Presentation on Natural Capital Accounts (Forestry Sector)

By: Government of Himachal Pradesh
Coverage

(i) Introduction
(ii) Why Forest accounts
(iii) Current & Past experience
(iv) Policy issues
(v) How would forest accounts help
(vi) Issues with SNA
(vii) Way Forward
Introduction
55673 Sq Km  [2 D Area]
86384 Sq Km  [3 D Area]
Percentage increase as per 3D area = 56%
## Introduction to Himachal Pradesh

<table>
<thead>
<tr>
<th>Area</th>
<th>Unit</th>
<th>2011 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Sq. Kms.</td>
<td>55673 (2D Area) 86384 (3D Area)</td>
</tr>
<tr>
<td>Districts</td>
<td>No.</td>
<td>12</td>
</tr>
<tr>
<td>Tehsils</td>
<td>No.</td>
<td>123</td>
</tr>
<tr>
<td>Development Blocks</td>
<td>No.</td>
<td>78</td>
</tr>
<tr>
<td>Census Village s</td>
<td>No.</td>
<td>20690</td>
</tr>
<tr>
<td>Gram Panchayats</td>
<td>No.</td>
<td>3243</td>
</tr>
<tr>
<td>Towns</td>
<td>No.</td>
<td>57</td>
</tr>
</tbody>
</table>
## Demographic Profile of the State

<table>
<thead>
<tr>
<th></th>
<th>HP</th>
<th>All India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (million) (Census 2011)</td>
<td>6.8</td>
<td>1121</td>
</tr>
<tr>
<td>Decennial Growth Rate(%)</td>
<td>12.94</td>
<td>17.64</td>
</tr>
<tr>
<td>Population Density per sq. km.</td>
<td>123</td>
<td>382</td>
</tr>
<tr>
<td>Sex Ratio (Females per 1000 males)</td>
<td>972</td>
<td>943</td>
</tr>
<tr>
<td>Rural Population</td>
<td>89.96</td>
<td>68.84</td>
</tr>
<tr>
<td>Literacy Rates</td>
<td>82.80</td>
<td>73.0</td>
</tr>
<tr>
<td>Life Expectancy (2006-10)</td>
<td>70.0</td>
<td>66.1</td>
</tr>
<tr>
<td>Male</td>
<td>67.7</td>
<td>64.6</td>
</tr>
<tr>
<td>Female</td>
<td>72.4</td>
<td>67.7</td>
</tr>
<tr>
<td>Forest Area as a %age of total Area</td>
<td><strong>66.5%</strong></td>
<td><strong>21.0%</strong></td>
</tr>
</tbody>
</table>
### Classification of Forests

<table>
<thead>
<tr>
<th>Type</th>
<th>Area(Km²)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved Forest</td>
<td>1896</td>
<td>5.1</td>
</tr>
<tr>
<td>Demarcated Protected Forest</td>
<td>11400</td>
<td>30.8</td>
</tr>
<tr>
<td>Un-Demarcated Protected Forest</td>
<td>21643</td>
<td>58.4</td>
</tr>
<tr>
<td>Unclassed Forest</td>
<td>977</td>
<td>2.7</td>
</tr>
<tr>
<td>Other managed by Forest department</td>
<td>369</td>
<td>1.0</td>
</tr>
<tr>
<td>Not managed by Forest department</td>
<td>748</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37033</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Economy of Himachal Pradesh
Growth Performance

Source: DES, HP
Gross State Domestic Product (GSDP) at current prices

<table>
<thead>
<tr>
<th>Year</th>
<th>GSDP (Rs. in crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>24077</td>
</tr>
<tr>
<td>2005-06</td>
<td>27127</td>
</tr>
<tr>
<td>2006-07</td>
<td>30281</td>
</tr>
<tr>
<td>2007-08</td>
<td>33963</td>
</tr>
<tr>
<td>2008-09</td>
<td>41483</td>
</tr>
<tr>
<td>2009-10</td>
<td>48189</td>
</tr>
<tr>
<td>2010-11</td>
<td>56980</td>
</tr>
<tr>
<td>2011-12</td>
<td>64957</td>
</tr>
<tr>
<td>2012-13</td>
<td>73710</td>
</tr>
<tr>
<td>2013-14</td>
<td>82585</td>
</tr>
</tbody>
</table>

Source: DES, HP
## Per Capita Income (PCI)

<table>
<thead>
<tr>
<th>Years</th>
<th>Current Prices</th>
<th>Constant Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>33350</td>
<td>33348</td>
</tr>
<tr>
<td>2005-06</td>
<td>36951</td>
<td>35806</td>
</tr>
<tr>
<td>2006-07</td>
<td>40396</td>
<td>38195</td>
</tr>
<tr>
<td>2007-08</td>
<td>43966</td>
<td>40143</td>
</tr>
<tr>
<td>2008-09</td>
<td>49909</td>
<td>41666</td>
</tr>
<tr>
<td>2009-10</td>
<td>58402</td>
<td>43492</td>
</tr>
<tr>
<td>2010-11</td>
<td>68297</td>
<td>46682</td>
</tr>
<tr>
<td>2011-12</td>
<td>75185</td>
<td>49203</td>
</tr>
<tr>
<td>2012-13</td>
<td>83899</td>
<td>51730</td>
</tr>
<tr>
<td>2013-14</td>
<td>92300</td>
<td>54494</td>
</tr>
</tbody>
</table>
Percentage Contribution of GSDP

- Tertiary: 40.59%
- Secondary: 40.26%
- Primary: 19.15%
Why Forest Accounts
The Forests of Himachal Pradesh known for their grandeur and majesty are like a green pearl in the Himalayan crown.

The State has vast forestry resources spread over different agro climatic zones throughout the length & breadth of the State.

This life supporting systems are presently under great stress due to impact of modern civilization, economic development and growth in human and cattle population.

At present the forests are not being looked as a source of revenue and sustained supply of raw material.
The emphasis now is on protection and conservation of forests, environment and wild life.

Major source of revenue to the State exchequer prior to the State Government direction on complete ban of green feeling of trees was from the forest.

The present accounting system at current prices include the activities like tourism but not Eco-tourism, watershed protection, carbon storage and bio diversity conservation which implies that the forestry sector have to reoriented for the real
<table>
<thead>
<tr>
<th>Year</th>
<th>Contribution of forestry to Total GSDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>5.60</td>
</tr>
<tr>
<td>2005-06</td>
<td>5.93</td>
</tr>
<tr>
<td>2006-07</td>
<td>5.85</td>
</tr>
<tr>
<td>2007-08</td>
<td>5.73</td>
</tr>
<tr>
<td>2008-09</td>
<td>5.12</td>
</tr>
<tr>
<td>2009-10</td>
<td>5.03</td>
</tr>
<tr>
<td>2010-11</td>
<td>4.34</td>
</tr>
<tr>
<td>2011-12</td>
<td>5.06</td>
</tr>
<tr>
<td>2012-13</td>
<td>4.94</td>
</tr>
<tr>
<td>2013-14</td>
<td>4.80</td>
</tr>
</tbody>
</table>
Why Forest Accounts contd.

• Present System of National accounts provides false signals to the policy makers. It Confuses the depletion of valuable assets with the generation of income resulting in illusory gains in income and permanent losses in wealth (Goal of Sustainable development)

• Natural resources being part of wealth of the nation, The Natural Resource accounting needs to be integrated with System of National Accounts (SNA).
Why Forest Accounts contd.

- Non marketed products are also not included in the national accounts although they are extremely crucial to rural livelihoods. (Measurement difficulties)
- Difference between “Produced” and “Natural” Capital.
- The value of forest degradation/depletion is not recorded as a cost in SNA.
Structure of the Economy

- Above diagram reflects that the secondary sector contributes 41% to the State GSDP whereas it employs only 1.65% of the total workers. In contrast, the primary sector contributes only 19 per cent to the State GSDP & 63 % workers are dependent on this sector.
Current & Past experience
- Environmental and Natural Resource Accounting In India is in developing stage.

- Natural Resource Accounting (NRA) is a revaluation of the National Income Accounts of a country, adjusting for the values of natural resources used in various economic activities. Natural resources being a part of the wealth of the nation, initiatives have to be taken to integrate the natural resource accounting along with the System of National Accounts (SNA).

- The Ministry of Statistics and Programme Implementation (MOSPI) Government of India, being the nodal authority to release official statistics, has taken significant steps for improvement of Environment Statistics and also for the development of framework for the preparation of Natural Resource Accounting in India.
India currently follows the System of National Accounts (SNA-1993)

Forest services provide intermediate inputs to other sectors such as livestock grazing, agriculture, Hydropower and tourism.

Value of these services are not recognized and hence, is attributed to the using sector, not to forestry.
To conserve environment and to protect the State from climatic change the government has already ordered complete ban on polythene and plastic bags & containers.

Economic activity in the sub sectors of the forestry sector will be fully accounted in terms of its actual potential and use accounts linkages with the other sectors of the economy.
The estimation of Gross Value Added from the “forestry and Logging “ sector is presently carried out by the production approach.

In this approach the state is evaluating timber, fuel wood, NTFP and fodder and Tree outside the forest area (TOF). TOF has been included in the 2004-05 series
Policy issues
• **Forest Policy 1988** focuses on environmental stability, restoring ecological balance and preserving the forests but National Accounting System considers only logging incomes in the accounting system resulting in under valuation of forestry sector’s contribution.

• **For Sustainable development**, It is necessary to have a clear idea regarding the extent and nature of degradation across various natural resources so that real costs of degradation are accurately estimated.

• **Estimation of gross value** added from the forestry and logging sector in India is presently carried out by the production approach. There is a need to estimate and integrate tangible and intangible benefits of the forestry sector in SNA.
Policy issues contd.

• How to ensure that forests get rightful place in Macro economic policy
• Economy-wide linkages with forestry needs to be improved by
  – Demonstrating improved measures of the economic benefits from forest ecosystems to all sectors of the economy
• Ban on green felling- should it continue or we should manage forests for revenue generation?
• For natural forests, natural growth is not considered an increase in inventory.
Policy issues contd.

• Identification of beneficiaries and to ensure their contribution in regeneration / conservation of forests

• Alternative policies in lieu of green felling- PES/NTFP/Carbon markets

• Net benefit method vs User Cost method of calculating depletion

• Inclusion of Maintenance Costs

• Valuation of Non- Marketable Environmental Services
Out of the total potential only 36% has been harnessed till now.
Tourism contributes only about 7.2% of total GSDP of the state.

Tourist arrivals in Himachal Pradesh (in lakh)

<table>
<thead>
<tr>
<th>Year</th>
<th>Indian</th>
<th>Foreigners</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>69.28</td>
<td>2.08</td>
<td>71.36</td>
</tr>
<tr>
<td>2006</td>
<td>76.72</td>
<td>2.81</td>
<td>79.53</td>
</tr>
<tr>
<td>2007</td>
<td>84.82</td>
<td>3.39</td>
<td>88.21</td>
</tr>
<tr>
<td>2008</td>
<td>93.73</td>
<td>3.77</td>
<td>97.50</td>
</tr>
<tr>
<td>2009</td>
<td>110.37</td>
<td>4.01</td>
<td>114.38</td>
</tr>
<tr>
<td>2010</td>
<td>128.12</td>
<td>4.54</td>
<td>132.66</td>
</tr>
<tr>
<td>2011</td>
<td>146.05</td>
<td>4.84</td>
<td>150.89</td>
</tr>
<tr>
<td>2012</td>
<td>156.46</td>
<td>5.00</td>
<td>161.46</td>
</tr>
<tr>
<td>2013</td>
<td>158.53</td>
<td>4.76</td>
<td>163.29</td>
</tr>
</tbody>
</table>
How would forest accounts help?

• Can help in analyzing trade-offs
  – Between cutting down upstream forests for timber and minerals versus the risk of floods downstream

• Better inform development policy through improved sectoral planning and more equitable social allocations
  – Dependence of other sectors on healthy forests

• Would capture both – resource use as well as damaging effects of degradation

• Forests accounts at watershed level can help design PES schemes
How would forest accounts help?

• Accounts are descriptors to assess performance
• Incomplete if natural assets are ignored
• Crucial role of forests undervalued in SNA
• Forests are “self-generative but degradable asset”
• If misused, they depreciate and impact economic well-being
Issues with SNA

• GDP is an unsuitable indicator of sustainable development (Invisible values are not captured)
• GDP cannot record trade-offs (Non marketed products)
• Natural capital degradation costs India $36 billion to $124 billion annually, or between 2.6% and 8.8% of 2009 gross domestic product (GDP). (World Bank)
Way Forward
To implement the proposed system of Forest Accounts in the State/Country and to overcome impediments in the system of economic valuation of forest of the country for estimating their true contribution, the State has to apply the SEEA central framework:
Initiative of Himachal?

- With the policy issues listed in the previous slides and
- As a part of the technical assistance programme of the World Bank’s Development Policy Loan Promoting Inclusive Green Growth and Sustainable Development in Himachal Pradesh and
- To assess the forest wealth and its contribution to the other sectors (Tourism & Hydropower).
Initiative of Himachal?

• The State has taken one sub state level area i.e. district (MANDI) as a pilot study area for implementing this new concept and will be replicated to whole State within this years.

• Establishment close collaboration between data producers, policy & decision makers
• **Creation of State Level Coordination Committee/ Working/Expert group**

• Development of Institutional arrangement for:
  - Improvement in data availability (Gaps ?)
  - Compilation and policy analysis
  - Capacity building
  - Communication and advocacy
  - Indicators for cultural services
• Preparation of physical area, volume of Forest resources in Himachal Pradesh as per SEEA framework.

• Estimate the exact potential and contribution of NTFP to the state.

• Understand the exact contribution of the Forests to Tourism sector of state economy.

• Physical accounts vs Monetary accounts (Development of PSUT tables for the timber and NTFP)
Outcome

• The Data collectors and producers workshop held in December, 2014.
• The house to house survey to find the contribution of NTFP in the district with pre designed survey instrument.
• The Area, Asset, Volume in physical and monetary accounts have been prepared and are available for its use in State accounts.
Major finding

• The state is in the governing council of SNA-2008 in the country, with the outcome of this pilot, the state can enforce this issue at the national level.

• Need for an agreed international standard
THANK YOU