

Country Experiences in Ecosystem Accounting - India

Regional Training Workshop on the SEEA Ecosystem Accounting for Asia and the Pacific

at

Manila, Philippines

during 5-8 June, 2023

By

Dr. Ruchi Mishra

Deputy Director

NSO, MOSPI

Mandate of the Ministry

As per the Government of India's Allocation of Business Rules:

Ministry of Statistics and Programme Implementation has the mandate for:

'Development of Environment Statistics, development of methodology, concepts and preparation of National Resource Accounts for India.'

History of Environment Accounts in India

1997-2009

- Different studies conducted under the aegis of Technical Working Group on NRA.
- Studies- disparate in nature – a strategy was required

2011

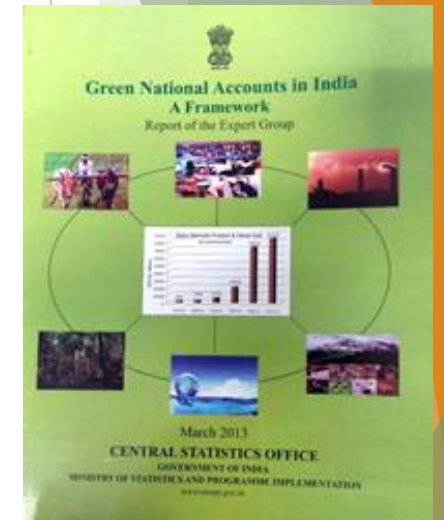
- Expert Group under Prof. Sir Partha Dasgupta constituted for preparing roadmap

2013

- Expert Group released report, "Green National Accounts in India-A Framework" and recommended compilation of the SEEA accounts in phased manner

2015

- Inter-Ministerial Group (IMG) constituted



Inter-Ministerial Group (IMG) on Environmental Economic Accounting

- ▶ IMG -EEA in India constituted in 2015.
 - ❖ Headed by Director General (Statistics)
 - ❖ Represented by various experts from different Ministries
- ▶ ToR includes:
 - ❖ Assessment of Data Availability
 - ❖ Resource Requirement and
 - ❖ Capacity Development
 - ❖ Technical Support
- ▶ Accounts are released after being approved in the IMG.

Institutional Mechanisms

Inter-Ministerial Group on Environment
Economic Accounting

Involvement of the State Governments (DES)
with the support of the line Departments

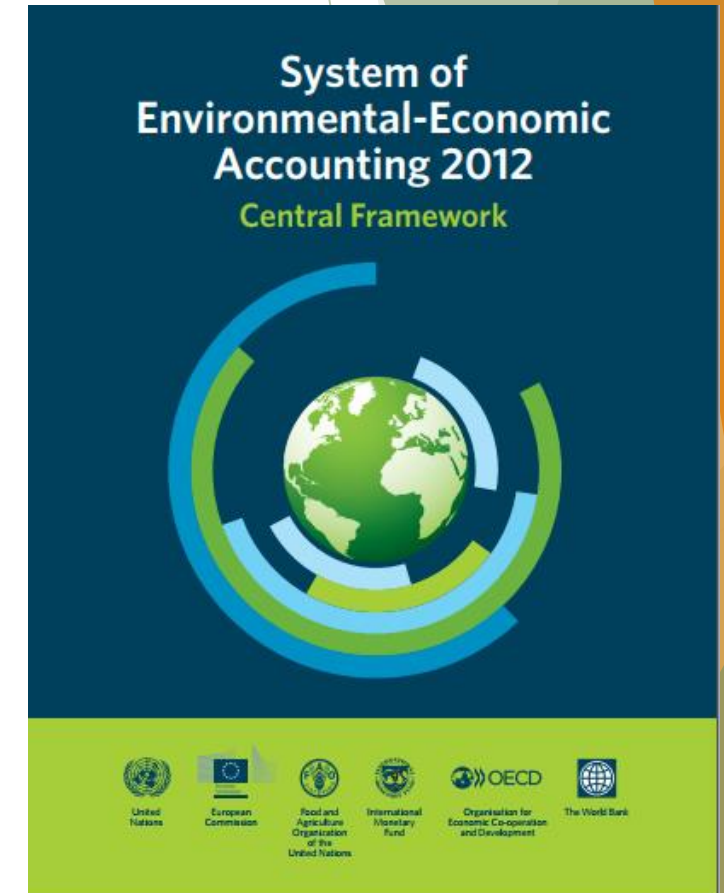
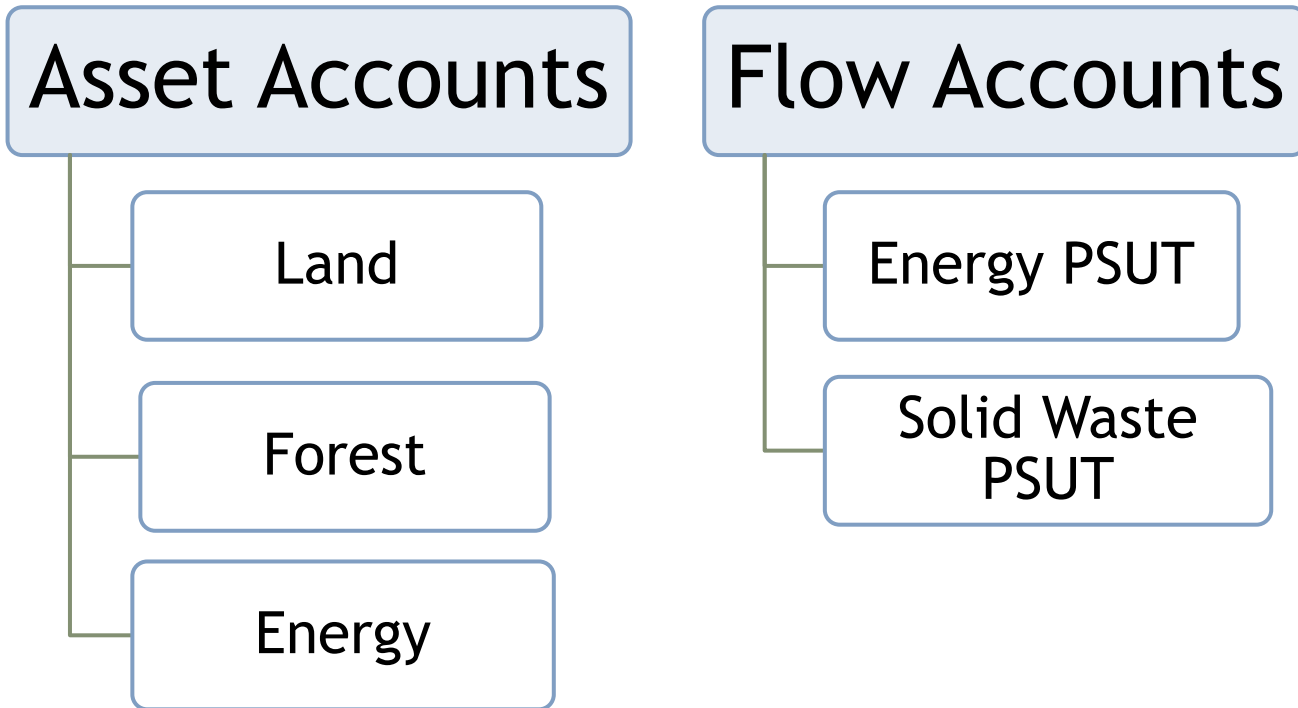
Others:

Brainstorming Sessions
One-to One Discussion

SEEA Implementation in India

- Annual publication titled 'EnviStats India Vol. II: Environment Accounts' following SEEA frameworks since 2018 onwards.
- Initially, the focus was on asset and extent accounts and gradually other condition and services accounts were developed.
- Challenges were to get timely data at the desired level of disaggregation.
- FDES and SDG frameworks were referred to decide on the indicators and statistics.

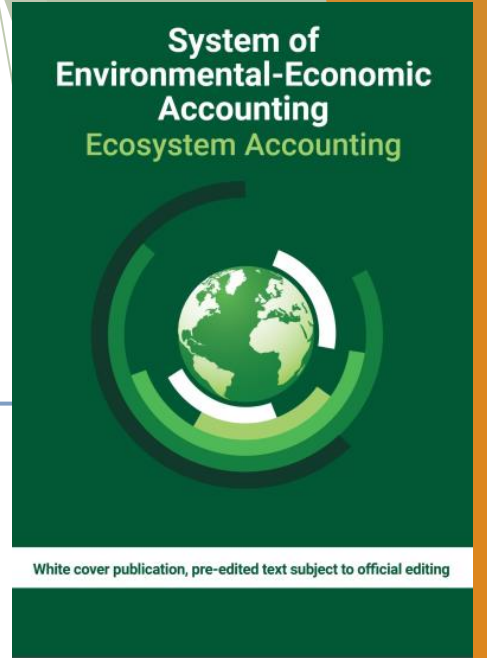
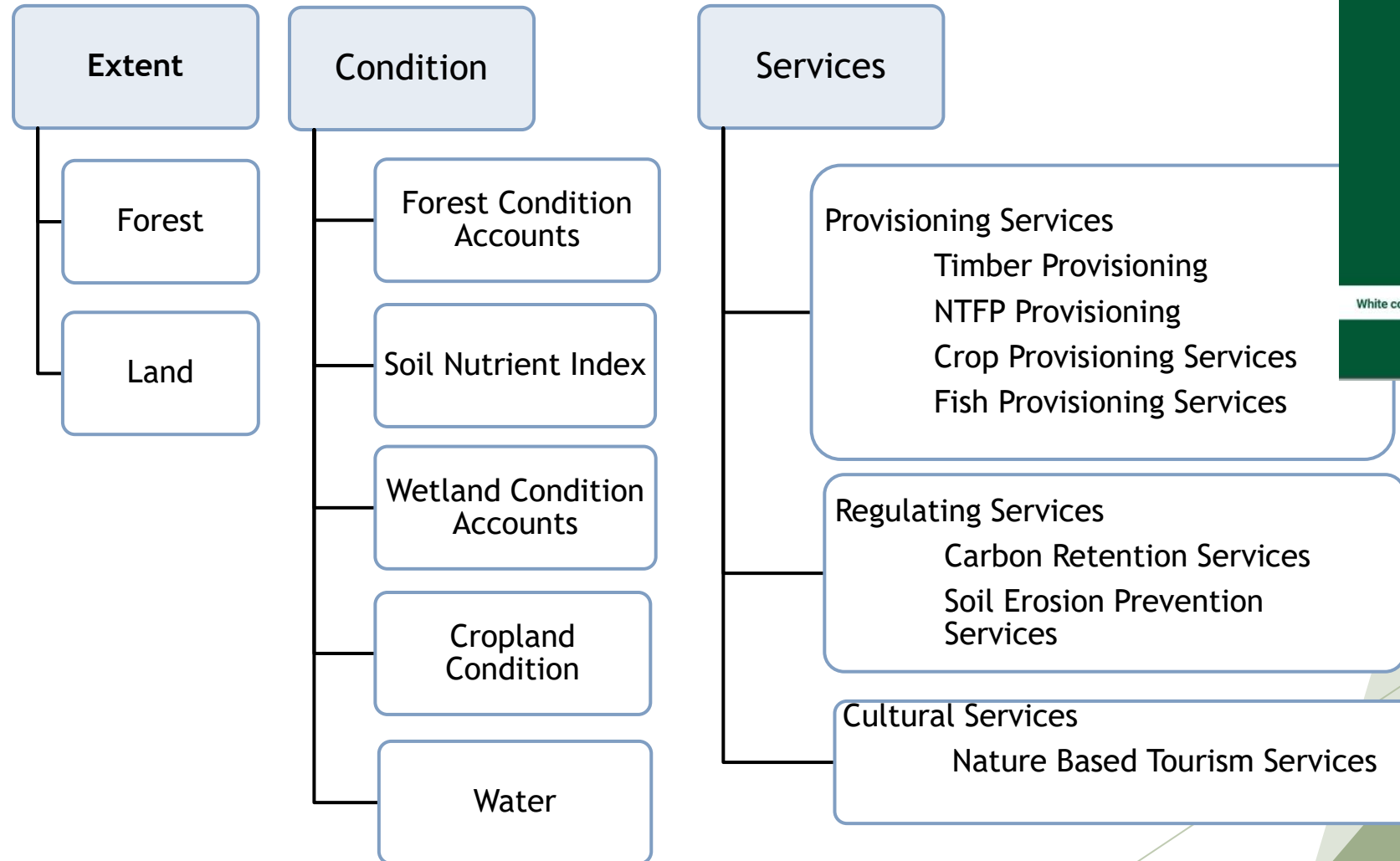
System of Environment Economic Accounting-Central Framework



Experiences and Challenges

- ▶ Started with Basic Format of SEEA Tables.
- ▶ SEEA Formats were modified in a simplified format for the ease of data source agencies. E.g. Energy PSUT, Solid Waste PSUT
- ▶ Definition of technical terms and appropriate explanation in consultation with the stake-holders were provided in the format for better understanding of the data providers. E.g. Solid Waste Accounts
- ▶ Challenges were to assess data availability. One-to-one meeting with the concerned stakeholders helped in assessing the data availability and understanding the technicalities of data generation, periodicity etc.

SEEA Ecosystem Accounting



Example: Accounts related to Forest Ecosystem

Extent Accounts

Recorded Forest Area, by type of Protection -
Reserved, Protected or Unclassed



- Difference in Definition of Forest in various sources such as NRSC, FSI and Land Utilization Statistics due to difference in objectives of data collection
- Data Source: Forest Survey of India has mandate to conduct survey and assessment of forest resources in the country.
- Accounts at sub-national Level: Changing administrative boundaries of Districts due to merger, division etc. leads to inconsistency in extent accounts compiled at district level over a period

Example: Accounts related to Forest Ecosystem

Condition Accounts

Growing Stock
Carbon Stock
Wetlands Within
Forests
Biodiversity
Assessment
Forest Fragmentation




- Condition accounts were compiled based on a review of available datasets for selected variables
- There are several other important condition indicators of forests which have not been included in this assessment, but are nevertheless, very important.
- Many parameters are yet to be explored
- Some of the parameters are not provided regularly, time-series assessment is not possible for those parameters

Example: Accounts related to Forest Ecosystem

Ecosystem Services Accounts

Timber and NTFP
Provisioning Services
Carbon Retention
Services



- Started with these 3 services
- Initially, estimates were compiled at current prices only. Subsequently, constant price estimates were also compiled.
- At the first instance, some of the ratios/statistics used for estimation are sourced from Global databases. Equivalent national estimates will yield better results.
- Estimates at the sub-national level can be compiled using state-level ratios/statistics.
- Many Services are yet to included due to lack of data in the required format
- Many of the services are yet to be explored

Major Stakeholders and Data Providers



Ministry of Environment, Forest
and Climate Change



FOREST SURVEY OF INDIA

Ministry of Environment, Forest & Climate Change

भारतीय वन सर्वेक्षण



भारतीय वनस्पति सर्वेक्षण
BOTANICAL SURVEY OF INDIA



CPCB



Government of India

National Remote Sensing Centre

Indian Space Research Organisation

ISO 9001:2015



सत्यमेव जयते

कृषि एवं किसान कल्याण विभाग

DEPARTMENT OF AGRICULTURE & FARMERS

WELFARE

भारत सरकार
GOVERNMENT OF INDIA

कृषि एवं किसान कल्याण मंत्रालय
MINISTRY OF AGRICULTURE & FARMERS WELFARE

Experiences and Challenges

- ▶ Examine existing datasets disseminated by different ministries for possible compilation of Accounts.
- ▶ Exploration of developing trial accounts w.r.t few ecosystems such as croplands, forests based on available data.
- ▶ Preparation of accounts for some states in the first instance rather than going for a Pan India Estimates.
- ▶ For Condition and Services Accounts:
 - ❖ Several parameters are yet to be explored.
 - ❖ Only a few contributions of several ecosystems have been identified and accordingly their services have been estimated.
 - ❖ There are still many services of ecosystems which are either unexplored or could not be quantified due to lack of data in required format.

Experiences and Challenges...Cont.

- Given federal structure of Indian polity, many environment related sectors such as forest, land and soil, etc. fall under the jurisdiction of the State Governments.
- Data are collected by the respective agencies w.r.t their priority agenda and schemes, which sometimes may not be sufficient to compile accounts in SEEA format.
 - ❖ Scattered over different agencies
 - ❖ Information available but not compiled in the format desired
 - ❖ Non-availability of data at the proposed disaggregation level for many indicators under different sectors
 - ❖ No periodic assessment/monitoring of certain Statistics
 - ❖ Periodicity - annual, biennial, 5-years
- Capacity Development as well as Coordination & Cooperation is required.

Way Forward

- ▶ Start with broad account based on the data available.
- ▶ Efforts to be made to convince the data source agencies to collect data in requisite formats.
- ▶ Regular discussions with Stakeholders to address the data gaps issues.
- ▶ Expansion of Accounts with updated and disaggregated data.
- ▶ Frequent Capacity Development Workshops are required at the horizontal level and vertical level.

Dissemination

Ministry's Website

- All Publications released so far are available on the Ministry's Website
- Also circulated through emails to IMG members and some Users

User Conferences Workshops

- Conferences/Workshops are organized to showcase the accounts developed so far and address queries of Users

Social Media

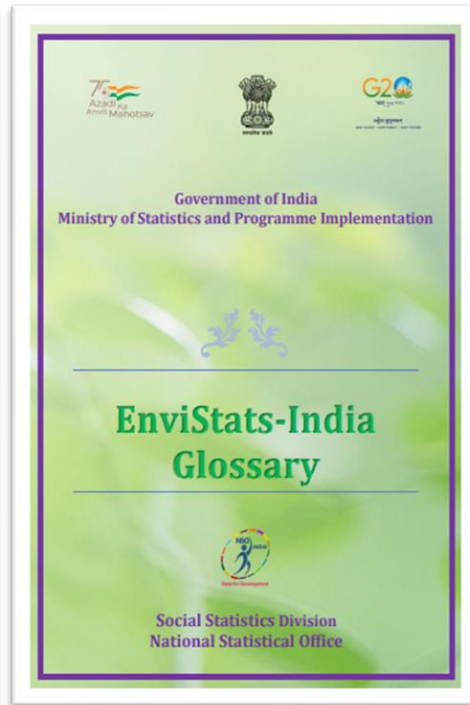
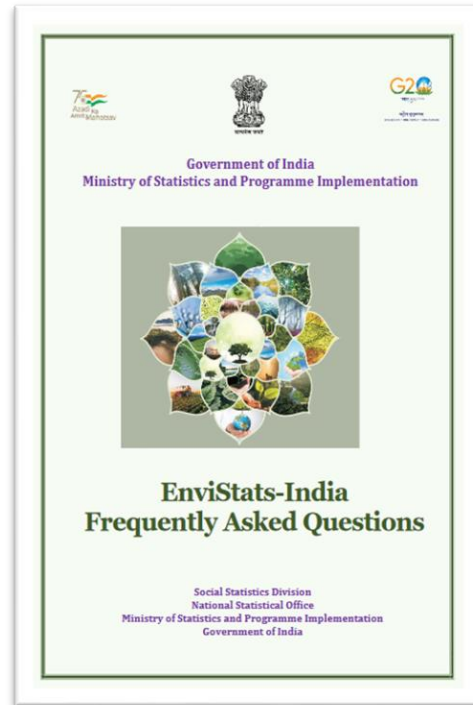
Contribute to SEEA Newsletter wherein the links are shared

Environment Ecosystem Accounts



- ▶ Started in 2018
- ▶ Latest Issue released in 2022
- ▶ Upcoming issue in September 2023

Other Related Publications



To address users' queries

The background features abstract geometric shapes in shades of green and orange, primarily on the right side, with some shapes extending towards the center. The shapes are layered and semi-transparent, creating a modern, layered effect.

Thank You

<https://mospi.gov.in/>