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International experiences in climate change-related statistics

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The International Seminar on Linking Climate Change and National Accounting showed that the state-of-the-art for accounting in Brazil and around the world requires the integration of actors and information systems to meet a challenging new era, where people and economies will be evaluated according to their ability to diminish the human impacts of greenhouse gas (GHG) emissions in the atmosphere.

Robert Smith, Chair of UNICEF's Task Force on Climate Change-Related Statistics, made it clear in his presentation that there is a need to incorporate the recommendations made by the United Nations Economic Commission for Europe (UNECE)[2] for the assessment of climate change in the context of national accounts. The main recommendation is to improve the reporting on GHG emissions under the Kyoto Protocol. Compilers of scientific or meteorological climate change data and official statistics must work in tandem to broaden climate change analysis. This will improve the accuracy of GHG data for inventory purposes, as well as: to inform decision-makers and national statistical systems seeking opportunities to measure climate change adaptation and/or impacts; to assess changes in output by sector due to climate change (e.g. loss in agricultural production due to drought); and to evaluate mitigation technologies (e.g. the output of solar panels in environmental goods and service accounts). Countries must consider these recommendations seriously to integrate the economic and environmental impacts of climate change into their data modelling endeavours.

The representative of the Environmental Economic Accounts Section of the United Nations Statistics Division, Sokol Vako, called evaluations that require multiple sources of information "puzzle pieces". He stated that to achieve sustainable development, environmental policy must consider interconnected natural systems (e.g. the nexus between food, energy, water and climate) and understand the links between them (integrated environmental information) and between the economy and the environment (integrated environmental-economic information). He referred the System of Environmental Economic Accounting (SEEA)[3] as a strategy to create statistics standards that can be used to monitor the Sustainable Development Goals (SDGs) from an economic and environmental perspective in an integrated manner.

To highlight the relevance of the SEEA for climate change concerns, he developed the link between air emission accounts (by residential economic units and by type of substance) and emission inventories—exemplified by the emission accounts of the Danish territory (IPCC-inventory) plus emissions caused by Danish citizens living abroad and others—to assess the footprint of Danish economic activities (environmental accounts); by accounts attributed to the Netherlands; by assessing the contribution of a specific industry to total emissions compared to air emissions and economic activities; and by calculating carbon dioxide (CO2) emissions per capita regarding production and consumption—all useful information for public policies.

Pierre-Alain Pioneer, from the Organisation for Economic Co-operation and Development (OECD), endorsed the SEEA as an ideal tool for measuring global air emission, emphasising that it is possible to provide the first estimates of air emission accounts[4] for countries that do not yet compile them. Energy data were mentioned as useful starting points for inventories.

Reference:

UNECE. 2014. *Conference for European Statisticians Recommendation on Climate Change-Related Statistics*. Geneva: United Nations Economic Commission for Europe. <http://www.unece.org/fileadmin/DAM/stats/publications/2014/CES_CC_Recommendations.pdf>. Accessed 1 December 2017.

Notes:

1. This seminar was a joint initiative between Ipea, the International Policy Centre for Inclusive Growth (IPC-IG), the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística—IBGE) and the Economic Commission for Latin America and the Caribbean (ECLAC) in Brazil, requested by the Brazilian Ministry of the Environment, financially supported by the Institute for Climate and Society (iCS) and with the technical support of Rede Clima. Technical Rapporteur: Flávia Witkowski Frangetto. For additional information, see <http://www.ipc-undp.org/pub/eng/JP16_Report_International_Seminar_on_Linking_Climate_Change.pdf>.

2. The UNECE Task Force defined climate change-related statistics as "environmental, social and economic data that measure the human causes of climate change, the impacts of climate change on human and natural systems, the efforts of humans to avoid the consequences as well as their efforts to adapt to the consequences" (UNECE 2014).

3. See <https://unstats.un.org/unsd/envaccounting/seeaRev/SEEA_CF_Final_en.pdf> and <https://unstats.un.org/unsd/envaccounting/seeaRev/eea_final_en.pdf> for measurement frameworks towards sustainable development.

4. Air emission accounts from European countries, Australia and Canada can be found at <http://stats.oecd.org/Index.aspx?QueryId=72560>.

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