(Reduction of Emissions from Deforestation and Forest Degradation) REDD+ Pilots

Background and Proposed Actions

Swapan Mehra, CEO
IORA Ecological Solutions
Evolution of REDD+

Noel Kempff Mercado Project (1997) (Bolivian Amazon) – An Experiment

RED/ REDD (Amazon Nations, Congo Forest and Indonesia)

REDD+
Incentivize Forest Conservation and Enhancement (India, China)

Decision 2/ CP 13, Decision 4/ CP 15, Bali Action Plan
SBSTA 29, Poznan, Dec 2008; Warsaw Framework for REDD+, Dec 2013


India contributed the ‘plus’ part of REDD agenda in UNFCCC.
(Rawat and Kishwan in 2008)
REDD+ : Contribute to achieving SDGs

15. Life on Land
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
Aligned with REDD+ goals

13. Climate Action
Take urgent action to combat climate change and its impacts.
Aligned with REDD+ goals

12. Responsible Consumption
Ensure sustainable consumption and production patterns.
REDD+ entails sustainable extraction of forest produce

1. No Poverty
End poverty in all its forms everywhere.
REDD+ ensures biodiversity conservation, local socioeconomic benefits, governance improvements

2. No Hunger
End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
REDD+ ensures biodiversity conservation, local socioeconomic benefits, governance improvements

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“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 Bali Action Plan Decision 1/CP13 Para)
Demonstrating REDD+ baselines

Source: Adapted from Lasco (2010)
REDD+: Pre-requisites

Reference
Emission Levels/Baselines
Also Useful for: WP, NDC, NAMA, Forest Health Assessment, Land Use Change

Ecological and Social MRV System
Data Management and Field Inventory
Also Useful for: WP, NDC, NAMA, Forest Monitoring, SDG Monitoring

Community Benefit Sharing Mechanisms and safeguards
Also Useful for: Interdepartmental Goals, SDG and Poverty Alleviation Goals
REDD+ and Communities

HOW COMMUNITIES CAN HELP REDD+

- Indigenous and local communities are key stakeholders in the protection and management of forest ecosystems and hence success of REDD+ will depend on their efforts and level of involvement.
- The traditional knowledge and practices of forest conservation will significantly contribute to the success of REDD+.

HOW REDD+ CAN HELP COMMUNITIES

- Incentives can provide source of livelihood and improved socio-economic condition.
- Help in climate change adaptation.
- Building knowledge and capacity.
- Ensure full and effective participation.

India in its Reference Document for REDD+ says that it is mandatory to develop and build safeguard information system (SIP) for providing information on safeguards and how the country is addressing and respecting the safeguards.

At international level the decision on reporting safeguard was taken at COP 17, Durban and provided guidance on how safeguards shall be addressed and respected. It was also decided that the safeguard information should be periodically reported to UNFCCC through NATCOM. Decision 12/CP.17
Developing a REDD+ Project

Process of development of a REDD+ project

- Delineation of the project boundary and determine the baseline methodology
- Identification of stakeholders
- Socio-economic analysis to identify drivers of degradation and deforestation, LULCF and association of communities
- Identify preliminary baseline scenario for the project (Reference Level/Reference Emission Level)
- Estimate carbon emission reductions over the project lifetime
- Monitoring plan to be developed, including third party monitoring
- Conducting extension activities and other awareness program
- Raising future finance from financial sources sector for the long-term sustainability of the project

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REDD+ Financing: Domestic

Domestic Finance

- Interdepartmental Convergence
- Central/State Project Finance?
- Private Sector Partnerships
REDD+ Financing: International

- Multilateral (GCF/WB)
- Bilateral (Norway, AfD, etc)
- Carbon Market

International Finance
REDD+ Policy India

REDD+ program for India could provide capture of more than 1 billion tons of additional CO2 over the next three decades and more than USD 3 billion as carbon service.

REDD+ is intended to be an additional co-benefit to the goods and services already accruing to and being enjoyed by the local community.

REDD+ will ensure more monetary benefits flowing to local communities.

REDD+ to be treated at jurisdictional and subnational levels.

Should tap into regulatory as well as voluntary markets.
REDD+ in India

**REDD+ initiative**

Forest-PLUS Program (M.P., Karnataka, Sikkim and H.P.)

VCS REDD+ Methodology for India

Garo hills community REDD+ project, Meghalaya

REDD+ Assessment in North East India

Assam Jurisdictional REDD+

Uttarakhand REDD+

REDD+ feasibility study in Nagaland

REDD+ feasibility in Dodamarg, Maharashtra

National REDD+ Reference Document and Policy

REDD+ Manual for field practitioners

**Details**

Four REDD+ pilots, MRV System, RS Protocols

Suited to Indian data sets (FSI, State Data) and condition

Community based forest conservation and PES mechanism in Meghalaya based on Plan Vivo

Identification of potential projects in all NE states in partnership with RCNAEB

Developing district level REDD+ project in Assam

State sponsored REDD+ project across chosen villages.

REDD+ Pilot in community forest

Initiated by Maharashtra State Forest department

Published by MoEFCC

Document to help practitioners of REDD+
REDD+ Jurisdiction vs. Project

District Level/
State Level/ Circle
Level

Sub Jurisdiction
Landscape
## Advantage of Jurisdictional REDD+

<table>
<thead>
<tr>
<th>Convergence in Planning</th>
<th>Transaction cost</th>
<th>Leakage</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Policy, Actions and Measures</td>
<td>• Far lower</td>
<td>• Far lower</td>
</tr>
<tr>
<td>• Co-benefits</td>
<td>• Monitoring synced to ongoing actions</td>
<td>• Jurisdiction boundaries can address leakage better and contribute to permanence</td>
</tr>
<tr>
<td>• Supplement and symbiotic efforts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Enhanced benefits to communities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Framework of Jurisdictional REDD+ in Assam

Assam JNR Project*

Developing Reference Emissions Levels
Analysis of potential emission reductions, sequestration and leakage
Identification of drivers, intervention activities and safeguards
Benefit-sharing mechanism through consultation
Monitoring, Reporting and Verification Plans
Capacity Building
Communication for outreach and creating awareness
Interdepartmental convergence

*JNR – jurisdictional and nested REDD+
• Provide Grants, Concessional loans for REDD+ in developing countries.

• Sub-national level implementation encouraged as countries build capacity to reach national levels

Nagaon

Nagaon Forests

Total Forest area - 793 sq km (FSI 2015)

1. In Nagaon, negative change in forest cover was recorded during 1999-2001 and 2003-05. Overall the forest cover has decreased slightly in the last sixteen years (1999 to 2015).

2. NRSC data also showed slight decrease in forest cover from 2005 to 2011. Increase in grassland and settlement area has increased during these periods.

3. There are 21 Reserve Forests in the district covering a total of 69414.08 ha of land.

4. As per records available, an area of 3154.50 Ha of land is under encroachment in different RFs/PRFs of Nagaon district.

Source: FSI, 2015

Source: NRSC
Majuli

Mostly TOF

1. The largest river island in the world and the first island district of India.
2. Having extreme historical and cultural importance and vying for recognition as a UNESCO World Heritage site.
4. Average annual rate of erosion and deposition 1966–2008 period were 8.76 km sq/yr and 1.87 km sq/yr (Dutta et al, A study of erosion-deposition processes around Majuli Island, Assam, Earth Science India, Vol. 3 (IV), October, 2010, pp. 206-216)
5. Since 1953 flood and erosion control measures were undertaken by the government. However, the results are far less.
6. Huge migrations of habitants.

<table>
<thead>
<tr>
<th>Year</th>
<th>Land Area</th>
<th>Area Eroded</th>
<th>Average Area Annually Lost</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>733.79</td>
<td>-</td>
<td>-</td>
<td>Survey of India Map</td>
</tr>
<tr>
<td>1949</td>
<td>708.91</td>
<td>24.88</td>
<td>0.71</td>
<td>Survey of India Map</td>
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<tr>
<td>1963</td>
<td>588.79</td>
<td>120.12</td>
<td>8.58</td>
<td>Survey of India Map</td>
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<tr>
<td>1988</td>
<td>513.89</td>
<td>74.90</td>
<td>3.00</td>
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<tr>
<td>1998</td>
<td>510.79</td>
<td>3.10</td>
<td>0.31</td>
<td>INSAT IC LISS III</td>
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<tr>
<td>2004</td>
<td>502.21</td>
<td>8.58</td>
<td>1.43</td>
<td>IRS P6 LISS III</td>
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<tr>
<td>2008</td>
<td>506.37</td>
<td>- 4.16</td>
<td>- 1.04</td>
<td>IRS P6 LISS IV</td>
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<tr>
<td>2013</td>
<td>522.73</td>
<td>- 16.36</td>
<td>- 3.27</td>
<td>IRS P6 LISS IV</td>
</tr>
</tbody>
</table>

Loss of landmass (Km sq) by erosion (source: Sarma, A., Landscape degradation of River Island Majuli due to Flood and Erosion by River Brahmaputra and its Restoration, Journal of Medical & Bioengineering, Vol 3, No. 4, Dec 2014)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Swamp/Water Body</th>
<th>Number of Streams/Drainage Channels</th>
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</thead>
<tbody>
<tr>
<td>1917</td>
<td>112</td>
<td>49</td>
</tr>
<tr>
<td>1972</td>
<td>52</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>21</td>
<td>1</td>
</tr>
</tbody>
</table>

Vision for Nagaon: Reduce Degradation of Forests

Jurisdictional REDD+ Vision for Nagaon

- Bordering Kaziranga, Conserve Corridora
- Large Mammals
- Better forest monitoring and data storage system
- Greater stake of communities in forest management and benefit sharing
- Interdepartmental convergence
- Achieving SDGs goals
- REDD+ and ARR
- Bio-cultural diversity conservation

Biodiversity benefit
Management benefit
Vision for Majuli: India’s first Carbon Neutral District

Jurisdictional REDD+ Vision for Majuli

- Conserving a vying world heritage site
- Avifauna, migratory birds
- Wetlands
- Better forest monitoring and data storage system
- Greater stake of communities in forest management and benefit sharing
- Management benefit
- Biodiversity benefit
- Interdepartmental convergence
- Achieving SDGs goals
- Organic farming of rice
- Erosion control, conserving the biggest river island in the world from disappearing
- Low carbon emission development through REDD+
- Centre of neo-vaishnavite movement
- Bio-cultural diversity conservation
- Mising tribe

Centre of bio-cultural diversity conservation
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Institutional Framework: Assam REDD+

ASAPCC Goals

SDGs

APFBC Goals

Assam Jurisdictional REDD+

Interdepartmental Convergence Planning

Reduce Forest Degradation in Nagaon

Nagaon REDD+ Task Force - Led by DC, Nagaon with DFO Nagaon

Supported by Assam State REDD+ Cell and Task Force (AFD)

Carbon Neutral District in Majuli

Majuli REDD+ Task Force - Led by DC, Majuli with DFO SF Golaghat
Process Flow for Interventions

1. Identify Interventions
2. Identify Roles and Scheme Specific Outlays of Departments
3. Socio-economic Surveys to Map Beneficiaries
4. Obtain Beneficiary Lists from Departments
5. Distribution / Allocation by Departments to Identified Beneficiaries
6. Monitoring and Course Correction (State REDD+ Task Force, REDD+ Cell)
Success Stories of Convergence

To maximize the outcomes and to effectively address the issue of forest conservation and management and bring environmental, economic and social benefits for the communities, there is a need to utilize the resources from various departments.

Convergence for REDD+ projects of IORA

Government of Madhya Pradesh
- Successful convergence between MP Forest Department, MGNREGS, Mahindra Sanyo Special Steel Pvt. Ltd. and IORA for plantation of 42000 bamboo and teak saplings in Harda.

Government of Karnataka
- Collaboration between Karnataka Forest Department, Village Forest Committee, Communities, and IORA for designing and developing a Medicinal Garden in Shivamogga, Karnataka.
- Department of Agriculture shared data of 9500 soil samples with IORA to support REDD+ interventions.

Government of India
- Collaboration between MoEFCC, IORA and Private Sector partner JC Decaux and Vertiver for National Campaign “Forests Are Life”
Afforestation in Madhya Pradesh

Potential Convergence Opportunities for Jurisdictional REDD+
Thank You

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