Fifth Meeting of the London Group on Environmental Accounting

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Country Update - Canada

Environment Accounts and Statistics Division

Statistics Canada

1. Spatial environmental accounts

Research has begun on a Water Stock Account for Canada. Some initial contacts have been made with other departments of the federal government. More contacts will have to be made with regional water research groups and departments of Canada's 13 provincial/territorial governments. The first output from this research project will be a planning document outlining the intentions for the account. This is expected to be completed in six months time. With respect to data development, Statistics Canada has joined a collaborative project between the federal department of natural resources and the federal department of agriculture and agrifoods to map groundwater aquifers in Canada. The objective of this exercise is to convert provincial groundwater maps into a national digital coverage, which will be used to estimate available groundwater stocks.

The Land Account continues to evolve. Digital data from the Canada Land Inventory are now available nationally. A pilot project is under way to use the land use layer of the Canada Land Inventory to calculate historical land use changes in the national capital region (Ottawa) between 1966 and 1996. If the pilot project proves successful, the methodology for calculating change will be adapted to the rest of the country. The large spatial database that supports the Land Account is also evolving. It underwent historical revisions in the last year. The revisions will improve the spatial estimates made in the account.

2. Environmental Protection Accounts Update

- More effort will be put into developing an accounting framework that integrates the supply and use of environmental products (using SERIÉE and SEEA Chapter 4). The focus of the project will be to derive value-added estimates for the accounts, which are currently based on gross

output.
- There are also a number of data gaps that need to be filled in order to have a complete account of environmental expenditures.
- Some details of the surveys that feed into the account are given below.

2.1 Environmental Protection Expenditure Survey

- Estimates for 1997 of business sector spending for environmental protection have just been released. Estimates for 1998 will be available in spring 2000 and the survey will be conducted every second year thereafter, starting with the 1998 reference year.
- For the government sector, the currently available data are consolidated data for 1996/1997 and unconsolidated data (by level of government) for 1998/1999.
- As result of increasing demand by users, Statistics Canada will be publishing a detailed report on the environmental technologies used by Canadian firms and is planning a Workshop on the Measurement of Environmental Technologies in Ottawa next year.

2.2 Environment Industry Survey

- The report for the 1996 and 1997 Environment Industry surveys was was released in October of this year. The report Waste Management Industry : Government and Business Sectors, 1996 was also released in October, 1999; results are included in the environment industry estimates).
- As mentioned above with respect to the Environmental Protection Expenditure Survey, the Environment Industry Survey and the Waste Management Industry Survey will be conducted every second year starting in 2000 with the 1998 reference year

- A research paper of the trade in environmental goods and services will be produced for March, 2000.

3. Resource Stock Accounts

Aside from the on-going update of existing time series, work on these accounts has lately focused on a proposal to develop a set of marine resource accounts. This project, which is still in the conceptual stage, will yield stock accounts measured in physical and monetary units for the major commercial marine resources in Canada. Statistics Canada will work closely with the federal department of fisheries in developing these accounts.

Discussions are beginning on the work necessary to complete the sub-soil asset accounts. All sub-soil assets of major importance in Canada are already included in these accounts. There remain a few resources (mainly metallic minerals) of some economic importance for which accounts have not yet been established. It is planned to develop accounts for these last resources in the coming 1 to 2 years.

Once the marine resource accounts are in place and the sub-soil asset accounts have been completed, the

resource stock accounts will be complete for all "economic" environmental assets in Canada.

4. Material and Energy Flow Accounts

Development of these accounts has not progressed a great deal since the last London Group meeting. One major new initiative is a project in collaboration with the federal department of natural resources that will investigate the possibilities for measuring flows of recycling materials in Canada. Currently, these are very poorly characterised, particularly at the level of industry branch. What data do exist are at the aggregate level. This project should have identified some alternative means of measuring recycled material flows within one year.

The other new initiative is a flow component to the aforementioned marine resource accounts. This component will measure the annual extraction and disposition of marine resources in physical and monetary units.

A major advance was made in terms of the use of the material and energy flow accounts earlier this year when the federal department of finance requested a provincial breakdown of the existing greenhouse gas emission accounts. This breakdown will be used as an input into an econometric model designed to estimate the impact of various fiscal measures for controlling greenhouse gas emissions. Adding a provincial dimension to these accounts was possible due to recent changes in Statistics Canada's input-output accounts, which are now available at the provincial level on an annual basis. Previously, provincial accounts where available only sporadically.

An investment has recently been made in new software (S-Plus) to replace the in-house software that had been used until now in the development of the material and energy flow accounts. This new software will allow us to take full advantage of the Windows operating system and will provide us with much improved data management possibilities. Over the coming months, we will be implementing this new system and taking advantage of this opportunity to re-think our approach to environmental I-O modelling.