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The System of Environmental-Economic Accounting and its contribution to Climate Change

Sustainable development policies addressing the challenges of climate change must be based on a sound statistical information system. An important part of this is the System of National Accounts (SNA) that renders a framework for comprehensive time series of data, tables and accounts to analyze fiscal, price and monetary instruments and regulations for jobs, growth and productivity. In relation to economic-environmental dimension of sustainable development and climate change the *System of Environmental-Economic Accounting* (SEEA) is an important extension of SNA, which brings together economic and environmental information in an integrated framework by using standard concepts, definitions and classifications. This framework links the physical and monetary information on flows and stocks of natural resources and ecosystems to conventional national accounts thus providing policy-makers with coherent time series of data, policy indicators and descriptive statistics for scenario modeling to analyze, plan and monitor the sustainability of growth.

The paper/presentation argues that the SEEA, which is expected to be adopted as an international statistical standard for official statistics in environmental-economic accounting by the United Nations Statistical Commission – the apex entity of the global statistical system – is an essential statistical framework for climate change policies. The SEEA, by presenting the main categories of emissions by sources and removals by sinks (i.e. energy, industrial processes and product use, agriculture, forestry and other land use, waste, etc.) in an integrated framework linking the economy and the environment, offers the analytical framework to evaluate how economic activities create pressures on the climate, and how climate change affects both the economy and the environment.

The paper/presentation goes on to show that by supplementing national emission inventories and UNFCCC reporting schemes with the SEEA considerable additional value added is obtained by allowing for the analysis of the impact of policy interventions (e.g. emission permits, taxes, subsidies, financing, etc.) on present and future emissions and on other environmental pressures as a result of changed patterns of production, consumption and accumulation. More specifically, the application of SEEA will offer a more detailed and comprehensive evaluation of the tradeoffs between mitigation and adaptation policies, technology and their financing, their impacts and effectiveness.

Finally, the paper/presentation proposes a research agenda to be addressed through close cooperation between national and international experts on climate change and environmental accountants and statisticians. The agenda would include:

- (a) Identifying and analysing conceptual issues
(for example, harmonization of industry and product classifications to facilitate the technology and industry conversion, adaptations of environmental protection expenditures classifications to analyze expenditures on mitigation and adaptation; the link between UNFCCC reporting and SEEA emission accounts; elaboration on the classification of sinks and wastes to reflect the removals by sinks (e.g. linking forest accounts to carbon binding);
- (b) Reviewing the statistical coordination to enhance statistical quality and cost effectiveness at national and international level
(for example, streamlining data items and reporting practices for the UNFCC reporting and the SEEA, the use of additional checks and balances and comparing data from different systems,);
- (c) Promoting the use of official statistics for climate change policies.