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DEVELOPMENTS OF NATIONAL ACCOUNTS STATISTICS IN INDIA

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DEVELOPMENTS OF NATIONAL ACCOUNTS STATISTICS IN INDIA

1. BACKGROUND

1.1 Before independence, the country had no official estimates of national income. Several attempts were, however, made by individual economists and research workers to compute nation's income. Recognising the need for providing estimates of national income for planning and policy making purposes on a regular basis, the Government of India set up an Expert Committee in 1949 known as "National Income Committee", under the chairmanship of Prof. P.C. Mahalanobis with Prof. D.R. Gadgil and Prof. V.K.R.V. Rao as members, to make recommendations regarding the compilation of estimates of national income, the improvement of the statistical data on which the estimates were to be based and to suggest measures to promote research in the field of national income. As per the methodology recommended by the National Income Committee, the first official estimates of national income were prepared by the CSO with base year 1948-49 and published them in 'Estimates of National Income' in 1956.

1.2 The CSO, thereafter reviewed the methodology continuously and incorporated additional macro-economic aggregates, like saving, capital formation, consumption expenditure, public sector transactions, consolidated sets of accounts, factor incomes, input-output tables and quarterly GDP estimates into the national accounting system, utilising the data available from population, agriculture, livestock and economic censuses and various large-scale household and enterprise surveys, conducted by the National Sample Survey Organisation (NSSO) and the CSO.

1.3 As a result, base years of the National Accounts Statistics series have been shifted from 1948-49 to 1960-61 in August 1967, from 1960-61 to 1970-71 in January 1978, from 1970-71 to 1980-81 in February 1988 and from 1980-81 to 1993-94 in February 1999. In line with this practice, the CSO introduced the New Series of National Accounts Statistics with 1999-2000 as the base year, on 31st January, 2006. Some of the features of these series are as follows:

1.4 Conventional Series of NAS (with base 1948-49)

1.4.1 As per the methodology and the pattern of presentation recommended by the National Income Committee, the first official estimates of national income were prepared by the CSO with base year 1948-49 for the estimates at constant prices. These estimates at constant (1948-49) prices along with the corresponding estimates at current prices and the accounts of the Public Authorities were published in the publication, "Estimates of National Income" in 1956. This series, commonly known as the "conventional series" was continued to be published till 1966 under the same title.

1.5 First Revision of NAS Series (Base year 1960-61)

1.5.1 With the gradual improvement in the availability of basic data over the years, a review of methodology for national income estimation and its extension to other fields of macro economic aggregates was undertaken, with a view to update the database and shifting the base year from 1948-49 to a more recent year. Special efforts in this regard were made for a comprehensive review of all available data, both published and unpublished. The estimates as per the revised series of national income with

1960-61 as new base were published in the “Brochure on the Revised Series of national Product, 1960-61 to 1964-65 (CSO, 1967)” replacing the earlier series with base 1948-49.

1.5.2 Simultaneously, work on the estimation of related aggregates like “capital formation” and saving for the years 1960-61 to 1965-66 was also undertaken. The coverage of the publication was extended gradually from time to time to incorporate the estimates of private consumption expenditure, saving, capital formation, factor incomes, consolidated accounts of the nation and detailed accounts of public sector.

1.5.3 Further, to meet the demand of the users a special supplement, “National Accounts Statistics, 1960-61 to 1972-73 – Disaggregated Tables (CSO, 1975)” was brought out. This publication included disaggregated tables on output, input, value added, private consumption expenditure, saving and capital formation. While the publication presented the estimates at current prices for the years 1960-61 to 1972-73, those at constant (1960-61) prices were presented for the entire period of 1950-51 to 1972-73. From the subsequent issue, the NAS, 1976, all those tables presented in the special supplement became regular features of the publication, NAS.

1.6 Second Revision of NAS Series (Base year 1970-71)

1.6.1 The base year of the revised series was subsequently changed from 1960-61 to 1970-71 (hereinafter referred to as 1970-71 series) and the estimates according to 1970-71 series were published in NAS, January 1978. These estimates were based on the latest available data from various sources, like population census, livestock census, various sample surveys and ad-hoc studies undertaken in the recent past. The scope, coverage and methodology of the estimates was same as for the earlier series included in NAS, October, 1976. Both 1960-61 series and 1970-71 series are known as “revised series”.

1.7 Third Revision of NAS Series (Base year 1980-81)

1.7.1 The CSO released a new series of national accounts aggregates with 1980-81 as base year (hereinter referred to as 1980-81 series) in February, 1988. This series was introduced after a comprehensive review of the data base as well as methodology employed in the estimation of various aggregates. It also involved a number of revisions arising out of the conceptual and methodological improvements as well as use of the latest available data. Efforts were also made to use as much current data as possible to replace the proportions based on the old bench-mark surveys. Further, the results of the latest Population Census, Livestock Census, All India Debt & Investment Survey (AIDIS), follow up surveys of the Economic Census (EC), Cost of Cultivation Studies (CCS) etc. were made use of. Special mention may be made here of the data collected under the programme of follow-up surveys of EC. The EC and its follow up surveys were particularly designed to fill the data gap pertaining to unorganized segments of the non-agricultural sectors of the economy.

1.7.2 The various methodological improvements carried out in 1980-81 series related to the revised procedure of estimation of evaluation of paddy, value added for textile group in case of unregistered manufacturing, domestic product from public administration and defence at constant prices, consumption of fixed capital (CFC), consumption of textiles and other items of private final consumption expenditure, change in stocks, losses of the departmental enterprises of the government etc. Details of the changes effected along with the results of the latest census/sources of data used in respect of each of the macro economic aggregates and also of the transactions of the public sector are available in the publication entitled ‘National Accounts Statistics-Sources and Methods’ published in 1989.

1.8 Fourth revision of NAS Series (Base year 1993-94)

1.8.1 The CSO revised the 1980-81 series of national account aggregates with 1993-94 as base year (hereafter referred to as 1993-94 series) in February, 1999. In the past, National Accounts Statistics were mostly revised decennially changing the base to a Year synchronizing with the year of decennial Population Census. It was primarily because in the base year estimates, the information on workforce played an important role and workforce estimates were obtained from the Population Census, which is conducted decennially in the years ending with 1. As a sequel to this sequence, this series of National Accounts Statistics should have been with the base year 1990-91. However, it was observed that the data on worker participation rate (WPR) captured by the National Sample Survey Organisation (NSSO) was better than the one estimated through the Population Census. Accordingly, the CSO used the workforce estimates based on National Sample Survey (NSS) workforce participation rates from the NSS 1993-94 (50th Round) survey results, and revised the base year of national accounts to 1993-94.

1.8.2 Of the various changes/methodological improvements effected in the new series, mention may be made of the estimation of working force by economic activities using the worker-population ratio and the workforce participation rates estimates based on the quinquennial survey on employment and unemployment conducted by the NSSO, 1993-94 (50th Round) and the total population as obtained from the 1991 Population Census, using the database on horticultural statistics released by the National Horticulture Board (NHB) of the Ministry of Agriculture, coverage of the agricultural production in the fore/backyard, floriculture, deep sea fishing, valuation of the output of prawns and shrimps separately, data on which is available from the Ministry of Agriculture, estimation of the contribution of tailoring services, public services in the quasi-government bodies and the contribution of Employees Provident Fund Organisation in the GDP. In the 1980-81 series imputed banking charges (financial intermediation services indirectly measured – FISIM) were being allocated to only few organised segments of the user industries and final consumers. In the 1993-94 series, however, FISIM was allocated to all user industries in line with the recommendations of the 1993 SNA (which came into existence in this period and was prepared under the auspices of the Inter Secretariat Working Group on National Accounts comprising of the European Communities (EUROSTAT), International Monetary Fund (IMF), Organisation for Economic Cooperation and Development (OECD), United Nations and World Bank). Further, methodology for estimating the output of insurance services was revised in this series, as per the recommendations of 1993 SNA.

1.9 Current series of NAS (Base year 1999-2000)

1.9.1 The CSO revised the 1993-94 series of national account aggregates with 1999-2000 as base year (hereafter referred to as new series) in February, 2006. The three major components influencing the present revision exercise include (i) revision of base year to a more recent year (for meaningful analysis of the structural changes in the economy), (ii) complete review of the existing data base and methodology employed in the estimation of various macro-economic aggregates including choice of the alternative databases on individual subjects and (iii) to the extent feasible, implementing the recommendations of 1993 SNA.

1.9.2 At the time of introducing the previous series with base year 1993-94, the CSO had announced that the future base year NAS series revisions would take place coinciding with the NSS quinquennial Rounds covering employment and unemployment. In continuation with the practice of adopting NSS employment and unemployment survey data, the new series of national accounts released on 31st January, 2006 adopted 1999-2000 as the base year, as it has used the data on WPR from the NSS 55th Round quinquennial survey on Employment and Unemployment, conducted in 1999-2000. In the new series, the WPR data has been used in conjunction with population data of the Population Census, 2001. In addition to using the results of these surveys and censuses, the CSO updated number of rates and ratios used in the compilation of national accounts based on the results of the latest studies.

1.10 Back Series of NAS

1.10.1 Whenever a new series of NAS is introduced with an updated base period, it is customary for the CSO to link the old series to the new base period. For the compilation of a linked series, the available two standard concepts are the splicing method, and reworking the estimates as per the current series methodology, at the component or detailed item level. The major problem in compiling back-series estimates is in maintaining the growth rates of earlier series at not only the component level, but also at each level of aggregation. If the growth rates are maintained at component level and at each level of aggregation, the components will not add up to the aggregate level, which means that there is loss of additivity between the components and at the aggregate level. On the other hand if the growth rates are maintained at the component level, and the aggregate is derived as a sum of the components, the growth rates of the aggregates in the linked series will be different from those in the earlier series. This is because the weighting diagram in the new series is the prices of different components in the new base year. The growth rates of the aggregates in the back years in the new series are now influenced by the price structure of the components of the new base year.

1.10.2 Keeping in view these difficulties in compiling the back-series estimates, and the need to account for the expanded coverage and the new data sources in the linked series, for the current series the CSO has carried out the linking of NAS series exercise separately for two distinct periods, namely (a) the series, for the years 1980-81 and onwards, and (b) the series, prior to 1980-81 (from 1950-51 to 1979-80). The linked series for the years 1980-81 and onwards has been compiled using the same methodology as adopted for the current series. This means that there would be some changes in the growth rates of various aggregates for the same years between the old series and the new series. However, additivity of detailed estimates with the aggregates will be maintained. For the years prior to 1980-81, estimates at detailed and aggregate levels are compiled by adopting the splicing method. This implies that there would be no change in the growth rates of these aggregates for the same years between the old and new series. However, additivity of detailed estimates with the aggregate is not maintained.

2. COMPILATIONS ON NATIONAL ACCOUNTS IN INDIA

2.1 Annual national accounts statistics

2.1.1 In India where availability of data required for detailed compilation of national accounts is sketchy, the approaches followed for estimation of macro-aggregates like national income and its components are guided very much by the information collected either on a continuous basis or at regular intervals through sample surveys or censuses. It also depends on the nature of the enterprises and their institutional character. The generalisation of approaches used is not easy and is also subject to revision from time to time as and when new and better data become available.

2.1.2 The annual national accounts of India are compiled following a mix of SNA 1968 and SNA 1993. These comprise the consolidated accounts of the nation, namely: Gross domestic product and expenditure; National disposable income and its appropriation; Capital finance; and External transactions accounts. The annual national accounts statistics also include estimates of domestic product (gross and net) by 18 major economic activities, private final consumption expenditure by object and by type of goods, domestic saving by type of institutions, capital formation by type of institutions, by type of assets and by industry of use, estimates of net capital stock by type of institutions and by industry of use, public sector transactions, and disaggregated statements. The input-output tables of India are compiled once in 5 years.

2.1.3 The annual estimates of GDP are prepared by dividing the whole economy into various sectors comprising primary, secondary and tertiary activities. The estimates of GDP in respect of agriculture, forestry and logging, fishing, mining and quarrying, registered manufacturing (establishments registered

under Factories Act, 1948) and construction are based on production approach. For the agriculture sector, estimates of area under different crops are made from the village records generally on complete enumeration basis, and the estimates of yield for principal crops are based on about 500,000 crops cutting experiments conducted every year. The data on agricultural inputs are available from the annual cost of cultivation studies, and benchmark surveys on feed of livestock. Data on major livestock products are available through the Integrated Sample Survey, and for other products from various administrative sources. Data on forestry and mining sectors are available from administrative sources. Data on fishing sector are available from the surveys conducted to capture the production of marine and inland fish. Data on prices of agriculture, livestock, forestry and fishing products are available from the surveys conducted by the State governments. Data on registered manufacturing sector is collected through the Annual Survey of Industries (ASI). The estimates for the construction sector are prepared broadly through commodity-flow approach. In other sectors viz., unregistered manufacturing (factory establishments not registered under Factories Act), electricity, gas and water supply, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, ownership of dwellings, business services, public administration and defence and other services, the GDP is estimated following a combination of production and income approaches. The estimates of various services in the public sector are compiled by analyzing the budget documents and annual reports of departmental and non-departmental commercial undertakings, those of unorganized sectors in various economic activities are made using the data on per worker value added available from the results of follow-up surveys of the Economic Census (generally conducted once in 5 years) and the work force in the activity estimated from the decennial population census and the quinquennial employment and unemployment household surveys). Generally for unorganized sectors estimate of GDP is compiled for the base year using the results of benchmark surveys, and estimates of subsequent years are obtained by moving the base year estimate with the help of appropriate physical indicators.

2.1.4 Expenditure on gross domestic product:- A direct expenditure approach is used to estimate government final consumption expenditure, exports and imports of goods and services, and increase in stocks. The commodity flow approach is adopted for estimating the private final consumption expenditure, whereas the estimate of gross fixed capital formation is based on a combination of the commodity-flow and the expenditure approaches.

2.1.5 Government final consumption expenditure is obtained by analysis and reclassification of the data available in the budget documents of central and state governments, Union territories and local authorities supplemented by information obtained from finance accounts, appropriation accounts and reports of the Comptroller and auditor-General of India. The reclassification is based on the recommendations given in a Manual for Economic and functional classification of Government Transactions (UN), keeping the SNA classification undisturbed. While reclassifying, similar types of transactions of the government are grouped after eliminating all internal transfers. Government final consumption expenditure is net of sales of commodities: (i) sold second hand or (ii) produced in the government administrative departments. The purpose classification of government final consumption expenditure is also undertaken except for local authorities due to non-availability of data.

2.1.6 Private Final Consumption Expenditure (PFCE) includes the final consumption expenditure by households and private non-profit institutions serving households. The estimates are obtained by following the commodity flow method. The sources of data on output are the same as used for the estimates of GVA and related aggregates. However, the expenditures on second hand goods are not included. The estimates of PFCE in the domestic market so worked out are adjusted for net direct purchases by resident households abroad to arrive at the estimates of PFCE of resident households. The estimates at constant prices are arrived at by valuing the output at constant prices.

2.1.7 The **estimates of capital formation** for the entire economy are based on commodity flow approach except the part of kutchra construction works. Estimates are based on current data in respect of outlays on new construction works, purchase of machinery and equipment and net addition to inventories. Data on expenditure on kutchra construction works are available from various budget documents in respect of public sector. In the case of household sector the estimates of the output of kutchra construction are based on All India Debt and Investment Survey of NSSO as discussed under the GVA of construction sector.

2.1.8 In case of **private corporate sector** the estimates are prepared on the basis of the results of sample companies published by RBI, duly adjusted by the data on paid up capital for all companies for full coverage. The estimates are prepared by type of assets as well as by type of institutions. Making use of almost the same sources of data, estimates are also prepared by industry of use. However, because of disaggregation of data by various industrial sectors the estimates by industry of use as well as by type of assets and institutions generally do not tally. The estimates at constant prices are worked out with the help of suitable price indices as applicable by various assets, institutions as well as industry groups separately.

2.1.9 **Estimates of domestic saving** are prepared at current prices only by type of institutions i.e. public sector, private corporate sector and household sector (residual) separately. In respect of public sector the data available in government budget documents and annual reports of the enterprises are analysed in detail. The estimates of saving are derived from the income and outlay accounts in respect of administrative departments and departmental and non-departmental enterprises separately. Estimates in respect of private corporate sector is based on analysis of the annual accounts of sample companies duly adjusted for full coverage on the basis of data on paid up capital of all companies. The estimates in respect of co-operative societies are worked out from the data supplied by the NABARD. The estimates of financial saving in respect of households including non profit institutions and unincorporated private business are estimated by changes in the financial assets held by them such as; currency, deposits with financial institutions, shares and debentures, claims on government, net equity in the life funds, provident and pension funds net of changes in financial liabilities. The estimates in respect of various financial instruments are arrived at as a residual after duly accounting for such instruments held by public and private corporate sectors. In case of households, saving in the form of physical assets created for own use as accounted for under capital formation estimates are also added.

(a) Advance estimate of national income & its update

2.1.10 The first estimates of annual national income for a reference year are released by the CSO, about 2 months before the close of the year, in the form of Advance Estimates of national income. These estimates contain at both current and constant prices and at factor cost, the gross national product (GNP), net national product (NNP), GDP, net domestic product (NDP), per capita income (per capita net national product at factor cost) and GDP by industry. These estimates are subsequently revised and released on the last working day of May, i.e., with a lag of 2 months, as updates of advance estimates. The Advance Estimates are compiled using the data on anticipated agricultural production and industrial production, analysis of budget estimates of government expenditure and performance of key sectors like railways, communication, banking and insurance, available at that point of time.

(b) Quick estimates of national income & related aggregates

2.1.11 The Quick estimates of NAS and the revised estimates of earlier years are released by the CSO utilizing the available data in respect of various sectors provided by the statistical system, in the month of January of the following year (with 10 months lag). Along-with the Quick estimates for the previous financial year, estimates for the earlier years are also revised using the detailed data supplied by various source agencies.

2.2 Quarterly GDP estimates

2.2.1 India is a subscriber to the International Monetary Fund's (IMF) Special Data Dissemination Standards (SDDS), w.e.f. 1.1.1997 and is also currently in full observance of the SDDS. The SDDS requires subscribing countries to compile and release the quarterly GDP estimates with the timeliness of one quarter.

2.2.2 India started releasing the quarterly GDP estimates for the years 1996-97 onwards, w.e.f. 30.6.1999. The present time lag in the release of these estimates is 2 months, with the exception of Q1 GDP estimates, which have a time lag of 3 months. These estimates are released according to an advance release calendar (ARC).

2.2.3 The quarterly national accounts of India are compiled by broad economic activities, namely, (1) agriculture, forestry & fishing, (2) mining & quarrying, (3) manufacturing, (4) electricity, gas & water supply, (5) construction, (6) trade, hotels, transport and communication, (7) financing, insurance, real estate & business services, and (8) community, social & personal services, using the benchmark-indicator approach. The quarterly GDP estimates at constant prices are prepared by extrapolating the previous year's estimates with appropriate physical indicators. The present base year of national accounts is 1999-2000. For obtaining the current price estimates, appropriate price indices are used.

2.3 Input-Output Transactions Table

2.3.1 The work on the preparation of Input-Output Transactions Table (IOTT) for the Indian economy was initiated jointly by Central Statistical Organisation (CSO) and Planning Commission and the first table was brought out for the year 1968-69. Subsequently, the CSO undertook the preparation of IOTT for 1973-74 at its own and decided to continue the work relating to the preparation of IOTT on regular basis and publish them every five years. CSO has so far published IOTTs for the years 1968-69, 1973-74, 1978-79, 1983-84, 1989-90, 1993-94 and 1998-99. The IOTT for the year 2003-04 is under preparation in the CSO. The IOTT compiled by the CSO contains absorption, make and other associated matrices at 115 sector level.

3. Regional Accounts in India

State Domestic Product

3.1.1 The state accounts statistics are an extension of the system of national accounts to the regional level. These comprise various accounts indicating the flows of all transactions within a time period between the economic agents constituting the state economy and their stocks. They include items like total output of the economy, the intermediate expenditure, state domestic product, factor incomes, consumption expenditure, capital formation, capital stocks, consumption of fixed capital, etc. The most important aggregate of the state accounts is the state domestic product (state income).

3.1.2 State Income (Net State Domestic Product/NSDP) is defined in exactly the similar manner as the net domestic product for the country, i.e. it is equal to the income generated by the production of goods and services within the geographical boundaries of a State. Net State Domestic Product (NSDP) at factor cost is regarded as the most important single economic indicator to measure the growth and pattern of economic development of a state. The per capita NSDP, on the other hand, reflects the welfare and level of living of the normal residents of a state. It also provides an idea of regional disparities. The indicators like per capita state income are now frequently used by the Planning Commission (PC) and Finance Commission (FC) for devolution of a part of plan resources and distribution of proceeds of Union excise duties to different states. The estimates of NSDP are obtained by subtracting the Consumption of Fixed Capital (CFC) from the estimates of Gross State Domestic Product (GSDP).

3.1.3 The estimation of State Income by the State DES is being done generally according to standard methodologies approved by the Working Group on State income (WGSI). This Working Group was set up in 1957 with representatives drawn from the CSO, State DESs, Indian Statistical Institute, Reserve Bank of India, Planning Commission and the Ministry of Finance, Government of India. The development of State Income was mainly based on the recommendations of the Working Group. The standard methodologies recommended by the WGSI were reviewed by the Committee on Regional Accounts constituted in 1972. This Committee submitted its final report in September, 1976. The final Report of this Committee gave broad outline for the preparation of estimates of State Income at current and constant prices for all sectors. The guidelines provided by the RAC are considered sufficient and detailed and at the same time allow enough flexibility in preparing the estimates on the basis of data available at the state level. A great deal of uniformity in concepts and methodology has been achieved, since the RAC Report, in the estimates prepared by the states. The Central Statistical Organisation assists the States in the preparation of these estimates by rendering advice on conceptual and methodological problems.

3.1.4 At present, almost all the states compile and release the estimates of gross and net state domestic product (GSDP and NSDP), by economic activity and also the per capita NSDP, both at current and constant prices. The NSDP is usually referred to as the state income and the per capita NSDP, the per capita income of the state. These are the official estimates of state income. The estimates of the GSDP and NSDP are compiled following income originating approach. Estimates of the supra-regional sectors (central government administration, railways, banking and communication) are compiled by the CSO and made available to all state DESs. The base year for the constant price estimates of the GSDP and the NSDP generally is the same as that of the national accounts statistics series. All the State DESs are currently revising the base year from 1993-94 to 1999-2000, in accordance with the methodology followed by the CSO in its current national accounts statistics series.

3.2 District Domestic Product

3.2.1 With the enactment of the 73rd and 74th amendment to the constitution, establishing the third tier of government, the information / statistics / indicators on economic activities at levels lower than state are often required by the central and state authorities for planning and policy purposes, as well as by researchers and academicians to know/measure the development and standard of living of the people and also to measure the regional disparities at that level. Due to clear-cut geographical boundaries and established administrative set-up, Districts in India have been recognized as the areas for such requirements (CSO, 1974). Estimates of product/income of a district (DDP) is thought to be one of the most important indicator/barometer to measure the economic growth/development of a district vis-à-vis other districts and the estimates of per capita income in the district is considered to be the indicator / barometer to measure the level / standard of living of the inhabitants of the district. Preparation of DDP estimates has recently gained added importance, as it is one of the three indicators to construct a composite Human Development Index (HDI) for inclusion in the Human Development Report being prepared by some of the states of India.

3.2.2 The Regional Accounts Committee (RAC) recognized the need of the income estimates at a level lower than state as early as in 1974. Two more important groups set up for the purpose were (a) 'Working Group on Regional Level Statistics' set-up by the Central Statistical Organisation (CSO) in 1975; and (b) 'Working Group On District Planning' set up by the Planning Commission in 1982. On the basis of the recommendations of Committees and Groups set up for the purpose, CSO has suggested a methodology for compilation of the estimates of DDP to the states. Now, a number of states are compiling estimates of DDP using this methodology.

4 Status of Implementation of recommendations of 1993 SNA

4.1 While undertaking the new base year exercise, efforts have also been made to implement the recommendations of the 1993 System of National Accounts (1993 SNA) to the extent data are available. Some of the recommendations of the 1993 SNA which presently form part of the new series are:

- valuation of non-market agricultural crops on the basis of prices of similar products made by market producers and their inclusion in the production boundary;
- inclusion of own-account production of housing services by owner-occupiers and of domestic and personal services produced by employing paid domestic staff;
- inclusion of premium supplements in respect of life and non-life insurance output estimates;
- inclusion of reinvested earnings of foreign direct investors in the rest of the world account. This treatment affects gross national product, saving and capital formation;
- imputed value of own-account labour treated as mixed income of self-employed;
- expenditures on mineral exploration treated as capital expenditure;
- allocation of financial intermediation services indirectly measured (FISIM) to the users of these services, as intermediate consumption to industries and as final consumption to final users;
- inclusion of expenditures on valuables, which are held as stores of value, and are treated as Gross Capital Formation;
- treatment of expenditures on software as Gross capital formation;
- inclusion of natural growth of livestock as Gross capital formation
- inclusion of expenditures made on few tree crops during the gestation period as Gross capital formation;
- addition of capital expenditure incurred on installing the wind energy systems in the Gross Fixed Capital Formation
- estimation of consumption of fixed capital of all fixed assets including government buildings, roads, dams etc. as Perpetual Inventory Method (PIM);
- adopting the practice of changing base year every 5 years.

4.2 The position of major recommendations of the 1993 SNA, vis-à-vis, the Indian system of NAS, is given in the following table:

Table: Recommendations of 1993 SNA, vis-à-vis, NAS

| Items | 1993 SNA recommendation | Status of implementation in the Indian NAS |
|---|---|--|
| Production boundary | Illegal activities to be accounted for | In some areas like firewood and industrial wood, services sectors, etc. these are indirectly taken into account, using alternative approaches. However, smuggling and other explicit illegal activities are not directly covered |
| | Production of goods within households for own-consumption | Agricultural products, including those under kitchen garden, included Manufactured goods are not included |
| Assets Boundary | Entire expenditure on mineral exploration to be treated as capital formation | Implemented from 1960-61 |
| | Expenditure on software | Implemented own-account software and databases, not yet included |
| | Govt. defence expenditure on fixed assets other than weapons and their means of delivery | Only the dwellings for the military personnel are included |
| | Valuables | included |
| | Entertainment, literary or artistic originals | Not implemented due to data problems |
| | Charging CFC on Govt. fixed assets | Implemented from 1980-81 |
| Institutional sector classification and accounts | | |
| | Sequence of Accounts have to be compiled for five broad institutional sectors, namely, non-financial corporations, financial corporations, general government, households, non-profit institutions serving households and rest of the world (ROW) | Accounts are prepared only for the public sector (Administrative departments, departmental commercial undertakings and non-departmental commercial undertakings), which correspond to general government and government owned part of non-financial and financial corporations according to 1993 SNA, and rest of the world. Accounts are now prepared for general government, financial corporations and public non-financial corporations |
| Production account | Uses and resources of GDP by institutions /activity/IOTT | Prepared for public sector and total economy; IOTT is also compiled |
| Income and appropriation account | Distribution of national income by institutions and its appropriation | Income-outlay account of public sector only; national disposable income and its appropriation for the whole economy. |
| Accumulation account | Capital account, financial account, other changes in volume of assets account, revaluation account | Capital finance account for the public sector and the whole economy, capital formation and saving |
| Commodity flow and balances | Supply-use table and IOTT | IOTT – industry X commodity, once in 5 years |

| Items | 1993 SNA recommendation | Status of implementation in the Indian NAS |
|--|---|--|
| BALANCE SHEETS | To be compiled as part of integrated set of accounts | Not compiled |
| <i>Natural resources account</i> | Recommended as satellite accounts | Not compiled |
| <i>Social accounting matrix</i> | Recommended | Only IOTT is compiled |
| <i>Valuation</i> | Output and value added are to be valued at basic, producer's and purchaser's prices | Estimates of value added are presented at factor cost and market prices. However, we will be shortly releasing estimates at basic prices. |
| Time of recording | | |
| CROPS | Cultivated natural growth to be included in output, as work-in-progress and gross fixed capital formation over the entire period of their growth process. | Cultivated assets included |
| <i>Livestock</i> | livestock raised for food are to be treated as work-in-progress until slaughtered. Furthermore, entries are to be recorded for own account production as the animal grows. | -do- |
| <i>Speculative constructions (when there is no contract of sale agreed in advance, the output produced by the construction enterprise must be recorded as work-in-progress or as additions to the producers' inventories of finished goods, depending on whether the construction is completed. For example, finished dwellings built speculatively remain as additions to producers' inventories)</i> | The speculative construction to be shown as part of inventories until the ownership has been transferred to the eventual user of the asset. Hence it should not be treated as gross fixed capital formation until that time. Output remains part of the work in progress of the institutional unit producing the asset until sold. In this way, consistency will be maintained between the financing of the activity and the production. However, construction for own-use or work completed under contract of sale is to be included as gross fixed capital formation as the work is put in place. | As far as speculative constructions are concerned, these are treated as gross fixed capital formation, since the estimates of the asset – construction, are made by the commodity flow approach. The treatment suggested for own-account construction or work completed under contract of sale is being followed for all building and construction activity in the Indian NAS. |

| Items | 1993 SNA recommendation | Status of implementation in the Indian NAS |
|---|--|--|
| <i>of finished goods until they are sold or otherwise acquired by users).</i> | | |
| Transactions | All transactions to be recorded on an accrual basis in order to reflect the time when the transactions occurred rather than when it may be paid for. | In the NAS, transactions are recorded in the mixed way, in that the accounts of the companies are kept on accrual basis whereas the government transactions are on cash basis. |
| Classification of expenditures | COFOG, COICOP, COPP and COPNI to be compiled. | COFOG and COICOP are being finalized. COPP and COPNI are not compiled in the NAS. |
| Others | | |
| Output of insurance | Premium supplement to be included in the output of insurance | Implemented |
| FISIM | Distribution to industry and final users | Followed |
| Mixed income | The return to both labour of self-employed and capital for unincorporated enterprises owned by households to be termed as 'mixed income'. | Implemented |
| Statistical discrepancy | No statistical discrepancy; emphasis on classification, simplification and harmonisation | Statistical discrepancy is recorded |
| Estimates at constant prices | For full system of national accounts | Major aggregates only. Disposable income and saving are prepared only at current prices |
| Chain volume measures | Constant price estimates are also to be prepared by chain volume measures | No chain linking is done. The estimates are available at fixed base year (current base 1999-2000) |

4.3 Progress as per the Milestones prescribed in 1993 SNA

4.3.1 India is in Phase-3 at present, as the accounts for Government and the total economy, as well as for the public sector segment of non-financial and financial corporations are compiled regularly. CSO is working on compilation of integrated accounts of all institutional sectors up to capital accounts by which will enable it to reach the level of Phase 4. Phase-5 comprising financial accounts of all institutional sectors has to be compiled by the Reserve Bank of India (RBI) and Phase-6 may not be relevant, as it requires estimation of total wealth of the country.

Table: Milestones in the Implementation of 1993 SNA

| Phases | Milestones |
|---------|--|
| Pre SNA | Basic data on prices, trade, production etc. |
| Phase-1 | GDP by industry and expenditure at current and constant prices |
| Phase-2 | Phase-1 plus External transactions with the rest of the world including macro indicators such as GNI (GNP), National disposable income etc. |
| Phase-3 | Phase-2 plus Production accounts of all institutional sectors and integrated accounts of general government until financial accounts |
| Phase-4 | Phase-3 plus Integrated accounts of all other institutional sectors until capital accounts |
| Phase-5 | Phase-4 plus All financial accounts of all institutional sectors |
| Phase-6 | Phase-5 plus Other changes in assets accounts of all institutional sectors and balance sheets for all institutional sectors |

5 Satellite Accounts

5.1 In order to analyse a specific field in depth using the SNA framework, the SNA recommends compilation of satellite accounts. These accounts concentrate on one field to give a full picture of it, in a systematic way. These satellite accounts allow flexibility with reference to adoption of concepts, procedures and classifications, without disturbing the core framework of national accounts. For example, the tourism satellite accounts adopt an industrial classification which cuts across all the industrial sectors as per UN's International Standards Industrial Classification (ISIC). Similarly, for household satellite accounts, the concept of production boundary can be extended to capture some non-market voluntary services.

5.2 The responsibility for compiling the satellite accounts lies with the respective agencies, who are responsible for collecting and disseminating statistics on the related subjects. The National Accounts Division provides any technical expertise that is required by the nodal agencies for compiling the satellite accounts.

5.3 Presently, the Ministry of Tourism compiled Tourism Satellite Accounts (TSA), with the help of NCAER for the year 2002-03. The Ministry of Health and Family Welfare compiled the National Health Accounts, India for 2001-02. Both these institutions received considerable technical help from the NAD of the CSO. Also, the Institute of Social and Economic Change (ISEC) have recently compiled National Transfer Accounts using the data available from the national accounts.

5.4 There are plans to compile the accounts of non-profit institutions (NPIs) as per the guidelines provided in the UN Handbook on Non-Profit Institutions in the System of National Accounts, in a time-frame of 30 months. The current plans in this regard are to involve the State Governments to prepare a register of NPIs from the records of the regulating agencies, the Registrars of Societies in the States.

Following this, a questionnaire seeking the financial information of the NPIs will be canvassed among the NPIs through the State governments. Based on the data collected in this survey, the accounts would be compiled using the NPI Handbook guidelines. In order to guide and monitor the program, a Task Force has been constituted with participation from the major stakeholders

References

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