Mainstreaming Climate actions at the Sectoral level in Chhattisgarh

Regional Dialogue on Climate Resilient Growth and Development,
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Secretary, Rural Development
Govt. of Chhattisgarh
India
Chhattisgarh at a glance

Districts: 27
SC&ST population: 43.44%
Forest area: 44%

- 80% of the rural households dependent on agriculture; 76% small and marginal farmers
- Three agro climatic zones - Northern Hills, Central Plains and Southern Bastar Plateau.
- Paddy is the main agricultural crop.
Agro climatic Zone and Irrigation Facility

- 55% arable land less capacity of retention of water
- 31% area irrigated
- 65% irrigation from sources dependent on rain
- **Irrigation break up**
  - Canal--60 %
  - Tube well –29%
  - Others(pond, well)--11%
District wise net irrigated area (%) – 2014-15

Source: DES, Chhattisgarh
Climate Change in Chhattisgarh

In number of districts, climate is becoming semi-arid

In general the state is moving from a wet to dry climate.

Drought
- Frequency has increased
- Long dry spell in July and Sept. (Critical for paddy).

Flood
- Distribution of rainfall-flash flood

Source: Indira Gandhi Agriculture University Raipur
Strategies adopted for Climate Change Adaptation in Forestry Sector

Policy changes that ensure judicious use of forest services and improved access for local communities. Forest ecosystems provide services that reduce the vulnerability of communities and broader society to climate change. These services can be divided into the following categories:

- Livelihoods: providing additional livelihood to local communities that make them resilient to effects of climate events;
- Agriculture: Crop diversification and supplementing with additional livelihood;
- Watersheds: regulating water quality and protecting soil from erosion through large scale soil and moisture conservation works;
Measures to increase the flow of benefits from forests and improve local adaptive capacity

- Improving the management of forests and allocating adequate rights at the local level, under the National Acts like the Forest Rights Act 2006 and the Panchayat (Extension to Scheduled Areas) Act, 1996 and devolution of rights and concessions by the State Government, the adaptive capacity of forest-dependent people has been greatly improved. include:

  - Strengthening forest land ownership and use rights.
  - Reducing and simplifying resource access procedures.
  - Strengthening sustainable production of NTFP, and access to markets for forest-based products.
  - Applying best practices in Joint forest law enforcement through JFMC.
Green India Mission


2. Ministry of Environment, Forest and Climate Change (MoEF&CC) will implement the Project in the States of Chhattisgarh and Madhya Pradesh through Indian Council of Forestry Research & Education under the National Mission for Green India.

The Mission aims at addressing climate change by:

- Enhancing carbon sinks in sustainably managed forests and other ecosystems.
- Conservation of vulnerable species/ecosystems to the changing climate; and
- Adaptation of forest dependent local communities in the face of climatic variability
Climate resilient wetland management along Mahanadi river basin

- National Adaptation Fund on Climate Change funded project for the duration of 4 years (2016-2020).
- Implementing Agency: Chhattisgarh State Centre for Climate Change
- Project Cost: 3,308,512 USD
- **Objectives of the project:**
  1. To identify impacts of climate change in-
     - Ecosystems in the wetlands of three districts of Mahanadi river basin
     - Communities in the wetlands of three districts of Mahanadi river basin
  2. Promote climate adaptation through-
     - Smart agriculture
     - Water conservation and management
     - Forest produce management
     - Capacity building activities of stakeholders
     - Knowledge management
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>District</th>
<th>Forest Range</th>
<th>Watershed Code</th>
<th>Proposed treatment area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Baloda Bazar</td>
<td>Arjunii</td>
<td>4G2E6</td>
<td>6000 ha</td>
</tr>
<tr>
<td>2.</td>
<td>Mahasamund</td>
<td>Mahasamund</td>
<td>4G2F3</td>
<td>6000 ha</td>
</tr>
<tr>
<td>3.</td>
<td>Dhamtari</td>
<td>Dugli</td>
<td>4G2G3</td>
<td>8000 ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TOTAL 20,000 ha</td>
</tr>
</tbody>
</table>
Rural Development Sector

- SECC (Socio-Economic Caste Census-2011)
- PMAY (Pradhan Mantri Awas Yojana-Gramin)
- NRLM (National Rural Livelihood Mission)
- MGNREGS (Mahatma Gandhi National Rural employment scheme)
- ICRG (Infrastructure for climate resilient growth)
<table>
<thead>
<tr>
<th>Deprivations</th>
<th>Chhattisgarh</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Households</strong></td>
<td><strong>45,40,999</strong></td>
</tr>
<tr>
<td>D1. Households with only one room, Kucha walls and Kucha roof</td>
<td>13,14,420 (28.95%)</td>
</tr>
<tr>
<td>D2. No adult members between ages of 16 and 59</td>
<td>2,93,609 (6.47%)</td>
</tr>
<tr>
<td>D3. Female headed households with no adult male member between 16 and 59</td>
<td>3,08,440 (6.0%)</td>
</tr>
<tr>
<td>D4. Households with disabled member and no able bodied member</td>
<td>36,889 (0.81%)</td>
</tr>
<tr>
<td>D5. SC/ST Households</td>
<td>19,12,192 (42.11%)</td>
</tr>
<tr>
<td>D6. Households with no literate adult above 25 years</td>
<td>15,38,616 (33.88%)</td>
</tr>
<tr>
<td>D7. Landless households deriving a major part of their income from manual casual labour</td>
<td>15,43,648 (33.99%)</td>
</tr>
</tbody>
</table>
## SECC Supports in tracking of Families

<table>
<thead>
<tr>
<th>SI NO</th>
<th>Category</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Number of Rural HH</td>
<td>45,40,999</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HH under auto-inclusion criteria</td>
<td>1,12,084</td>
<td>2.47</td>
</tr>
<tr>
<td>1.</td>
<td>HH with all 7 deprivations</td>
<td>1438</td>
<td>0.03</td>
</tr>
<tr>
<td>2.</td>
<td>HH with any 6 deprivations</td>
<td>23180</td>
<td>0.51</td>
</tr>
<tr>
<td>3.</td>
<td>HH with any 5 deprivations</td>
<td>88021</td>
<td>1.94</td>
</tr>
<tr>
<td>4.</td>
<td>HH with any 4 deprivations</td>
<td>282851</td>
<td>6.23</td>
</tr>
<tr>
<td>5.</td>
<td>HH with any 3 deprivations</td>
<td>666087</td>
<td>14.67</td>
</tr>
<tr>
<td>6.</td>
<td>HH with any 2 deprivations</td>
<td>1111148</td>
<td>24.47</td>
</tr>
<tr>
<td>7.</td>
<td>HH with any 1 deprivations</td>
<td>1006602</td>
<td>22.17</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>31,79,327</td>
<td>72.48%</td>
</tr>
</tbody>
</table>
HH already covered under the scheme
• Auto-inclusion, houseless and all 7,6,5 deprivations families
• All disabled families covered
• All women headed families covered
• Houses in the name of female

PMAY-G (Pradhan Mantri Awas Yojana- Gramin)

Auto Inclusion Groups (1,12,771)
Shelterless, Destitute, Rescued Bonded Labors, Primitive Tribe Groups

HHs with zero rooms (5,326)

7 deprivations (1,438)

SAGY/RURBAN GPs (10,075)

Persons With Disabilities (D4) (22,773)

60% of the remaining target for (D5) Landless Labourers

40% of the remaining target for (D2) Women Headed HH

SAGY ODF Village
PMAY-G houses in Chhattisgarh

Before

After
National Rural Livelihood Mission

• Identification of 10000 most deprived families in each block
• Expansion mode from 29(2016-17); 85(2017-18); 144(2018-19)block
• SHG-as VRP in social audit- 13,731 trained
• Bring all SHG in to NRLM fold
• Double the credit linkage
  o Bank Sakhi and BanK Mitra
• Convergence to increase livelihood in agriculture
• E-Ricksaw
- Verification of casual manual labourer
- Priority to FRA beneficiaries PVTG.
- Bare foot technician
- Capacity Building-SAKSHAM
- CLART- Foundation for Ecological Security (FES).
- GIZ Project
  - Mate training to SHG members and Community Farming through SHG members
- ICRG
  - Vulnerability Study
  - Community Mobilisation
  - Capacity building of technical staff
  - Creation of demonstrative structures
CLART shows four colours data with GPS location.

- **Very Good Recharge Area**
  - Percolation tank, WHS, Contour trench

- **Moderate Recharge Area**
  - LBCD, WAT, Gully plug

- **Surface Storage Area**
  - Farm Pond, WHS, Well deepening

- **Area for Protection & Regeneration**

**Step 4:** Now you can see CLART file in GeoODK Collect
ICRG-Capacity building and Skill training

• Training and Orientation of Administrative and Technical Team of MGRNEGA
• Training of Local Governance Body and ground functionaries
• Learning Material
• 5 Membered State team, 9 District Engineers and 33 Community workers placed
Climate Resilient Watershed development in Chhattisgarh (some examples)

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<tr>
<th>What?</th>
<th>Where?</th>
<th>What’s being done?</th>
</tr>
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<td>Check Dam, soil and water conservation</td>
<td>D: Rajnandgaon, B: Mohala, GP: Mading Piding Bhursa, V: Mading Piding Bhursa</td>
<td>Wing walls to stop siltation, treatment work upstream, dug well in low lying area, plantation</td>
</tr>
<tr>
<td>Farm Pond, water conservation and harvesting</td>
<td>D: Bilaspur, B: Belha, GP: Bharari, V: Bharari</td>
<td>Slope gradient for water flow, Silt trap and stone pitching at inlet and outlet</td>
</tr>
<tr>
<td>Pond, water conservation and harvesting</td>
<td>D: Korba, B: Pali, GP: Rangole, V: Saraipali</td>
<td>Site selection as per soil type, silt trap chamber, bund stability, plantation, additional dug well</td>
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CHHATTISGARH

**What?**
- Check Dam, soil and water conservation
- Farm Pond, water conservation and harvesting
- Pond, water conservation and harvesting

**Where?**
- D: Rajnandgaon, B: Mohala, GP: Mading Piding Bhursa, V: Mading Piding Bhursa
- D: Bilaspur, B: Belha, GP: Bharari, V: Bharari
- D: Korba, B: Pali, GP: Rangole, V: Saraipali

**What’s being done?**
- Wing walls to stop siltation, treatment work upstream, dug well in low lying area, plantation
- Slope gradient for water flow, Silt trap and stone pitching at inlet and outlet
- Site selection as per soil type, silt trap chamber, bund stability, plantation, additional dug well

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**Images:**
- Stop Dam, Mading Piding Bhursa
- Community Pond, Saraipali
- Community farm pond and Feeder channel, Bharari
- Dug well, Balrampur
Key Points

- Imperative to understand the linkages between climate change and national and local development priorities, needs and sectoral strategies.

- Leverage funds of different schemes for climate adaptation and vulnerability reduction.

- Adaptation not necessarily require additional investments always – investments in capacity and integration of adaptation measures into ongoing planning.

- Important to build capacities of various sub-national actors to absorb climate funds.

- Critical to engage the private sector, not just for funds but also for their due diligence and R&D capabilities.
Thank you