

ENVIRONMENTAL-ECONOMIC ACCOUNTING IN INDIA

**Presented in the 20th Meeting of the
London Group on Environmental Accounting
15-17 October 2014
New Delhi**

**By
Social Statistics Division
Central Statistics Office
Ministry of Statistics & Programme Implementation
Government of India**

Initial stage

- **India made initial efforts towards Natural Resource Accounting (NRA) in late 1990's.**
- **A Technical Working Group on Natural Resource Accounting was Constituted in 1997.**
- **As per the recommendations of the Group, a pilot project on Natural Resource Accounting initiated in Goa in 1999-2000.**
- **Further seven State-level studies on NRA were commissioned in different sectors in different States.**

PRESENT STAGE

- Subsequently, in 2011, an Expert Group was constituted under Professor Sir Partha Dasgupta, for developing a framework for '**Green National Accounts In India**' and preparing a roadmap for implementation.
- The Expert Group submitted its Report in March, 2013.

Recommendations of The Report- SUMMARY

- **The recommendations of the Expert Group can be broadly summarized into 4 categories.**
 - **Initial focus will be on preparation of physical supply use tables(PSUTs) in respect of land, forest and timber and minerals which will be possible in a short time period.**
 - **To have a medium-term plan for preparation of (a) monetary supply use tables for land, forest and timber and minerals, and (b) physical supply use tables for soil, water, carbon and energy.**
 - **To initiate exploratory research on valuation and development of a more complete set of national accounts.**
 - **To have a long-term plan for (a) environmental accounts in respect of aquatic resources, air and biodiversity and (b) institutionalising mechanism for period collection of data/periodic studies and surveys.**

Expert Group Report: Follow up

- **Follow-up action on the Report**
 - Discussed in an International Workshop held during 5-6 April, 2013 in New Delhi.
 - Hon'ble Prime Minister of India inaugurated and unveiled the Report.
 - The report is available in the MOSPI website: <http://www.mospi.gov.in>.
 - The outcome of the workshop was discussed in the National Statistical Commission for drawing Action Plan for Environmental Accounting in India.

The SEEA Central Framework

- **Meanwhile SEEA Central Framework was adopted by UN Statistical Commission as an Interim International Standard in February 2012.**
- **The Expert Group has recommended the adoption of Asset accounts, PSUT and MSUT as adopted in SEEA Central Framework.**

SEEA Implementation in India

- **The initial focus is compilation of asset accounts for selected sectors.**
- **Water, Timber, Minerals (Energy and Non Energy) and Aquatic Resources identified.**
- **The First Challenge is to identify indicators and Statistics, measurement unit, at desired disaggregation level for asset accounts.**
- **To meet the challenge, statistics and indicators, measurement units, at the desired disaggregation levels have been decided which are broadly based on FDES 2013 and relevant for the SEEA Tables for respective sectors.**

SEEA Implementation in India...contd.

- **The Basic Table format in SEEA Central Framework was used for sector wise frameworks.**
- **The basic table format in the Central Framework was expanded suitably to make a framework which will be more clear to data source agencies.**
- **Appropriate explanation of the terms were also given in the framework for better understanding.**

SEEA Implementation in India ...Contd

- **Detailed frameworks for asset Accounts were prepared for the following Sectors:**
 - Water
 - Timber
 - Minerals (Energy and Non-Energy)
 - Coal
 - Aquatic assets
- **For the remaining Sectors, Statistics and Indicators were prepared sector wise using FDES set of statistics to assess the data availability.**

ASSET ACCOUNTS FRAMEWORK FOR WATER

- Table 5.11.2 of SEEA CF was used as the basic reference table.
- The Table was expanded to include all components and flows.
- Concepts and definitions were included for better understanding and clarity.
- Some related additional information were also included.
- The Framework is given below. [WATER ACCOUNTS FRAMEWORK INDIA.xlsx](#)

ASSET ACCOUNTS FRAMEWORK FOR TIMBER

- Basic Table in SEEA CF -5.8.1
- The basic table was expanded to include all components and flows.
- The framework include three components given in the Central Framework viz- i. Cultivated Timber resources, ii. Natural timber resources available for wood supply, iii. Natural timber resources not available for wood supply.
- The Framework is given below. [Data requirement-forest timber account.xlsx](#)

ASSET ACCOUNTS FRAMEWORK FOR MINERALS

- **Basic Table in SEEA CF -5.5.3**
- **Separate frameworks for Energy Minerals (Oil and Natural Gas), Coal and Peat Reserves and Non Energy Minerals. (As data source agency in each case are different).**
- **Potential Aggregations by By Mineral Type, By Grade, By Class (A,B,C), National/State; (The Classes are : A: Commercially recoverable resources, B: Potentially commercially recoverable resources, C: Non-commercial and other known deposits).**

Asset accounts FRAMEWORK FOR Minerals...contd

- Energy Minerals: [Energy Resources- Accounts- P&NG.xlsx](#)
 - Data Source: Ministry of Petroleum and NG
- Non Energy Minerals: [Non-Energy Minerals Accounts .xlsx](#)
 - Data Source: Ministry of Mines/Indian Bureau of Mines
- Coal and Peat: [Energy Resources- Accounts- Coal.xlsx](#)
 - -Data Source: Ministry of Coal

Asset Accounts FRAMEWORK FOR **Aquatic Resources**

- **Basic Table : Table 5.9.2 of Central Framework.**
- **The Framework :**
- **[Aquatic Resources- Accounts.xlsx](#)**
 - **Data Sources: Department of Animal Husbandry, Dairying and Fisheries, Fisheries Survey of India.**

Problems experienced

- **Lack of basic environmental data, even when the will to develop Environmental Economic Accounting is strong. This makes the implementation of Economic Accounting more difficult.**
 - **Given federal structure of Indian polity, many environment related sectors such as forest, land and soil, agriculture, fisheries, water, etc fall under the jurisdiction of the State governments.**
 - **The official data on the subjects allocated to States are collected by the respective State governments which are coordinated at Union level by the respective subject Ministries.**
 - **Insufficient development of technical capacities among the State statistical functionaries coupled with insufficient resources both in terms of money and manpower makes the job of relevant data collection more difficult.**
 - **Confidentiality is a problem connected to obtaining data from the source agencies.**
 - **Data quality is to be properly maintained for compilation of environmental economic accounting.**

Steps taken to address Data related problems

- **Director General, Central Statistics Office interacted with data source agencies to discuss data availability and related aspects. The following emerged during interaction:**
- **Data is collected by the respective agencies with respect to some of the identified indicators/statistics but they are not compiled in the required accounting format. Further in many cases the periodicity is not annual. For example data on minerals are collected once in five years. Forest survey data is collected in every two years.**
- **In some cases data is not available with one agency but are scattered to different agencies. For example water related data is available with State governments, Central Ground Water Board, and Central Water Commission, IMD**

Steps taken to address Data related problems ...contd.

- **Data are not currently available for many identified indicators/statistics such as data on evapotranspiration, data on soil water and glaciers, natural aquatic resources.**
- **Data are not be available at the proposed disaggregation level for many indicators under different sectors**
- **Species wise data are not available in some sectors- For example Timber and Aquatic accounts. In case of Minerals, data are not available by class/grade of minerals.**
- **Data source agencies do not have adequate resources for collection/compilation of required data in the context of compilation of Environmental Economic Accounts.**

Future Plan

- **Data requirement, measurement unit, periodicity and disaggregation level have been identified.**
- **Union Ministries have been requested to examine the existing data sets for compilation of asset accounts.**
- **The exercise is to be completed on priority.**
- **Simultaneously Central Statistics Office will explore the possibility of developing a trial asset account in respect of few sectors such as water, timber based on available data.**

Suggestions

- **Capacity Building**
 - Detailed training manual is to be developed
 - Training Statistical functionaries : Regional level training programmes can be organized by UNSD keeping in view needs of developing countries.
 - Technical cooperation among countries coordinated by UNSD
 - A dedicated website for the purpose of sharing experiences of the countries
- Implementation plan of the SEEA Central Framework to be drawn up keeping in view gaps in data availability being presently being faced by the countries particularly the developing countries.

THANK YOU