

Experimental Ecosystem Accounting in Mexico Progress Report and Work Plan

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Background

By invitation of the United Nations Statistics Division (UNSD) and the United Nations Environment Programme (UNEP), Mexico participates as a pilot country together with Bhutan, Chile, Indonesia, Vietnam, South Africa and Mauritius in the implementation of the “System of Environmental-Economic Accounting – Experimental Ecosystem Accounting” (SEEA-EEA).

National Plan

As part of the implementation process of the experimental accounts, the “National Plan for Advancing Environmental-Economic Accounting 2015” (NP-AEEA) was developed, which contains an evaluation of the viability of producing this type of accounts in the country, besides establishing guidelines about the expected deliverables and their delivery dates.

The identified priorities for the development of the experimental ecosystem accounting in Mexico are: a) pilot **water** accounts; b) pilot **land cover** accounts; c) pilot **biodiversity** accounts; d) **case studies**; e) evaluations on the **viability** of producing **carbon** accounts, ecosystem **condition** accounts, as well as **supply and use of ecosystem services** accounts. According to the NP-AEEA, it is expected to have results during the second half of 2016.

Interinstitutional Working Group

The National Institute of Statistics and Geography (INEGI, by its Spanish acronym) serves as a focal point in the integration of the experimental ecosystem accounting; nonetheless, aware that the project requires an inter and multidisciplinary work, a working group with the institutions of the Mexican environmental sector has been made, such as the Secretariat of Environment and Natural Resources (SEMARNAT), the National Commission for the knowledge and the use of Biodiversity (CONABIO), the National Commission of Natural Protected Areas (CONANP), the National Commission of Water (CONAGUA), the National Institute of Ecology and Climate Change (INECC); as well as international organisms that are developing works related with this subject in our country, such as the German Corporation for International Cooperation (GIZ, by its German acronym) and the Biodiversity Finance Initiative (BIOFIN).

With the purpose of checking the progress made, as well as planning the next steps, a **First Mission by the UNSD to Mexico** was made in October 2014; a Second Mission was undertaken during July 2015.

With the intention of socializing the knowledge between all the participant institutions, an exchange website has been developed where all the records of the technical meetings and the advances made are; besides, it serves as repository and digital memoir of the implementation of the SEEA-EEA in Mexico: <https://extranet.inegi.org.mx/sitios/ceem>

Case studies

With the finality of determining the viability of the implementation of the SEEA-EEA in Mexico, the decision was taken to make several pilot studies centered in specific case studies for two States of the Mexican Republic: Aguascalientes and Colima (it is expected to add Veracruz to the study by the end of this year).

For both cases, the municipal political division was taken as a frame for the EAU (Ecosystem Accounting Units).^{1, 2} The classification of each LCEU (Land Cover Ecosystem Unit) is given by the land cover use and vegetation charts made by INEGI applied to each of the municipalities that are part of the case studies.

Sources of information

INEGI produces enough geographical information to start the calculations for some accounts in physical terms. Most of the information is available at a 1:250,000 scale (minimal mappable area of 25 hectares).³ There are maps in *shape* and *geodatabase* format (for Geographical Information Systems) for land cover and vegetation, edaphology, soil erosion, hydrology, water bodies, among others. For the rest of the information contact with institutions of the environmental sector has been vital, since they have provided us with information to design, for instance, the water accounts based on data about surface and ground water exploitation for the entire country. It is expected to keep the exchange of information with other institutions to address specific parts of the accounts, for instance with CONABIO for the biodiversity accounts.

Progress, challenges and work plan

The work plan has been developed relating the goals of the National Plan with the Technical Guides made by the UNSD, the exercises sent by Rocky Harris, and with the SEEA-EEA. Following the general outline of the Technical Guidance of the SEEA-EEA⁴ Mexico's ecosystem accounting began. The idea is to produce the entire sequence of accounts for the pilot studies with the objective of evaluating the possibility of applying the methodology to the whole country.

The main support in the construction of ecosystem accounting has been interinstitutional cooperation; which has allowed overcoming little by little the obstacles towards an effective communication. The challenge is to finish the two pilot studies at least at the level of physical units

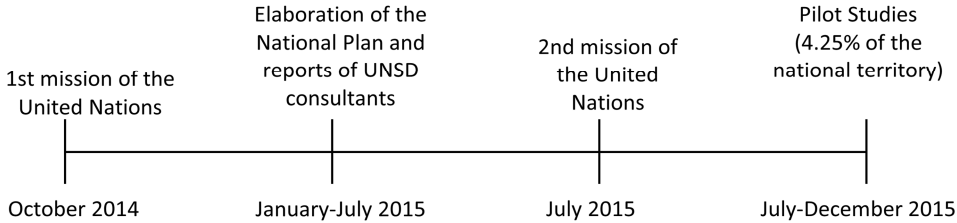
¹ According to the recommendations of the SEEA-EEA Technical Guidance: "3.22 For EAUs. The most obvious choices of delineation for EAUs relate to administrative boundaries. These boundaries correspond best to the level of coverage of government decision making and hence to a range of other socio-economic data."

² It is necessary to clarify that the parameters for each EAU can vary for different parts of the national territory, depending on the availability of information. The municipality is the minimum observation unit (for EAUs) that will be used in Mexico.

³ According to the Technical Guidance of the SEEA-EEA the maximum desirable area for a BSU (Basic Spatial Unit) is one square kilometer (100 hectares), for which the quality of the information is enough for SEEA-EEA standards. See: paragraph 3.17, SEEA-EEA Technical Guidance. Link: http://unstats.un.org/unsd/envaccounting/workshops/eea_forum_2015/12.%20SEEA%20EEA%20Tech%20Guid%20Exp%20Forum%20Draft%20Deliv%202.c%203Apr2015.pdf

⁴ Figures 2.2 y 4.1 of the Technical Guidance.

by the end of 2015.



In the next table is shown at detail the work plan designed for the pilot studies and the progress made:

Table 1. Progress control.

| | | Physical units | Monetary units |
|---|-------------------------------|----------------|----------------|
| Ecosystem extent account | | | |
| Land cover | | ✓ | n/a |
| Ecosystem condition account | | | |
| Water | Surface water | | n/a |
| | Groundwater | | n/a |
| Carbon | Living biomass | | n/a |
| | Dead biomass | | n/a |
| | Soil | | n/a |
| Soil | | ✓ | n/a |
| Biodiversity | Extent/habitat condition | ✓ | n/a |
| | Richness/abundance of species | ✓ | n/a |
| | Threatened species | ✓ | n/a |
| | Genetic diversity | | n/a |
| Supply and use of ecosystem services account | | | |
| Water | Surface water | ✓ | |
| | Groundwater | ✓ | |
| Carbon | Living biomass | | |
| | Dead biomass | | |
| | Soil | | |
| Soil | | | |
| Biodiversity | Extent/habitat condition | | |
| | Richness/abundance of species | | |
| | Threatened species | | |
| | Genetic diversity | | |

*n/a: not applicable.