Lecture Notes

Introduction to Satellite Accounts

Training Course Material for e-Library on
System of National Accounts
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Introduction to Satellite Accounts

This lecture note is intended to introduce satellite accounts as complementary to the System of National Accounts (SNA). Topics and discussions address the questions like what is the basic difference in the approach of satellite accounts verses the SNA central framework?, What are Satellite Accounts?, What Satellite Accounts deal with and allow for?, What are Ancillary Activity Satellite Accounts?, What are Functionally Oriented Satellite Accounts?, and other important matters concerning Satellite Accounts?

SNA Central Framework vs Satellite Accounts

SNA central framework has an integrated accounting structure that is exhaustive and consistent within boundary of economic activities it covers. The set of concepts adopted by the system is fully coherent. The central framework may be used in a flexible way in order to put greater or lesser emphasis on specific aspect of economic life such as public sector, household, high inflation. However the margins of flexibility allowed by the central framework do not permit conflicting approaches to be covered simultaneously.

Counterpart of the benefits of central framework is that there are certain limitations as to what may be accommodated directly by it against what all a user may want. Satellite accounts or systems generally stress the need to expand the analytical capacity of national accounting for selected areas of social concern in a flexible manner without overburdening or disrupting the central system.

Typically satellite accounts allow for the (a) provision of additional information on particular social concerns of a functional or cross sector nature, (b) use of complementary and alternative concepts including use of complementary and alternative classifications and accounting framework when needed to introduce additional dimensions to the national accounts, (c) extended coverage of costs and benefits of human activities, (d) further analysis of data by means of relevant indicators and aggregates, (e) linkage of physical data sources and analysis to the monetary accounting system.

Broadly two types of Satellite Accounts are popular, one which focuses on details of an aspect without expansion of SNA framework for example satellite accounts for Agriculture, Tourism, NPIs. Health, Education; and the other type making expansion of the framework beyond the boundaries (production or assets or both) of the SNA for example satellite accounts for Environment, Household, Human Resources, etc.

The Satellite Accounts Framework is derived from SNA as the central framework for specific type of analysis and may expand the framework beyond the boundaries (production or assets or both) of the SNA. The Satellite Accounts are designed to expand the analytical capacity of “basic” economic accounts without overburdening them with details or interfering with their general purpose orientation.
The Satellite Accounts are meant to supplement rather than to replace the existing accounts, organize information in an internally consistent way that suits their particular analytical focus, while maintaining links to the existing accounts. The Satellite Accounts may typically expand a particular segment of the existing account with additional information, including non-monetary. They may use definitions and classifications that differ from those in the existing accounts. The Satellite Accounts may modify the production and/or asset boundary of the SNA, depending on the analytical focus.

Satellite Accounts allow for provision of additional information on particular social concerns of a functional or cross sector nature. They may allow for use of complementary or alternative concepts, including the use of complementary and alternative classifications and accounting frameworks. Satellite Accounts may also allow for extended coverage of costs and benefits of human activities and further analysis of data by means of relevant indicators and aggregates. Certain satellite accounts allow for the linkage of physical data sources and analysis to the monetary accounting systems.

\textit{Satellite Analysis}

Satellite accounts play a dual role as tools for analysis and statistical coordination. Satellite accounts deal with analysis of production and products, primary incomes and transfers, uses of goods and services, assets and liabilities, and purposes as well as aggregates. For illustration of production and products, consider the case when establishments, and consequently industries are not homogeneous at a given level of ISIC, they undertake both principal activity and secondary activities. The output of secondary activities is identified according to its nature but the inputs of secondary activities are not separated from the ones of principal activities. Ancillary activities on the other hand are not analyzed and classified according to their own nature. This means that ancillary activities are not undertaken by distinct producer units and the related products do not appear as autonomous products.

For illustration of primary incomes and transfers consider the case when production boundary is extended, primary income is increased as income being imputed for the additional activities which are inserted in the production boundary. Additional analysis is also possible for primary incomes, for example one may separate the mixed income of households into element of return to labour and an element of return to capital. Several kinds of transfers in addition to those in central framework may be delineated, if meaningful. For example the case of non-market service provided free of charge by government units to market producers. In the central framework these services are collective consumption of government. If a further analysis treats them as an addition to intermediate consumption of market producers, a counterpart should be introduced, preferably in subsidies on production.

The coverage of uses of goods and services, either for intermediate consumption or final consumption or capital formation, obviously changes as a result of enlarging the concept of production. The borderline between intermediate consumption, final consumption and capital formation may also be modified in various ways. For example
when final consumption in education and health is treated as fixed capital formation; the corresponding central framework transaction is reclassified from consumption to capital formation which results in human capital assets. The scope of assets and liabilities is also modified as a consequence of extending the concept of production or modifying the borderline between consumption and capital formation as indicated above.

In the central framework an analysis by purpose is applied to most transactions of general government and NPISH to households. As many times purposes of current interest hardly feature in existing general classification, priority is given to the analysis of other purposes. For example, besides the fact that tourism does not appear as such as a main category in the classification of household goods and services by object, it is not even reasonably possible to reassemble the necessary pieces because not all of them are shown in the classification. The main aggregates may be modified due to various complementary and alternative analyses mentioned above.

Thus broadly speaking two types of satellite analysis may be distinguished in their relationship with the central framework of SNA- One type involves some rearrangement of central classifications and introduction to complementary elements that differ from the conceptual framework (such as the identification of the output of ancillary activities) without drastically diverging from the concepts on which the central framework is built. The second type of satellite analysis is mainly based on the concepts that are alternatives to the ones in the SNA. A different production boundary or enlarged concepts of consumption and capital formation may be introduced, or the scope of assets may be extended, the borderline between economic phenomena as covered by the central framework and natural phenomena may be altered, etc.

**Ancillary Activity Satellite Accounts**

Ancillary activities (central administrative office, warehouse, garages, repair shops, transport section, in house electric power plants) are not undertaken by distinct producer, they are undertaken for the internal use of the unit/ establishment/enterprise. As already discussed units conducting ancillary activities are not regarded as separate producers even if located separately in SNA. Ancillary activities therefore do not appear as autonomous products. In the Ancillary Activity Satellite Accounts therefore the ancillary activities are considered as autonomous products and shown first as production and then as consumption. This helps in identifying the contribution and role of the ancillary activity product in the economy.

**Functionally Oriented Satellite Accounts**

Framework for functionally oriented satellite accounts concentrate on one field to give full picture of it, in a systematic way, by establishing a specific accounting framework, articulated with the central framework. Satellite framework does not aim at covering all economic life; it is a self consistent framework in a partial domain. A satellite framework or account is by hypothesis more functional rather than institutional. To put more emphasis on the functional point of view, such satellite accounts combine an
extension of the kind of activity and product analysis and a generalization of the purpose approach. Such accounts are relevant for many fields, such as culture, education, health, social protection, tourism, environmental protection, research and development (R&D), development aid, transportation, data processing, housing and communications.

Scope of a functionally oriented satellite account that consider a specific field in depth while preserving the possibility of calculating some significant aggregates such as national expenditure, the starting point is an analysis of the uses. This corresponds to the questions ‘how many resources are devoted to (education, transportation, etc.)?’ or, ‘how much is spent (education, transportation, etc.).’ In order to answer these questions, we have to decide upon (i) goods and services specific to the field, (ii) activities for which capital formation is required, and (iii) transfers specific to the field.

Depending on the field, the design of a given satellite account will emphasize on

(a) Detailed analysis of the production and uses of the specific goods and services (R & D, Transportation, Electricity)
(b) Detailed analysis of transfers (e.g., Social Protection)
(c) Both production/uses and transfers equally (e.g., Education, Health)
(d) Uses as such (Tourism, Environmental Protection)

Matters concerning Satellite Accounts

Analyzing in detail, who are users, consumers, investors, or transfer recipients: is an important part of the satellite account. For example in national expenditure the users are units which actually acquire goods and services (actual final consumption, intermediate consumption or capital formation) or receive specific transfers which are not intended to finance these acquisitions of goods and services.

Analysis of uses or benefits out of national expenditure: In satellite account in a given field covers the analysis of uses or benefits out of national expenditure, production and its factors, transfers and other ways of financing the uses both in value terms and when relevant, in physical quantities.

Components of Uses/ national expenditure:

Components of Uses or national expenditure distinguish two types of specific goods and services, the characteristic goods and services and connected goods and services. The first category covers the products which are typical for the field under study. Interest is in what way these goods and services are produced?, what kind of producers are involved?, what kinds of labour and fixed capital they use? and the efficiency of the production process?, thus the allocation of resources. For example, for health, characteristic products are health services, public administration services, education and R&D services in health.
The second category, connected goods and services includes products in whose uses we are interested because they are covered by the concept of expenditure in the given field without being typical. For example in health, transportation of patients may be considered connected goods and services.

Capital formation in specific goods and services: is a part of the components of uses/ national expenditure. In a satellite account for housing, for example, it covers fixed capital formation in residential building. In R & D, Education and Health this item will be empty if the related services are all included under consumption as in central framework and if all or part of these services were treated as capital formation in a satellite account, the corresponding uses would be under capital formation in specific goods and services.

In an account for culture, acquisition less disposal of valuable such as paintings may be significant. It is also a component of capital formation in specific goods and services.

*National expenditure by components and by Users/ beneficiaries*

For users or beneficiaries the terminology used may differ from one satellite account to another. ‘Users’ is more relevant to tourism or housing whereas ‘beneficiaries’ to social protection or development aid. In both cases the terms refer to who is using the goods and services or benefiting from the transfers involved.

At most aggregated level the classification of users/beneficiaries is simply a rearrangement of the central framework classification of institutional sectors and types of producers in which production aspect and consumption aspect are separated. It may be:

(a) Market producers  
(b) Non-market producers  
(c) Government as a collective consumer  
(d) Households as consumers  
(e) Rest of the World.

Households, even individuals as consumers are the most important type of users/beneficiaries in many satellite accounts. In order to be useful for social analysis and policy, a further breakdown of households (size of income, age, sex, location, etc) is necessary.

*National expenditure by components and by Financing Units*

As users do not always bear the expenses themselves it may be necessary to analyze the financing units, i.e., the units which ultimately bear the expenses. For this purpose a classification derived from the central framework classification of institutional sectors, such as the following:
(a) Market production
(b) NPISHs
(c) General government
(d) Households
(e) Financial enterprises
(f) Rest of the World

may be used for a satellite account giving the cross classification of components of national expenditure by financing units.

Non-monetary data

A satellite account allows for the linkage of physical data to monetary accounting system. In central framework this kind of link remains generally implicit, being done only for population and labour inputs where these figures are necessary for calculating a number of per person indicators such as income or consumption and indicators of productivity. Non-monetary data are more important for user/ beneficiaries of goods and services and recipients of transfers. These data are especially meaningful in the fields of social concern such as education, health and social protection. They are indispensable to asses the standard of living of various parts of the population and to look in depth at redistribution policy. Physical data are not to be considered as a secondary part of a satellite account. They are essential components, both for the information they provide directly and in order to make the monetary data fully meaningful.

Environmental and Economic Accounting

Environmental and Economic Accounting considers environmental analysis in the context of a broadened framework that amends several concepts of the SNA to respond to the growing concerns of incorporating environmental criteria in economic analysis

In these accounts, SNA aggregates are amended to treat natural resources as capital in the production of goods and services, to record the cost of using, i.e. depleting and degrading those resources and to record the implicit transfers needed to account for the imputed cost and capital items.

In SNA many costs and capital items of accounting for natural resources are identified separately in the classification and accounts dealing with stocks and other volume changes of assets. These features of SNA facilitate use of the system as a point of departure for environmental accounting. However several elements of the SNA particularly those for the account for the other volume changes need to be broken down further and reclassified and other elements have to be added for the specific purposes of environmental accounting.

In the SNA only produced assets including inventories are explicitly taken into account in the calculation of net value added (NVA). The cost of their use is reflected in intermediate consumption of fixed capital. Non-produced natural assets such as land,
mineral resources and forests are included in the SNA asset boundary in so far as they are under the effective control of institutional units. However the cost of their use is not explicitly accounted for in production cost. This may either imply that the price of the products does not reflect such cost or, if it does, as may be the case for some depletion cost- such cost is not separately identified but lumped together with other unidentified elements in the residual derivation of operating surplus.

Three main approaches to environmental accounting: first one natural resource accounting focusing on accounts in physical terms; second liked to national accounts is environmental accounts in monetary terms; and third is welfare oriented one. The second one, monetary satellite accounting identifies the actual expenditures on environmental protection and deals with the treatment of environmental cost to natural and other assets caused by production activities in the calculation of net product. Monetary satellite accounting is generally more limited in coverage of environmental concerns than physical resource accounting. The welfare oriented approach deals with the environmental effects borne by individuals and by producers other than the producers causing these effects.

The physical resource accounting is most advanced in terms of practical implementation. Monetary satellite accounting has some controversies with regard to valuation. The least consensus exists with regard to the welfare approach to environmental accounting.

*Natural Resource accounting in physical terms*

Natural resource accounting focuses on physical asset balances i.e., opening and closing stocks and changes their in of materials, energy and natural resources. Where applicable (for selected pollutants) it may also include changes in environmental quality of natural assets in terms of environmental (quality) indices.

*Environmental Accounts in monetary terms*

Monetary environmental accounts in restricted sense identify within national accounts the actual expenditures on environmental protection. Monetary environmental accounts also include the functional approach to environmental accounting. Further in the monetary environmental accounts GDP is adjusted for selective environmental costs, including the cost of oil depletion, deforestation, depletion of fish stock, and the cost of soil erosion. The System of Environmental Economic Accounting (SEEA) does not distinguish between depletion and degradation but rather quantitative and qualitative use of natural assets. The SEEA considers effects on production analysis, identifying the environmental cost of depletion and degradation caused by different economic activities and showing the corresponding effects on natural and other assets.

*Welfare and similar approaches*

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Instead of dealing with the cost caused by production activities and their effects on capital used in production, welfare approach focuses on the environmental impacts of cost borne or, in a broader sense, on the well being. The approach considers the free environmental services provided by nature to producers and consumers and the subsequent damage borne by them. The environmental services provided free and the damages borne are implicitly considered as transfers by and to nature, which increase or decrease environmentally adjusted net national income. Another approach is based on concept of environmental sustainability standards and on estimating the necessary avoidance or restoration costs to meet these standards.

**SNA framework extended to environmental accounts**

<table>
<thead>
<tr>
<th>Economic activities</th>
<th>Environment</th>
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</thead>
<tbody>
<tr>
<td>Production (1)</td>
<td></td>
</tr>
<tr>
<td>ROW (2)</td>
<td></td>
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<tr>
<td>Final Cons. (3)</td>
<td></td>
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<tr>
<td>Economic assets</td>
<td></td>
</tr>
<tr>
<td>Produced (4)</td>
<td></td>
</tr>
<tr>
<td>Non-produced (5)</td>
<td></td>
</tr>
<tr>
<td>Natural non-produced assets (6)</td>
<td></td>
</tr>
</tbody>
</table>

- i) Opening Stock of assets  
  - KO\textsubscript{p,ec}  
  - KO\textsubscript{np,ec}  

- ii) Supply  
  - P  
  - M  

- iii) Economic Uses  
  - C\textsubscript{i}  
  - X  
  - C  
  - I\textsubscript{g}  

- iv) Cons. of fixed capital  
  - CFC  
  - -CFC  

- v) Net domestic product  
  - NDP  
  - X-M  
  - C  
  - I  

- vi) Use of non-produced natural assets  
  - Use\textsubscript{np}  
  - - Use\textsubscript{np,ec}  
  - - Use\textsubscript{np,env}  

- vii) Other accumulation of n.p. natural assets  
  - I\textsubscript{np,ec}  
  - - I\textsubscript{np,env}  

- viii) Environmentally adjusted aggregates  
  - EDP  
  - X-M  
  - C  
  - A\textsubscript{p,ec}  
  - A\textsubscript{np,ec}  
  - - A\textsubscript{np,env}  

- ix) Holding gains/losses  
  - Rev\textsubscript{p,ec}  
  - Rev\textsubscript{np,ec}  

- x) Other changes in volume of assets  
  - Vol\textsubscript{p,ec}  
  - Vol\textsubscript{np,ec}  

- xi) Closing Stock of assets  
  - KI\textsubscript{p,ec}  
  - KI\textsubscript{np,ec}  

Flows and stock items of the SNA are shown in shaded area in above table. The columns of the table related to flows are in column (1) for production covering output (P), intermediate consumption (C\textsubscript{i}), CFC, and net domestic product (NDP); in column (2) for the rest of the world which includes exports (X) minus imports (M) and in column (3) final consumption (C). The rows of the table referring to the SNA flows are for supply, including output and imports; a row for economic uses, including intermediate consumption, exports, final consumption and gross capital formation (I\textsubscript{g}); a row each for CFC and NDP which presents final expenditure categories. In column (4) asset balances for produced assets includes opening and closing stocks of produced assets (KO\textsubscript{p,ec} and KI\textsubscript{p,ec}) and the elements explaining the changes between the two, i.e., net capital formation (I= I\textsubscript{g} - CFC), holding gains/losses on produced assets (Rev\textsubscript{p,ec}) and other changes in volume of produced assets (Vol\textsubscript{p,ec}).

The asset balances in the SNA area cover all economic assets, and therefore include the assets covered by column (5) for non-produced natural assets. The elements
of this column do not figure in the calculation of NDP as all changes in non-produced natural assets between opening and closing stocks (\(K_{0,ec}\) and \(K_{1,ec}\)) are explained in the SNA as holding gains/looses (\(Rev_{np,ec}\)) and as other changes in volume of assets (\(Vol_{np,ec}\)).

The non-shaded area in the table include the additional elements that are needed to supplement the SNA concepts with data in physical terms on environmental cost and capital, or amend the concepts by valuing the physical data and incorporating the values in environmentally adjusted concepts of cost and capital. The SEEA elements in column (6) can be interpreted in physical as well as monetary terms. The environmentally adjusted net domestic product (EDP) and other environmentally adjusted concepts are shown in the non-shaded area.

In the row (vi) of use of non-produced natural assets an additional element (\(Use_{np}\)) has been included in the column for production. This reflects the use of non-produced natural asset in production; it is sum of counterpart items in columns (5) and (6) representing, respectively, the use of non-produced natural asset that are economic assets in the SNA sense (\(-Use_{np,ec}\)) and the degradation of other natural assets that are not economic assets (\(-Use_{np,env}\)). The use of non-produced economic assets (\(-Use_{np,ec}\)) includes the depletion of minerals, extraction of timber from forests that are economic assets and the effects on productivity of those forests and agricultural land of soil erosion, acid rain, etc. The deteriorating effects of air pollution on buildings and structures and the effects of soil erosion on roads and other degrading effects on produced assets are not included as they are assumed to be reflected in the CFC. The use of natural assets that are not economic assets (\(-Use_{np,env}\)) covers non-sustainable extraction of fish stock, firewood, etc. Other accumulation row records in physical or monetary terms the transfer of natural assets to economic uses as a change in the stock of non-produced economic assets (\(I_{np,ec}\)). The counterpart of this increase in economic assets is the reduction of natural assets other than economic assets (\(-I_{np,ec}\)).

When additional SEEA elements are valued in monetary terms, the incorporation of the use of non-produced natural assets (\(Use_{np}\)) as additional cost in the column for production results in an EDP, presented in row (vi) which is lower than NDP. The elements in row (vii) for other accumulation do not affect EDP. If the additional SEEA elements are expressed in physical terms, row (vii) is not relevant; in that case the additional information in rows (vi) and (vii) is only used to supplement NDP with information in environmental cost caused by economic activities.

Corresponding to the monetary valuation of the additional SEEA elements on the expenditure side a new concept called net accumulation is introduced in the SEEA to replace net capital formation in the SNA. It is presented in row (viii), separately for produced assets (\(A_{p,ec}\)), non-produced assets (\(A_{np,ec}\)) and other natural assets (\(-A_{np,env}\)). For produced assets it is same as net capital formation (\(A_{p,ec} = I\)). For non-produced economic assets, it reflects the net effects of negative depletion and degradation and positive addition of natural assets that are transferred to economic uses (\(A_{np,ec} = -Use_{np,ec} + I_{np,ec}\)). For natural assets other than economic assets, it could be considered as the economic
valuation of the impact of economic activities on the environment and is the sum of negative depletion and degradation effects (- Use_{np,env}) and negative effects of incorporating natural assets as economic assets (- A_{np,env} = - Use_{np,env} - I_{np,env}).

If net capital accumulation in economic assets (A_{p,ec}+ A_{np,ec}) replaces net capital formation (I), the identity as reflected in row (viii) becomes:

EDP = C + (A_{p,ec}+ A_{np,ec}) - A_{np,env} + (X-M)

Or,

EDP + A_{np,env} = C + (A_{p,ec}+ A_{np,ec}) + (X-M)

This implies that net capital accumulation of economic assets are only partly derived from net product of economic activities reflected in EDP; an important part of the expenditures may reflect the transfer of environmental assets and/or their services to economic activities.

Environmentally adjusted Net Value Added for industry i, EVA_{i} is

EVA_{i} = O_{i} - IC_{i} - CFC_{i} - EC_{i} = NVA_{i} - EC_{i}

where, O_{i}, IC_{i}, CFC_{i}, and EC_{i} denote output, intermediate consumption, consumption of fixed capital, and environmental costs of industry i. NVA_{i} is unadjusted net value added. Environmentally adjusted Net Domestic Product (EDP) would be,

EDP = \sum_i EVA_{i} - EC_{h} = NDP - EC_{h}

= C + CF - CFC - EC_{h} + X - M

where, EC_{h} is environmental cost generated by households, C, CF, X, and M denote consumption, capital formation, export and import.

Environmentally adjusted Net Capital Formation ECF is

ECF = (CF - CFC) - EC_{c}

where, EC_{c} is Natural capital consumption

Asset boundary and classification

The most important amendment introduced into environmental accounting as compared to SNA is the extension of the asset boundary. In SNA, natural assets are included only if they provide economic benefits to the owner. Thus only economic assets (those having institutional ownership) are considered. However, in environmental accounting both economic assets and environmental assets are considered in order to fully cover depletion, degradation and other accumulation, i.e., transfer of natural assets to economic activities.
Classification of natural assets in SEEA differs to that of in SNA. SEEA asset classification covers wider range of natural assets and environmental impacts on them, including ground water depletion and air pollution. Of course, more selective environmental accounting could focus on only those natural assets that are economic assets.

*Environmental cost*

The SEEA identifies two types of environmental cost. The first is imputed cost for degradation and depletion. The second is the actual cost incurred in the form of environmental protection expenses.

*Use of non-produced natural assets*

The use of non-produced natural assets is introduced as an additional cost in the SEEA. They represent depletion and degradation in physical terms - e.g., quantity of minerals extracted, quantity of timber cut, volume of solid, liquid or gaseous wastes generated, or alternatively monetary allowance for depletion and degradation.

*Environmental protection expenses*

In addition to the disposal services provided by the environment free of charge in the case of degradation, actual expenses are incurred to avoid environmental degradation or eliminate the effects after degradation takes place. Increasingly enterprises explicitly produce such services on a commercial basis. In many instances however the services are produced as the ancillary activities. SEEA recommends classifying and compiling and accounting the environmental protection expenses in the SEEA as per CEPA (Classification of Environmental Protection Activities).

*System of Economic Accounts for Food, Agriculture (SEAFA)*

System of Economic Accounts for Food, Agriculture (SEAFA) recommended by Food and Agricultural organization (FAO) is designed for analysis of products from the agriculture sector. It is designed to focus on Food supply and demand and to link agriculture with other components of economy for planning and policy making.

*Key Aspects of SEAFA* involve the scope- what products (Goods and services), Economic activities and transactions, Institutional sectors and transactions to be included while basically following the SNA Framework as a core.

*Why SEAFA as a separate system?* SEAFA is a separate system as a satellite account for the several reasons. Main reasons include: SEAFA intends to focus on the basic needs of human population for food, fiber, fuel and shelter supplied by a combination of agriculture, fishing and forestry activities; SEAFA main interest is in food production, impact of food and agricultural activities on eco-system /natural resources; SEAFA
requires information on labor force, Research and Development, balance of trade, BOP, depletion of natural resources; Food production is not specifically identified in ISIC/SNA; and for SEAFA Food availability is required in terms of nutritional levels.

Products and Economic Activities included in SEAFA

Products included in the scope of SEAFA are Agriculture products, Forestry products, Fishery products, Manufactured food products, Environmental protection services, and Other related services. Economic Activities included in SEAFA are Agricultural crop and livestock production, Forestry, logging and related activities, Fishing, Manufacturing (ISIC Division 15), Environmental protection activities, Agriculture-related services: agricultural research, veterinary services, education, manufacturing of fertilizers, insecticides/pesticides, agriculture capital industries.

Tourism Satellite Account (TSA)

Tourism Satellite Account – Recommended Methodological Framework (TSARMF) is the guide for compiling the TSA. Salient features of TSA include the following: Tourism Satellite Account (TSA) identifies the economic aspects of tourism separately, but still within, the core NA framework. The tourism ‘industry’ is defined not by the suppliers of its output, but rather by the consumers of its output. As such, the tourism industry, as measured in a TSA, cuts across potentially all industries in the core national accounts. It is not readily apparent because “tourism” is not identified as a conventional industry or product. Tourism is however implicitly included in core national accounts statistics. TSA refers basically to demand of goods and services of Visitors from the country and from other countries. TSA involves interaction of the demand and supply with other activities and transactions in the economy. The aim of a TSA is to identify the value of tourism expenditure (Visitor Consumption) and the proportion of each industry’s output (Tourism Industry Ratio) that is consumed by visitors/tourists.

Visitor Consumption will include consumption of visitors for business, leisure and other tourism purposes, individual services produced by Governments and NPISH consumption in kind of various types. From this, tourism’s contribution to GDP may be calculated.