POSSIBLE CONTRIBUTION OF THE SYSTEM OF NATIONAL ACCOUNTS AND SATELLITE ACCOUNTS TO THE FULFILLMENT OF THE SUSTAINABLE DEVELOPMENT GOALS

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The System of National Accounts (SNA) is an international statistical standard that lays the foundation for the orderly and logical recording of the activities of production, distribution, consumption and accumulation of goods and services, produced within the economic sphere, in the financial and goods and services sectors, in the national and regional scopes, regardless of the timing with which such information can be presented.

This information generated under the SNA framework allows showing the dynamics of a given economy at different time periods, using derived indicators such as Gross Domestic Product, investment, Consumption of Fixed Capital or Total Factor Productivity, among others.

However, it is important to accompany these indicators with additional information to give an account of progress in the sustainability of growth, so that a country can make measurements by taking into account the use of natural, financial, social and human capital, beyond produced capital.

In this sense, the SNA itself allows, through satellite accounts, making measurements that enable showing the relationship between the economy and the environment, highlighting the international statistical standard System of Environmental Economic Accounting Central Framework (SEEA-CF).

The construction of the SEEA-CF required the joint efforts of expert statisticians from the Statistics Division of the United Nations together with the European Union, the Food and Agriculture Organization (FAO), the International Monetary Fund, the Organization for Economic Co-operation and Development, and the World Bank; as well as the collaboration of various statistical offices of countries.

As a result of this international effort, the SEEA-CF manages to capture the direct relationship between natural resources and the environment with economic activities; namely, the use of assets from nature for their incorporation into production processes, and the emission of waste into the environment (water, soil and air).

In this sense, it is essential to take advantage of SNA and SEEA-CF international statistical standards, as frameworks that will generate information to monitor progress in the fulfillment of the Sustainable Development Goals (ODS).

These ODS are not only a continuation of the Millennium Development Goals, but seek to transform our world, improving the lives of people, through 17 goals, 167 targets and 230 indicators. The general topics that at least will be monitored as part of the ODS are fight against poverty and hunger, health and welfare, education, gender equality, water, energy, labor and

economic growth, industry, inequalities reduction, sustainable cities, responsible production, climate, marine life, ecosystems, peace and major international partnerships to achieve the goals.

Of course a fundamental issue for monitoring these objectives is the availability of information in sufficient detail to characterize current and desirable scenarios of sustainable development in the world; especially considering that such information should be consistent, objective, accessible, recurrent, timely and reliable; so that monitoring progress on goals is clear, concise, demonstrable and unobjectionable.

Therefore, it is important to make efforts aimed at building capacity to contribute to the development of both first (particularly) and second level information, not only allowing the vast array of data, but also being supported by a robust and clear methodology, internationally discussed and endorsed.

The implementation of SEEA-CF, which assumes the characteristic of being an international statistical standard, allows generating a first set of information, which, together with the one derived from the SNA (also endorsed as an international standard), complies with the properties or features set to determine the first level information that will allow developing monitoring indicators of the SDG.

Widespread implementation of SEEA-CF and the complement of the SNA will allow a wide dissemination of capabilities that, when joined with information from state units, private establishments, households and academia, will ensure that no country is left behind in this great global initiative. This should also be aligned with national goals that each government will set, led by the ambitious general aspiration, but taking into account the circumstances of the country.

Relationship between Mexico's National Accounts information and SDG

In principle, the information that is directly considered useful for the construction of indicators, at different levels, is related in the following list of information from SNA as well as SEEA-CF, SEEA-EEA and SEEA-WATER. Usually the variables are available in the country and others are under construction or can be constructed from the implementation of projects, moreover these variables are used to fulfill the vision of the project of the ODS internationally, as well as the national priorities.

- Target: 6.3 ... halving the proportion of untreated wastewater...
- Indicator: 6.3.1 Percentage of wastewater safely treated

Information:

- **Wastewater discharge, per economic activity**
- **Wastewater treatment, per economic activity**
- **Wastewater reuse by other economic units**

- Target: 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater...
- Indicator: 6.4.1 Percentage change in water use efficiency over time

Information:

- **Physical water accounts (abstraction, use and consumption) per economic activity**
- **Productivity and efficiency in water use**
- **Water resources overexploitation**

- Indicator: 6.4.2 Percentage of total available water resources used...

Information:

- **Total groundwater abstraction**
- **Groundwater abstraction at aquifer level**

- Target: 6.6 ...protect and restore water-related ecosystems...
- Indicator: 6.6.1 Percentage of change in the extent of water-related ecosystems over time

Information:

- **Environmental-Economic Extent Accounts of water bodies in two points in time**

- Target: 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
- Indicator: 7.2.1 Renewable energy share in the total final energy consumption

Information:

- **Total final energy consumption**
- **Renewable energy consumption**

- Target: 7.3 By 2030, double the global rate of improvement in energy efficiency
- Indicator: 7.3.1 Energy intensity measured in terms of primary energy and gross domestic product (GDP)

Information:

- **Primary energy consumption**
- **GDP of the total economy**

- Target: 8.1 Sustain *per capita* economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries

- Indicator: 8.1.1 Annual growth rate of real GDP *per capita*

Information:

- **GDP of the total economy**
- **PIB of strategic sectors of the country**

- Target: 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation...

- Indicator: 8.4.1 Resource productivity

Information:

- **GDP of the total economy**
- **Gross Production Value**
- **Households Final Consumption**
- **Material Flow Account (Biomass):**
  - **o Agriculture**
  - **o Fishing**
  - **o Hydrocarbons and non metallic minerals**
  - **o Water**

- Target: 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products

- Indicator: 8.9.1 Tourism direct GDP (as a percentage of total GDP and in growth rate); and number of jobs in tourism industries (as a percentage of total jobs and growth rate of jobs, by sex)

Information:

- **GDP of the total economy**
- **Tourism GDP**
- **Employment in Tourism**
- **Natural Protected Areas and Tourism establishments**
- **Tourism in Archaeological sites**

- Target: 9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

- Indicator: 9.2.1 Manufacturing value added as a percentage of GDP and *per capita*

Information:

- GDP of the total economy

- Value added of manufacturing

- Target: 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable...

- Indicator: 9.4.1 CO_2 emission per unit of value added

Information:

- GDP of the total economy

- GDP of the manufacturing industry

- CO_2 emissions

- Air emissions:

o Particulates

o Carbon Monoxide

o Sulfur

o Nitrous oxides

o Ammonium

o Organic compounds

- Air emissions abatement

- Target: 10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

- Indicator: 10.4.1 Labour share of GDP, comprising wages and social protection transfers

Information:

- GDP of the total economy

- Total compensation of employees

- Target: 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

- Indicator: 11.4.1 Share of national (or municipal) budget which is dedicated to the preservation, protection and conservation of national cultural natural heritage, including World Heritage sites

Information:

- Expenditure on protection and conservation of air, ambient and climate

- Expenditure on wastewater management

- Expenditure on waste management expenditure

- Expenditure on protection and remediation of soil, groundwater and surface water

- Expenditure on noise and vibration abatement

- Expenditure on protection of biodiversity and landscapes (ecosystems)

- Expenditure on protection against radiation

- Expenditure on Research and development for environmental protection

- Environmental protection expenditure such as management and education

- Culture GDP

- Material and natural heritage GDP

- Material and natural heritage Jobs

- Target: 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

- Indicator: 11.6.1 Percentage of urban solid waste regularly collected and with adequate final discharge with regard to the total waste generated by the city

Information:

- Waste collection by type of residual and federal entity

- Total waste collection

- Target: 12.2 By 2030, achieve the sustainable management and efficient use of natural resources
- Indicator: 12.2.1 Material footprint and material footprint *per capita*

Information:

- **GDP of the total economy**
- **Gross Production Value**
- **Households Final Consumption**
- **Material Flow Account (Biomass):**
  - **Agriculture**
  - **Fishing**
  - **Hydrocarbons and non metallic minerals**
  - **Water**

- Target: 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
- Indicator: 12.5.1 National recycling rate, tons of material recycled

Information:

- **Total recycling**
- **Recycling by type of material**

- Target: 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices...
- Indicator: 14.4.1 Proportion of fish stocks within biologically sustainable levels

Information:

- **Non-sustainable fishing in selected fisheries**

- Target: 14.5 By 2020, conserve at least 10 per cent of coastal and marine areas...
- Indicator: 14.5.1 Coverage of protected areas in relation to marine areas

Information:

- **Environmental Economic Accounts of Sea Extent**

- Target: 14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
- Indicator: 14.7.1 Fisheries as a percentage of GDP

Information:

- **GDP of the total economy**
- **Non-sustainable catch**
- **Sustainable and non-sustainable fishing values**

- Indicator: 14.a.1 Budget allocation to research in the field of marine technology as a percentage of total budget for research

Information:

- **Total Environmental Protection Expenditure**
- **Expenditure on protection of biodiversity and landscapes (ecosystems)**
- **Expenditure on Research and Development for environmental protection**
- **Environmental protection expenditure such as management and education**

- Target: 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands...

- Indicator: 15.1.1 Forest area as a percentage of total land area

Information:

- Environmental Economic Extent Accounts

- Target: 15.2 By 2020, promote the implementation of sustainable management of all types of forests…

- Indicator: 15.2.1 Forest cover under sustainable forest management

Information:

- Total Environmental Protection Expenditure

- Expenditure on protection of biodiversity and landscapes (ecosystems)

- Environmental protection expenditure such as management and education

- Target: 15.3 By 2030, combat desertification, restore degraded land and soil...

- Indicator: 15.3.1 Percentage of land that is degraded over total land area

Information:

- Degraded area extent, in hectares

- Extent per type of land cover, in hectares

- Degraded area extent per type of physical and chemical degradation, per type of land cover and degree of damage, in hectares

- Eroded area per type of erosion and degree of damage, in hectares

- Volume of eroded soil per type of erosion and degree of damage, in tons

- Target: 15.5 Take urgent and significant action to reduce the degradation of natural habitats...

- Indicator: 15.5.1 Red List Index

Information:

- Environmental Economic Condition Accounts

- nvironmental Economic Biodiversity Accounts

- Indicator: 15.a.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

Information:

- Total Environmental Protection Expenditure

- Expenditure on protection and conservation of air, water and soil

- Expenditure on protection of biodiversity and landscapes (ecosystems)

- Expenditure on Research and development for environmental protection

- Environmental protection expenditure such as management and education

- Target: 17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection

- Indicator: 17.1.1 Total government revenue (by source) as a percentage of GDP

Information:

- GDP of the total economy

- Disposable Income of the General Government

- General Government GDP

Questions for discussion:

- Does UNCEEA consider that more information can be added from SEEA-CF, SEEA-Water, and SEEA-EEA?

- How to extend this exercise to other information sources? (Environment Ministries, Central Banks, Water, Forest Ministries/Agencies, etcetera)