REDD+ and SFM: Status, Opportunities, and Challenges in India

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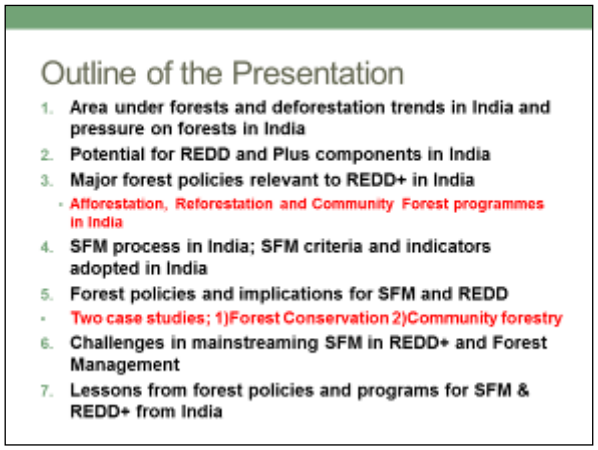
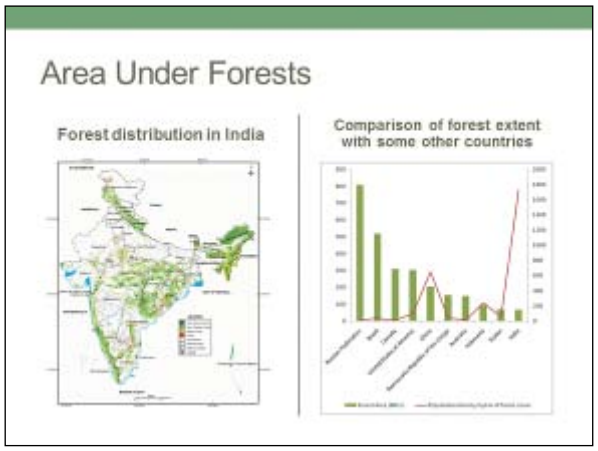
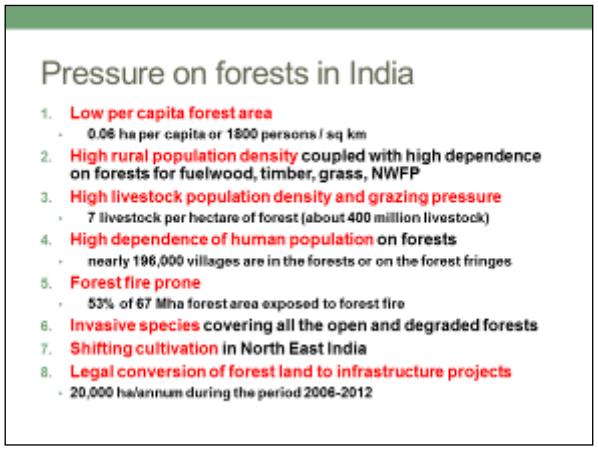
I will try to focus on the Indian experience of what kind of policies, programs they have, how they link up with SFM criteria, and the provisions or requirements of REDD+ under UNFCC. It is quite a complex one.



I will first present on: what is the area under forests in India; what are the deforestation trends; what is the potential for REDD+ activities in India; what are the major policies that are relevant to REDD+ in India such as afforestation, deforestation, and community forestry programs; and SFM process in India, to what extent SFM is being mainstreamed or not; and then, what are the forest policies and their implication for SFM and REDD+. I will try to present two case studies which are very important. Then I will talk about challenges in mainstreaming SFM and REDD+ in India. Then I will conclude with few lessons from India's forest policies which are very important in the context of forest conservation or REDD+.



Well, if you look at this map, there is not much forest in India. Actually, the national policy states that we should have one-third, 33%, under forests, but currently we have only about 20%; out of that, only 12% is good forest. So imagine for a large country, having only 12% of geographic area under forest. If you compare the forest extent to population density, say, per hectare or number of persons per square kilometers, you can compare for the top 10 countries, India is far out from all other countries. We have very little forest for the population we have, unlike all the other tropical or other temperate countries.

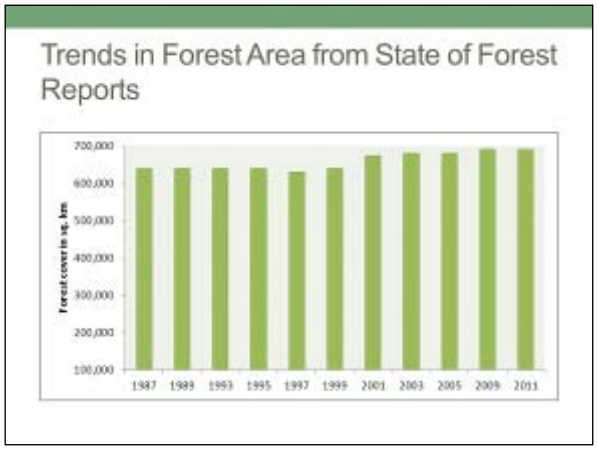


Let us look at what are the pressures on forests in India. We have very little forest at 0.06 hectares per capita. In other words, there are about 2000 persons per square kilometers of forest, which is very low. We have a high rural population density coupled with high dependence on forests for fuel wood, timber, and non-wood forest products.

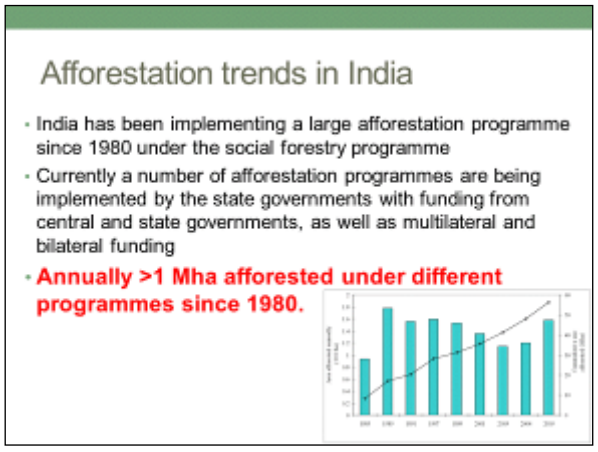
Thirdly, there is a high livestock population density. There is a huge livestock grazing pressure. There are almost 400 million livestock in India for a population of 1.1 billion. There is high dependence of human population on forests. Almost 200,000 villages are in and near the forests, so you can imagine the pressure on the forests.

There is significant occurrence of fire. Almost half the forests are prone to fire in India. Invasive species are invading all the degraded or canopy-opened forests. There is, to a small extent, shifting cultivation in Northeast India, close to China and the Burmese border. Of course, there is demand for forest land for infrastructure.

Given this kind of pressure in a country of something like one billion plus, let us see what is happening to the area under forest.

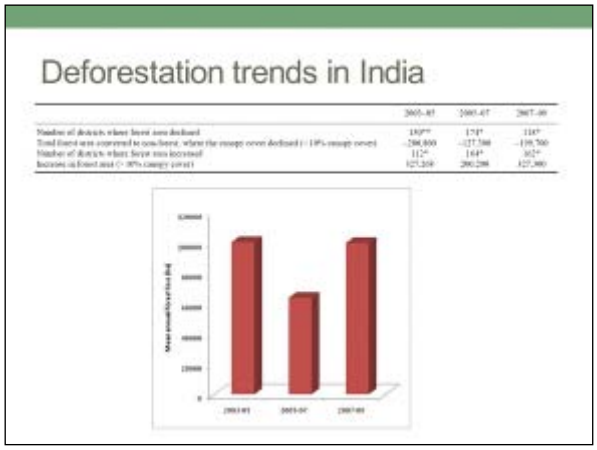


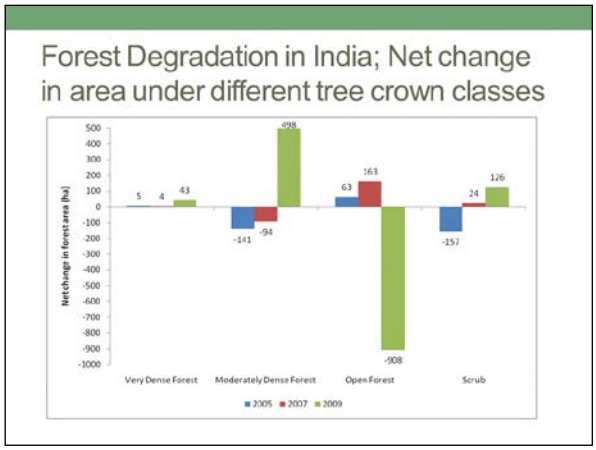
India has one of the best remote-sensing based forest monitoring. India has its own satellites and has its own agencies to monitor and report forest area. Every two years there is an update of forest area. It is published and it is on the Internet. If we just look at the area under forests from 1987 when the remote-sensing-based forest reporting started, to 2011, you can see forest area is stable and, if anything, in the last 10 years there is a marginal increase in area under forest.



One of the reasons is there is a large afforestation program in India. Next to China, India has been implementing, since 1980, one of the largest afforestation programs between 1.2 to 1.5 million hectares of plantations are raised in India. That means this main purpose is to meet the fuel wood,

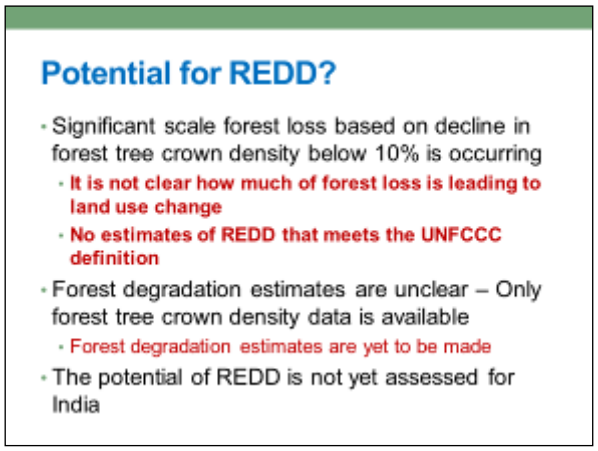
timber, and other demands of the rural communities.





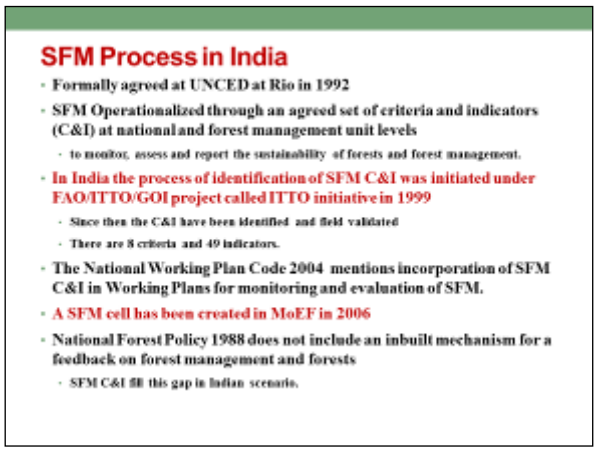
If you look at deforestation, even though the total area under forest is increasing, there is some level of forest loss. I would not call it deforestation. If you look at the last six years, it is about 60,000 to 100,000 hectares. For a large country, a loss of 60,000 to 100,000 hectares is not really much at all.

If you look at forest degradation, the green is open forest. In the recent past, open forests have declined, but moderate dense forest and dense forests have increased. That means, if you go strictly by the remote-sensing maps on forest tree crown cover, there is no degradation of forests in India.



What is the potential for REDD+ in such a case? Though I put significant scale in India, we do not want to have any – we want to have zero deforestation. There is some forest loss. We do not know whether it is forest conversion to non-forest. Personally, I feel a lot of it is not conversion of forest to non-forest, it is simply cutting trees to meet the industrial needs and the urban needs of timber, pulp wood, and so on and so forth.

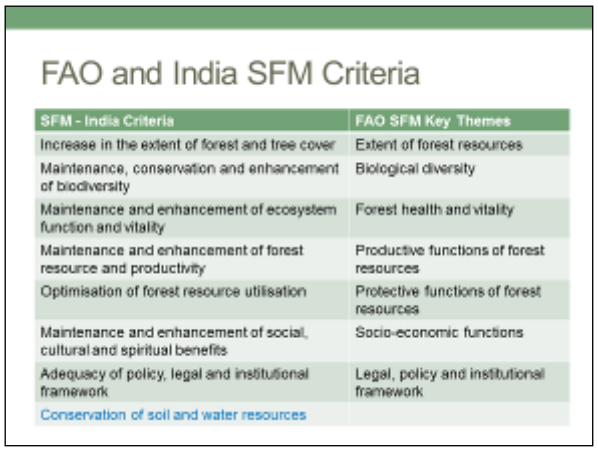
We do not have any estimates of REDD+ or even the estimates of forest degradation. Only based on forest tree canopy cover, from remote sensing data, I was showing that, in fact, there is no forest degradation, if you go strictly by the data. We still do not know to what extent there is conversion of forest land to non-forest land or there is degradation of ground vegetation or degradation of soil organic matter and so on. We still do not know what the potential for REDD+ is in India.



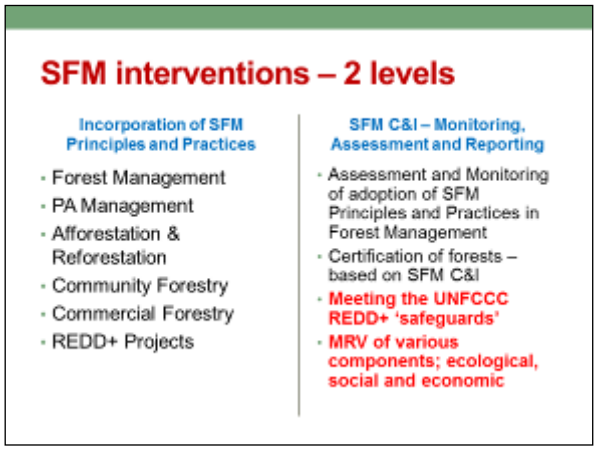
Regarding the SFM process post-UNCED[1] in 1992, under a large project initiated by FAO, ITTO, and Government of India, SFM was initiated in India. A set of criteria and indicators and the

[1] United Nations Conference on Environment and Development: http://www.un.org/geninfo/bp/enviro.html

process has been initiated. There is a sustainable forest management cell at the Ministry of Environment[2] in Delhi. Surprisingly, the National Forest Policy of 1988, which is a basis for all the programs on forests, it does not use the word SFM, but it has all the components of SFM much before the 1992 process.



If you look at the FAO criteria for SFM, between the key themes or guidelines and the SFM India criteria, there is not much difference. It matches very well. Plus, there are one or two additional items. Otherwise, you have seen them, what are the FAO principles or themes for SFM, and India has more or less slightly modified, but basically the same criteria and indicators.

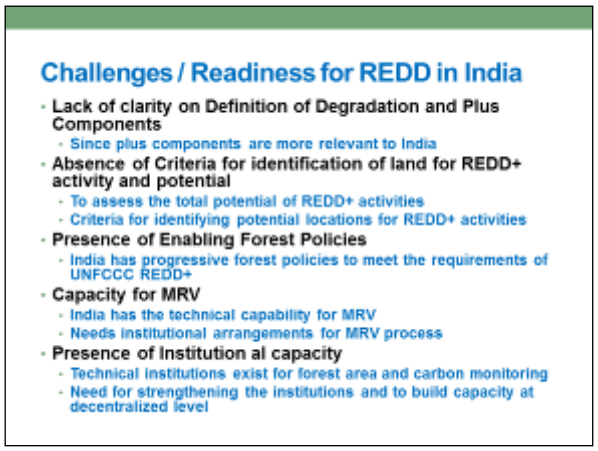


I want to look at SFM interventions at two levels. Firstly, the incorporation of SFM principles and practices in forest management, in protected area management, in undertaking afforestation and reforestation programs, community forestry, commercial forestry, and REDD+ projects.

I think it is very important that we should adopt SFM principles and practices in all the forest

[2] http://envfor.nic.in/

management programs. The second level is SFM criteria indicators; it is monitoring, assessment, and reporting. This is important for certification of forest, for example. Of course, it will be required from meeting the UNFCC REDD+ safeguards and also for monitoring, reporting and verification of not just carbon, but also the other socioeconomic and ecological components.

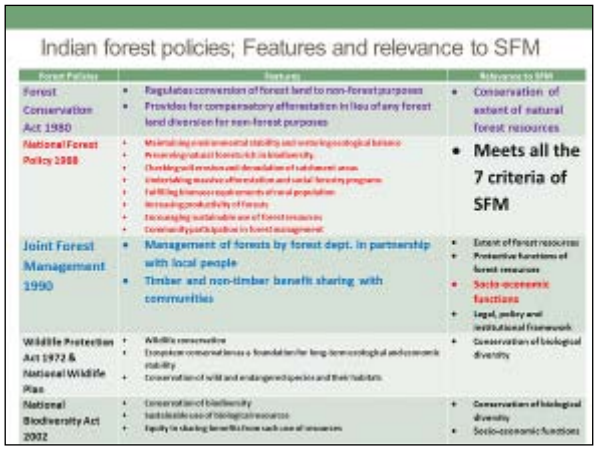


As for the challenges or problem with respect to REDD+ in India, there is lack of opportunity. There is a lack of clarity and the definition of degradation and the "plus" components, the three other components. For India deforestation is not a major issue. That is the reason why even in the UNFCCC negotiations, India was particularly fighting for the "plus" components. We still do not have clear guidance, guidelines, definitions, or procedures for identifying the "plus" opportunities.

There is absence of criteria for identification of land for 'REDD' as well as 'plus' activities. We still do not know. There is some level of forest loss happening. There is some change in the forest crown cover. We still do not know to what extent we can attribute it to or it will qualify for REDD+ activities.

Of course, India has a significant amount of enabling forest policies. India has very progressive forest policies with respect to conservation, community participation, biodiversity conservation, and so on. India also has the intuitional capacity for technical monitoring, reporting and verification, and so on. However, there is a need for reorienting these institutions and these policies for REDD+. That is yet to happen.

In India we do not have any UN REDD or World Bank REDD projects. There is one externally funded project and it is called Forest-PLUS[3]. India decided not to call it REDD+. The Government of India also has national REDD+ policy guidelines prepared, but it is under approval process in Government of India.



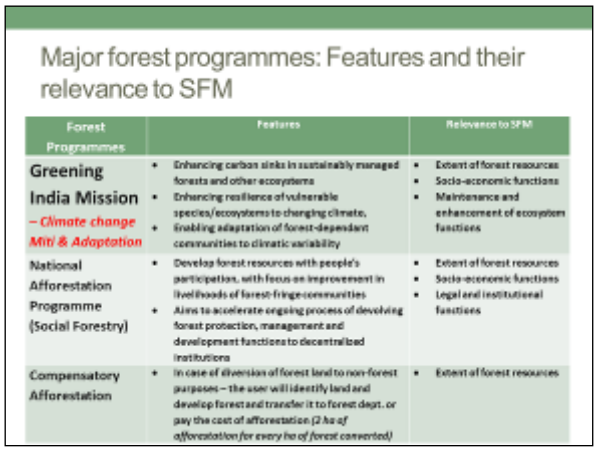
I was trying to map India's key major forest polices and their features with the relevance or linkage to SFM. If I take the three very important forest policies, there is Forest Conservation Act, which has led to completely halting, more or less, the deforestation rate. It can be linked to several SFM criteria.

Similarly, if you look at the National Forest Policy, which is a benchmark for all forest programs, it includes maintaining environmental stability, preserving natural forests and its biodiversity, checking soil erosion, undertaking afforestation program, meeting the biomass requirements, community engagement, so on and so forth.

India's forest policy, announced in 1988, is fully compatible with the SFM criteria. Of course, then India introduced another major program called Joint Forest Management in 1990 involving

[3] http://climatechange-asiapac.com/projects/india-forest-plus-program

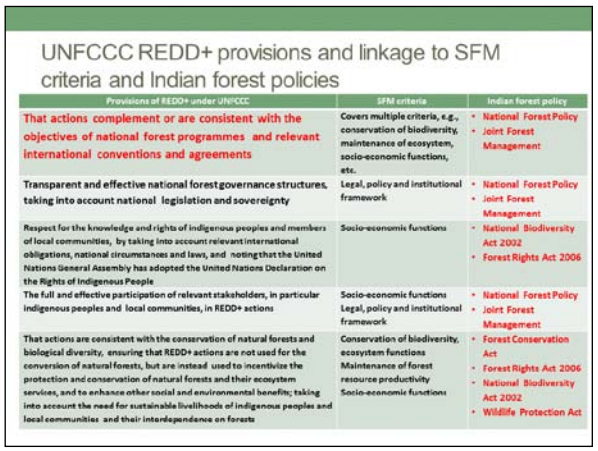
local communities formally and legally in managing forests, and for which they will be paid in terms of forest products, timber sales, and so on and so forth. They also meet the SFM criteria.



Major forest programmes: Features and their relevance to SFM

Forest Programmes	Features	Relevance to SFM
Greening India Mission – Climate change Miti & Adaptation	• Enhancing carbon sinks in sustainably managed forests and other ecosystems • Enhancing resilience of vulnerable species/ecosystems to changing climate, • Enabling adaptation of forest-dependent communities to climatic variability	• Extent of forest resources • Socio-economic functions • Maintenance and enhancement of ecosystem functions
National Afforestation Programme (Social Forestry)	• Develop forest resources with people's participation, with focus on improvement in livelihoods of forest-fringe communities • Aims to accelerate ongoing process of devolving forest protection, management and development functions to decentralised institutions	• Extent of forest resources • Socio-economic functions • Legal and institutional functions
Compensatory Afforestation	• In case of diversion of forest land to non-forest purposes – the user will identify land and develop forest and transfer it to forest dept. or pay the cost of afforestation (2 ha of afforestation for every ha of forest converted)	• Extent of forest resources

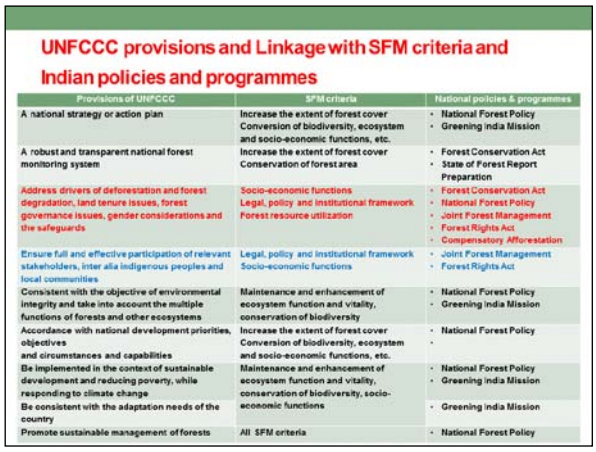
India has several major programs, one, of course, called Greening India Mission[4]. It is a part of Climate Change National Action Plan[5]. It aims at climate change mitigation and adaptation. It also meets the SFM criteria. Of course, there is a National Afforestation Programme[6], one of the biggest in the world. We also have Compensatory Afforestation[7]. If a hectare of forest is converted, two hectares of forest have to be raised.



UNFCCC REDD+ provisions and linkage to SFM criteria and Indian forest policies

Provisions of REDD+ under UNFCCC	SFM criteria	Indian forest policy
That actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements	Covers multiple criteria, e.g., conservation of biodiversity, maintenance of ecosystem, socio-economic functions, etc.	• National Forest Policy • Joint Forest Management
Transparent and effective national forest governance structures, taking into account national legislation and sovereignty	Legal, policy and institutional framework	• National Forest Policy • Joint Forest Management
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 People	Socio-economic functions	• National Biodiversity Act 2002 • Forest Rights Act 2006
The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in REDD+ actions	Socio-economic functions Legal, policy and institutional framework	• National Forest Policy • Joint Forest Management
That actions are consistent with the conservation of natural forests and biological diversity, ensuring that REDD+ actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits; taking into account the need for sustainable livelihoods of indigenous peoples and local communities and their interdependence on forests	Conservation of biodiversity, ecosystem functions Maintenance of forest resource productivity Socio-economic functions	• Forest Conservation Act • Forest Rights Act 2006 • National Biodiversity Act 2002 • Wildlife Protection Act

4 http://www.naeb.nic.in/documents/GIM_Brochure_26March.pdf
5 http://pmindia.nic.in/Pg01-52.pdf
6 http://envfor.nic.in/public-information/national-afforestation-programme-participatory-approach-sustainable-development-f
7 http://envfor.nic.in/major-initiatives/compensatory-afforestation-fund-management-and-planning-authority-campa-0



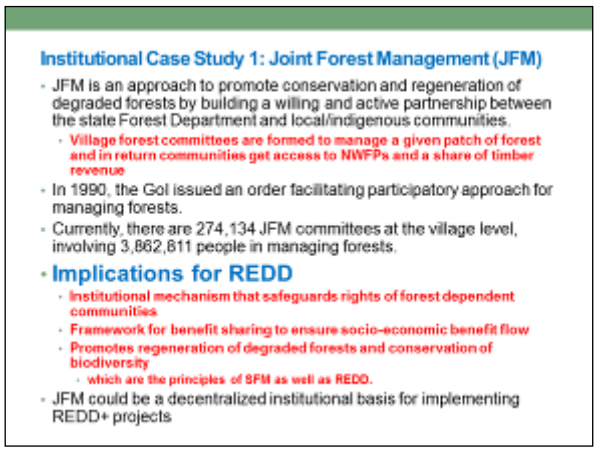
UNFCCC provisions and Linkage with SFM criteria and Indian policies and programmes

Provisions of UNFCCC	SFM criteria	National policies & programmes
A national strategy or action plan	Increase the extent of forest cover Conversion of biodiversity, ecosystem and socio-economic functions, etc.	• National Forest Policy • Greening India Mission
A robust and transparent national forest monitoring system	Increase the extent of forest cover Conservation of forest area	• Forest Conservation Act • State of Forest Report Preparation
Address drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the safeguards	Socio-economic functions Legal, policy and institutional framework Forest resource utilization	• Forest Conservation Act • National Forest Policy • Joint Forest Management • Forest Rights Act • Compensatory Afforestation
Ensure full and effective participation of relevant stakeholders, inter alia indigenous peoples and local communities	Legal, policy and institutional framework Socio-economic functions	• Joint Forest Management • Forest Rights Act
Consistent with the objective of environmental integrity and take into account the multiple functions of forests and other ecosystems	Maintenance and enhancement of ecosystem function and vitality, conservation of biodiversity	• National Forest Policy • Greening India Mission
Accordance with national development priorities, objectives and circumstances and capabilities	Increase the extent of forest cover Conversion of biodiversity, ecosystem and socio-economic functions, etc.	• National Forest Policy •
Be implemented in the context of sustainable development and reducing poverty, while responding to climate change	Maintenance and enhancement of ecosystem function and vitality, conservation of biodiversity, socio-economic functions	• National Forest Policy • Greening India Mission
Be consistent with the adaptation needs of the country		• Greening India Mission
Promote sustainable management of forests	All SFM criteria	• National Forest Policy

I also tried to map the UNFCCC REDD+ criteria provisions and link them with SFM criteria and the Indian Forest Policy. Obviously, I cannot go into the details. If you take, for example, that actions complement or are consistent with the objectives of National Forest Programme and relevant internationally conversion agreements, it covers multiple SFM criteria. If you look at the Indian Forest Policy, National Forest Policy, and Joint Forest Management Policy, they are perfectly compatible with these ones.

Again, if we take another issue addressing the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender consideration, and other safeguards, it really meets several SFM criteria such as socioeconomic functions, legal, policy framework, forest resource utilization, and so on. At the same time, it is perfectly compatible with India's National Forest Policy, Policy on Joint Forest Management, and also, what you call, Forest Rights Act, and Compensatory Afforestation.

There are many policies which perfectly match the requirements of SFM criteria, and, at the same time, the provisions of UNFCCC REDD+ safeguards.



Institutional Case Study 1: Joint Forest Management (JFM)

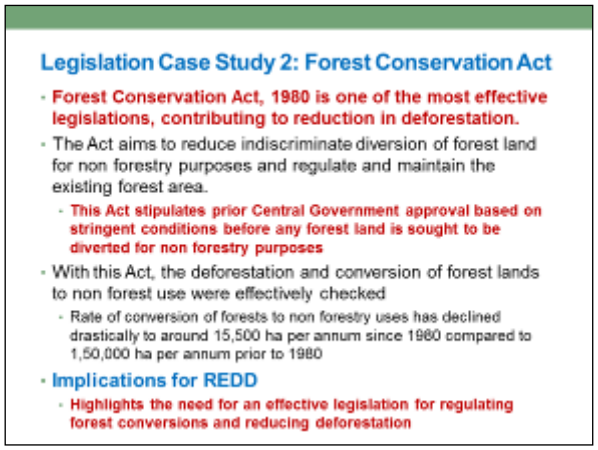
- JFM is an approach to promote conservation and regeneration of degraded forests by building a willing and active partnership between the state Forest Department and local/indigenous communities.
  - Village forest committees are formed to manage a given patch of forest and in return communities get access to NWFPs and a share of timber revenue
- In 1990, the GoI issued an order facilitating participatory approach for managing forests.
- Currently, there are 274,134 JFM committees at the village level, involving 3,862,811 people in managing forests.
- **Implications for REDD**
  - Institutional mechanism that safeguards rights of forest dependent communities
  - Framework for benefit sharing to ensure socio-economic benefit flow
  - Promotes regeneration of degraded forests and conservation of biodiversity
    - which are the principles of SFM as well as REDD.
- JFM could be a decentralized institutional basis for implementing REDD+ projects

I will present two short case studies which are very important for any REDD+ program anywhere. As I mentioned, the Joint Forest Management programmers announced based on the 1988

Forest Policy. Under this program, the main goal is conservation and regeneration of degraded forests by involving local communities by the forest department. It is a legal agreement between local communities and the forest department where local communities protect, manage, regenerate forests, and for which they get incentives in terms of non-wood forest products, grass, leaves, fuel wood, and also 50% to 80% of timber harvest, if it is plantations.

Currently, there are more than 274,000 forest management committees. They are called village forest committees, forest management committees, and so on, at the village level. They are managing almost more than 270,000 village forest committees, forest patches. Of course, not all of them are alive and functioning, but some of them are functioning. Some have been not performed very well.

As for the implications for REDD+, it provides and institutional mechanism that safeguards the rights of the forest dependent communities, and it provides a framework for benefit-sharing. In some states, 90% of the benefit from the forests go to the communities. Here is a framework for sharing benefits from the communities legally by law. It promotes regeneration of degraded forests and conservation of biodiversity by involving local communities. JFM[8] could be an example of a decentralized institutional basis for implementing REDD+ projects.



If we take the other example, the Forest Conservation Acts enacted in 1980, it is one of the most effective legislations contributing to reduction in deforestation. If anyone wants to convert more than five hectares even for laying railway line or for irrigation projects, it has to go through stringent procedures and be approved by Government of India, which is very difficult in India given the bureaucracy. In fact, deforestation rates used to be 150,000 to 200,000 hectares before 1980. It has come down to 15,000 to 20,000 hectares for legally approved deforestation.

The implications for REDD+: this highlights the need for effective forest legislation. If we have very strong effective legislation, and also of course its implementation, that is the first condition

[8] Joint Forest Management

for any REDD+ program.

Let me conclude by saying that strong Forest Conservation Act, Wildlife Act and many other national forest policies are very critical. These acts, supported by the judiciary, Supreme Court and so on, have effectively reduced deforestation. It is impossible for anyone to go and encroach for five hectares forests in India, no matter how powerful. It will be on the front pages of newspapers and it will be reported on nation television and it goes to Supreme Court. That is the level of consciousness with respect to forest conservation and its act.

Second is the National Forest Policy. It incorporates all components of SFM. That is the basis for all the forest management, afforestation, and forest conservation programs. I think such a national forest policy should drive REDD+ rather than REDD+ driving national policy. I would like to underline this point.

India also has been implementing huge programs. The Greening India Mission is almost a $10 billion program. It incorporates both mitigation and adaptation. If you ask me, we need to really add one of the other conditions to SFM criteria, and that is to make forests resilient to climate change. In 1982 when the criteria were developed for SFM, probably climate impacts and forests were not an issue. However, today we all know from observations and modeling, climate change could impact forest biodiversity; it will impact forest carbon stocks, and so on and so forth. We need to really look at REDD+ not just from conservation or enhancing carbon sinks, but also building resilience in forests to impending climate change.

Fourthly, large afforestation programs to meet the community biomass needs are necessary not only to meet the needs, but also to reduce pressure on forests and to conserve forest sinks. India's social forestry program, the Joint Forest Management program and the National Afforestation program ensure that REDD+ safeguards' and criteria and many socio-economic functions are met.

Fifth, community participation and empowerment for decentralized forest management is very critical. India's experience of social forestry as well as Joint Forest Management shows the way on

really how to really reduce the pressure on forests, meet the community needs, and also involve them in forest management where they have rights that have been enacted by law, rather than just being intention.

Sixth, of course, you need institutional capacity for enforcing REDD+ safeguards or even for implementing or adopting SFM principles in the forest management, afforestation/deforestation program. You need institutional capacity. India has one of the best remote sensing based forest monitoring systems. India also has its own satellites.

What is lacking is, India has all the policies, technical capacity, but we need to really reorient it towards 'REDD' and 'plus' components. Yes, 'REDD' may not be important reducing deforestation degradation, but the 'plus' components are very important. We really need to reorient at least our institutions and policies to promote the 'plus' component leading to enhancing carbon sinks through SFM, enhancing carbon stocks in forests, afforestation/deforestation, and so on.

Thank you very much.