation of REDD+ action plan. He said that due to COVID 19 pandemic, training programmes have not been started, but assured that focused capacity building programmes would be taken up shortly.

Dr. R. S. Rawat, Scientist In-charge, Biodiversity & Climate Change, ICFRE, Dehradun presented the Draft Safeguards Information System for REDD+.

Dr. Jose Mathews said that the SFDs will be collecting data and ICFRE will be coordinating. He said that DFOs are already under tremendous pressure and creation of REDD+ cell will be an added responsibility. He enquired about the responsibilities of the assessments, whether the State Govt., the ICFRE or the Govt. of India level?

Responding the queries put forth by Dr. Mathews, Sh. Anurag Bhardwaj said that activities of REDD+ will be project based activities. He said that ICFRE and Govt. of India are building capacities of the State Governments so that they can develop the projects. These are facilitating mechanisms that are being done and it is not mandatory for the States. He informed that capacity building will be done to enable the SFDs to develop their own projects related REDD+ and will be funded exclusively under REDD+ scheme.

Dr. Kailash Chandra, Director, Zoological Survey of India, Kolkata West Bengal said that after the REDD+ activity, there can be a periodic data to have a futuristic approach and a clear understanding about the status of forests.

Dr. J. P. Pandey, Scientist, Central Tasar Research and Training Institute, Ranchi informed that their organization wanted to set up a tasar silk sanctuary in various parts of the country. In response to Dr. Pandey, Dr. Kulkarni said that relevant projects may be drafted in lines of the REDD+ safeguards system.

Shri Rajnish Kumar, DFO, Saranda Forest Division, Jharkhand informed that there was excess dependence of local people on forest in terms of food, like NTFPs and fuel because they do not have other livelihood options. He queried about how REDD+ can help Saranda Forest Division in Jharkhand on reduction of pressure on forest from people who are residing in the vicinity.

Dr. Purabi Saikia, Assistant Professor, Central University of Jharkhand, Ranchi said that REDD+ strategy is committed to safeguard and ensure respect for the rights of indigenous people and local communities as stated in the constitution of India. She added that Jharkhand is a State where forest dwelling communities are high and their dependency on forests is very high, so, there must be special provisions for the tribal dominated States or areas, where most of the tribals are highly dependent on forests and forest products.

Sh. Srikant Verma, IFS said that soil health card system can be developed through existing laboratories for soil carbon measurement.

Dr. Prasanjit Mukherjee, Head, Dept. of Botany, S.K.M College, Pakur, Jharkhand enquired about collaboration avenues with universities during data collection and awareness campaigns while implementing the REDD+ SIS activities. Shri V. R. S. Rawat said that during development of State specific REDD+ action plan, the collaborations with institutions, universities, NGOs, JFMCs, local communities etc will be taken care of.

Sh. Anurag Bhardwaj, IFS, Director (International Cooperation), ICFRE, Dehradun while concluding the day long deliberations praised the interactions and active participation. He summarized by saying that SIS is a mandatory reporting system and not a project formulation guideline system. The SIS exercise would help us in ensuring that we incorporate all the key probable risks of the project that is formulated under REDD+ mechanism and it is important to have the SIS system in place.

8. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Tamil Nadu, Kerala and Andaman & Nicobar Islands

The eighth stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 16 December 2020 at Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore, Tamil Nadu. The workshop was attended by a total of 48 participants from Tamil Nadu Forest Department, Kerala Forest and Wildlife Department and Environment and Forests Department of Andaman & Nicobar Islands.

Dr. C. Kunhikannan, Director, IFGTB welcomed the dignitaries and delegates and highlighted about the climate change, its impact like change in rainfall pattern due to frequent floods, drought, rise in sea level etc. across the global level. He stressed the importance of the contribution of forests towards climate change, like absorbing Co2 and storing it in woods, leaves etc.

Shri Anurag Bhardwaj IFS, Director (International Cooperation), ICFRE enlightened the gathering about the United Nations Framework Convention on Climate Change, which encourages developing countries to contribute in climate change mitigation by undertaking REDD+ activities and about the incentives and various welfare measures provisioned to the forest dwelling communities.

Shri P.K. Kesavan IFS, Principal Chief Conservator of Forests & Head of Forest Force, Kerala Forest and Wildlife Department highlighted the impact of climate change and the ground reality situation of the Kerala State, which is facing the climate change related issues for the last three years. He stressed the need to address those issues. The forestry sectors globally known as carbon source due to degradation of habitat but it has the potential as carbon sink. He opined that since water will become a commodity in future, we need to follow the safeguard information system for effective implementation of REDD+ in the country.

Shri Deepak Srivastava IFS, Additional Principal Chief Conservator of Forests (Working Plan), Tamil Nadu Forest Department highlighted the importance of Cancun Agreements. He insisted on collecting various scientific data once in two or four years in a synergic manner or through convergent approach from the Department of Agriculture, Department of Social Justice, and Department of Sericulture. He mentioned about NWFP and the benefits accrued to be shared with the local tribal communities in a participative manner leading to overall benefit in environment protection and social protection.

D. G. Trinadh Kumar, IFS, Chief Conservator of Forests (Research & Working Plan), Environment and Forests Department, Andaman & Nicobar Islands stated that about 86% of geographical area of Andaman & Nicobar Islands comes under the forest cover. He also pointed out the constraints in land availability to initiate any carbon sink activity and lack of expertise in REDD+ activities. He also stated that at the same time the Andaman & Nicobar Islands is already involved in undertaking afforestation programmes, biodiversity conservation etc.

Shri V.R.S. Rawat, Former ADG, (Biodiversity and Climate Change) ICFRE gave an overall introduction to the REDD and the role of our country in REDD+.

Dr. R.S. Rawat, Scientist, BCC Division, ICFRE gave a detailed presentation on the Draft Safeguards Information System for REDD+ including the criteria and indicators developed for monitoring the REDD+ activities in the country.

Shri Anurag Bhardwaj, IFS, Director (IC), ICFRE highlighted the need for developing the criteria and

indicators for adopting the safeguard information system drafted for implementation of various REDD+ activities. Detailed discussion on the various draft criteria and indicators developed for each of the safeguards on was made.

Shri S. Senthilkumar IFS, Chief Conservator of Forests, Silviculture and Forest Management Division, IFGTB during the discussion opined that detailed guidelines and weightage may be developed for easy understanding of field staff to assign scores from 0 to 9 for each of the indicators. Field level staff should know clearly while reporting about grading in planning and implementation stage of REDD+ project. Further, such guidance followed by them for assigning scores will help the higher officials to monitor effectively. He also mentioned that the detailed guidelines if made will help the field officers to accurately grade it and problems while reporting could be avoided. So, he suggested that guidelines for the field level officers and awareness on existing policies should be there before initiation of any REDD+ project.

Shri A. Mohamed Zainulabdeen, Deputy Conservator of Forests (Working Plan), Palakkad stated that already some initiatives have been made with regard to REDD+ activities in the working plans. Some of the unproductive teak plantations were reverted back to natural forests. So he opined that under the criteria 2, instead of number of approved Forest Working Plans, all parameters in the working plan are to be included as indicators for REDD+ activities.

Shri S. Ramasubramanian IFS, Conservator of Forests (Working Plan), Trichy suggested that while implementing National Afforestation Programme, the carbon stock, the above ground biomass and below ground biomass were assessed and documented, which will serve as bench mark for future REDD+ projects.

Shri S. Suresh, Forest Range Officer, Coimbatore Forest Division informed about the functioning of JFMC and the role of JFMC in controlling forest fire. He also mentioned that grievance redresal of local community is important and hence the number of grievances addressed should be considered as criteria to judge effective functioning of JFMC. He further informed that man-animal conflict is another important issue in the division which is being effectively managed with the help of a Whatsapp group “Thadam” and the compensation to the affected people are given depending upon the fund availability. He emphasized the need for utilizing the technology for addressing forest degradation.

Shri G. Rajesh IFS, Head, Extension Division, IFGTB suggested that under criteria -3 “Adequacy of institutional framework for management of REDD+ activities”, the likely institutions which would facilitate management of REDD+ activities may be mentioned which would facilitate management of REDD+ activities. He added that whether various committees like JFMC and VFC come under this criterion need to be clarified. This will help the field staff to make correct entries against the indicators, otherwise they may record that no such adequate institutional facilities are available for management of REDD+ activities.

Dr. K.R. Sasidharan, Scientist-F, IFGTB suggested that the Biodiversity Management Committees functioning at the grass root level can also be included in the criteria -3 as they are important in terms of local biodiversity conversation and traditional knowledge documentation.

Shri K. Ravi, President, VFC, Kandivazhli Village highlighted the role of VFC members in forest protection and conservation. He also informed about the loan given to VFC and the benefits derived out of such loans. He added that the local communities are collecting forest products and they have knowledge on various medicinal plants.

Shri S. Senthilkumar IFS, wanted to know whether their local knowledge with reference to crops, medicinal plants etc. were documented at present. The field staff informed that such documentation is available in the Range Office and stated that while on patrolling, the field staff collected such knowledge from local people, recorded and kept for future reference. The need for linking people biodiversity register with the REDD+ activities was also discussed and stressed during the meeting.

Shri G. Rajesh, IFS, Chief Conservator of Forests & Head, Extension, IFGTB opined that details of growing stock, tree cover, etc based on National Remote Sensing Centre (NRSC) data are included during the revision of forest working plan and hence the remote sensing data should be used for reviewing the REDD+ activities.

Shri R. Suryaprakash, Forest Guard, Coimbatore Forest Division opined that GPS and drones may be used for identifying sites for increasing forest cover as part of REDD+ activities, so that it is easier to

monitor the progress. He also stated that, similarly camera traps may be used to monitor wildlife movement, identify poachers and other offenders. He informed that some advancement in technology is required, so that the images in the camera traps are directly stored/ sent to a desktop/server.

Shri S. Senthilkumar, IFS, wanted to know the list of displacement of activities from project area to other nearby places and effective addressing of the issue for proper reporting (Criteria 15 of the draft SIS document). He suggested that all the activities are to be clearly mentioned for easy understanding of the frontline staff.

9. Stakeholder Consultation Workshop on Draft Safeguards Information System for REDD+ for the states of Odisha and Telangana

The ninth stakeholder consultative workshop on "Draft Safeguards Information System for REDD+ implementation in India" was hosted virtually on 04 January 20201 at Institute of Forest Biodiversity (IFB), Hyderabad on behalf of Indian Council of Forestry Research and Education. The workshop was attended by a total of 40 participants from Odisha and Telangana.

Dr. Ratnaker Jauhari, Director, Institute of Forest Biodiversity, Hyderabad welcomed all the participants and briefed about the transition from REDD to REDD+ at global level, highlighted important features of REDD+ and UNFCCC guidelines for implementation of REDD+.

Shri Lokesh Jayaswal, IFS, Principal Chief Conservator of Forests (CAMPA), Telangana Forest Department in his opening remarks welcomed all the participants. He acknowledged the efforts of ICFRE on REDD+. He also appreciated the inputs and capacity building in the form of National REDD+ Strategy, achievements and way forward for implementation of REDD+ and tackle the issues associated with it. Mr. Jayaswal mentioned the features of India's National REDD+ Strategy which aims to extend the process uniformly across the country. He mentioned that the efforts are appreciable. He mentioned that for achieving this target there is a need of capacity building at all levels of the stakeholders from frontline staff to the higher officials which is generally lacking and these workshops will be helpful in this aspect. He also touched upon the activities to be taken up as per the Cancun safeguards to ensure positive results on implementation of REDD+ such as by ensuring uninterrupted flow of ecosystem services.

Shri Anurag Bhardwaj, Director (IC), ICFRE said that REDD+ has emerged as a promising mitigation option against climate change. He also mentioned that avoiding the negative feedbacks and experiences from previous mitigation options such as Clean Development Mechanism, we should look forward to other available promising options. He highlighted the components of REDD+ which focus exclusively on forestry sector and address issues in this sector, and touched upon the major role-players in its implementations. Mr. Bhardwaj highlighted the need to involve all the stakeholders. He elaborated that SIS is meant to reduce the negative impacts (if any) due to REDD+ implementation. He also informed that ICFRE will be taking up all the capacity building activities for successful implementations of REDD+. He requested for constructive inputs on the Draft SIS through active and healthy participation which will be effective in functioning SIS for REDD+ implementation.

Shri Akshaya Kumar Patnaik, Chief Conservator of Forests (T&D), Odisha Forest Department in his opening remarks said that this meeting is a medium to get some information about REDD+ and related activities. He stressed upon the improvement of carbon stock and forest conservation through REDD+. He said that proper implementation of REDD+ with safeguards will be helpful in two important aspects – rights of forest dwellers which are usually the disadvantage group most of the times will be well taken care through Forest Right Act as with the help of these people we are getting better services from the forests, and REDD+ will help in sustainable management of forests ensuring sustained availability of forest produce and ecosystem services. Community participation is very effective in Odisha, and involving the communities in REDD+ implementation will equally work well. For effective implementation of REDD+, he said that the REDD+ strategy and other documents will be translated into local language and distributed among the stakeholders at all levels in the state so that they have proper understanding of its working and activities. He also mentioned about future support in implementation of REDD+ activities.

Shri V.R.S. Rawat, Former ADG (BCC) and Member, Expert Committee, ICFRE, Dehradun gave a presentation on 'REDD+ and India's approach to REDD+ Safeguards'.

Dr. R.S. Rawat, Scientist-in-charge, Biodiversity and Climate Change Division and Member Secretary, Expert Committee, ICFRE, Dehradun, elaborated the Draft SIS for REDD+.

The feedback regarding principles, criteria and indicators of draft SIS were discussed and recorded for each safeguard. The comments and suggestions for each indicator under respective safeguard were:

Safeguard 1: Shri Sarvanan (Telangana Forest Department) informed about the mobile application "One App" similar to the "Forest-Plus 2.0" which the forest department is using to collect information for working plan preparation. He told that the components of the indicators are already taken care of in the working plan preparation by giving emphasis to ecosystem approach following the new National Working Plan Code 2014 and new working circles are being introduced accordingly.

Indicator 4: Shri Sarvanan (Telangana Forest Department) suggested to add ICFRE as a vetting agency at national level.

Safeguard 2: Ms. Nibedita Das (Odisha Forest Department) informed how involvement of communities in the working plan preparation works to help to reduce the gaps and issues between forest departments and local communities, and improve the grievance redressal.

Safeguard 3: Shri Sarvanan (Telangana Forest Department) wanted to know about the vetting agency for the indicators under this safeguard, as it is not mentioned. Shri Akshaya Kumar Patnaik (Odisha Forest Department) suggested that community related data is already being collected for working plan preparation, thus these criteria and indicators can be pursued with aforesaid one.

Safeguard 4: Criteria 9 & 10: Shri Rama Murthy (Telangana Forest Department) suggested that instead of reporting the indicators in numbers it can be mentioned in percentage, as numbers may vary in different states and regions.

Safeguard 5: Criteria 12- Mr. Akshaya Kumar Patnaik (Odisha Forest Department) suggested that instead of responses like Y/N quantitative and/ qualitative response options can be given where ever possible/ applicable.

Shri Rama Murthy (Telangana Forest Department) suggested that Indicator 32 can be further simplified into small sections. Shri Sarvanan (Telangana Forest Department) informed that using the mobile application "One App" they have collected data on ecosystem services and it could be useful to address this indicator. Mr. Gaini Sailu (Telangana Forest Department) explained the mobile application "One App". He informed that the process to include ecosystem valuation component in this application is going on, they have already prepared manual for data collection for tree outside forests and for manual working plan preparation is in progress.

Safeguard 6: Criteria 14, Indicator 35: Shri Sarvanan (Telangana Forest Department) said that a lot of risks are identified and is a severe problem. He asked in such case Y/N is needed or it should be detailed. Mr. Akshaya Kumar Patnaik (Odisha FD) suggested that since it is a vast issue, it should be detailed out.

Safeguard 7: Indicators 39: Shri Akshaya Kumar Patnaik (Odisha Forest Department) suggested to incorporate all the possible displacement activities which vary from state to state.

Shri Prabhu Datta Himanshu Mishra (Odisha Forest Department) also made his submission that there are lots of qualitative indicators in each category which will make them subjective. He suggested to include quantitative indicators to get real data from field-level and avoid bias.

Shri Rama Murthy (Telangana Forest Department) suggested that digitalization of forest boundaries can also be included in indicators.

Shri Akshaya Kumar Patnaik (Odisha Forest Department) said that the session was eye-opener will be helpful in working plan preparations. Since this meeting involves all levels of stakeholders so it will be helpful for all.

Shri Sarvanan (Telangana Forest Department) said that it will be much better if these criteria and indicators are integrated in working plans and he requested to incorporate it in Working Plan Code 2014 for working plan preparations.

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