

Comments about SEEA's Chapter 4 Draft for the Canberra Meeting

Not all following comments are likely to be presented and discussed at the Canberra meeting due to the limited time available and the absence of the authors of these comments, the latter precluding a useful interaction. However, some of the more general comments on the structure of the chapter and the accounting framework could be addressed in Canberra. It will be necessary for the working group on Chapter 4 to meet later on to discuss two distinct sets of issues: definition issues and accounting issues.

The draft as it is more or less contains all the basic information required for a manual on environmental protection accounts. It is certainly a major improvement compared with the actual SEEA version. However, it requires some reorganisation of the sections and improved merging of the different frameworks into a more cohesive and consistent one, with Annexes of existing classifications and frameworks.

4.1 Scope

More work is required in order to improve scope and definition criteria. The present draft creates some overlaps and confusions with respect to the different types of activities measured. Some of the confusion arises from the vocabulary employed.

Core environmental protection account

A core account of environmental protection includes supply and use of environmental products. However, at the moment, environmental protection activity issues (description, definition, etc.) are presented and discussed separately from environment industry issues. Statistics Canada's point of view is that the environment industry represents the production of environmental products, therefore is part of the supply table. Whereas, expenditures on environmental protection are part of the use table. It is necessary to integrate aspects of demand-based estimates of such production (e.g. national expenditure for environmental protection) to supply-based estimates (environment industry). Therefore, we suggest changing the wording in 4.7.1 to:

The focus so far has been on integrating the expenditure (use) related to environmental protection to the production or supply of products related to environmental protection.

And to move Section 4.7.1 on the environment industry to 4.1. We suggest modifying the text from section 4.7.1 in a way that would make it more consistent with the supply and use framework.

There is a discrepancy between the CEPA and the Environment Industry Classification: the classification of activities includes "protection of biodiversity and landscape" (6) as an environmental protection activity, whereas the environment industry classification includes nature protection in a "resource management" group rather than as a core activity. This means that following both classifications would create an imbalance between measurement of demand and measurement of supply of environmental products. Work needs to be done to make the two concepts homogenous.

Coverage of environmental activities

A discussion is required to improve the coverage of "environmental activities". In view of the changes in business and government practices, it is necessary to extend the definition to cover activities that are not necessarily done for environmental reasons but that do bring clear, measurable environmental benefits. This should be emphasised in the text.

What is the rationale behind adding Resource Management to the account name? As resource management is defined (recycling, energy and materials saving, water supply, forest and fisheries management), it is the result of the CEPA classification, which is domain driven.

It would be more useful to expand CEPA to cover both environmental purpose (protection) and environmental benefits. For example, CEPA could be separated in the following modules:

- Pollution abatement (end-of-pipe)
- Pollution prevention, including recycling and energy and material savings (integrated processes)
- Forest and fisheries management has 2 parts: Protection and restoration of wildlife and habitat; and Sustainable

Resource Management that is required for sustainability of extraction or harvesting of the stock (e.g. forest harvesting practices)

- Water supply can be represented as a separate module depending on individual countries needs

* Such a revised CEPA would have the advantage of taking into account the gradual changes in the way businesses and governments take the environment into consideration. It would also prevent overlaps between pollution prevention and resource management (e.g. energy saving issue).

Repercussion activities and expenditures (4.1.1): aimed at treatment of damages that actually occur (remove avoidance of damage from environmental deterioration, it is wrong since it is entirely different > pollution prevention): this is confusing since it appears to be similar to damage repair activities and expenditures. Is it the same? It is confusing with restoration activities.

4.1.4 Links to NA

ADD Also, revenues and value added from the production of environmental goods and services are part of SNA.

4.2 Definitions

4.2.2 The purpose criterion

- Section 4.2.2 should be moved up before Section 4.2.1 and renames Definition of Environmental Protection.
- Definitions of the criteria (pure purpose, compliance, and cost) need to be separated as different definitions; the current text assumes that all criteria are a variant of the purpose criterion - this assumption needs to be discussed further.
- It should be noted that the first 2 variants, i.e. pure purpose and compliance criterion are required for practicality before it is possible to move to criteria 3 and 4.
- With respect to cost criterion, timing is an issue; if an investment in environmental protection is done too early for a business, there may be a significant net cost, whereas there might not be one if the investment was done later.
- The difference between cost and technology criteria is not clear here.
- Classifications (CEPA, environment industry...) should be discussed in this section.

4.2.3 Main data sources

This is an important section and should be moved as a distinct section, say after the supply-use framework. This way we can take full advantage of the detailed information provided not only in SERIÉE but also in the OECD/Eurostat manual on the environment industry.

- Eliminate paragraph 1 (not relevant)
- List of primary data sources needs to be expanded (comments to follow)
- For specialised corporations, it is not too likely that information could be collected from service statistics, national accounts or even I/O tables. Rather, there is a need for specific surveys and environment industries or industry associations' data. Households: non-profit organisations should be included here as well, information may be obtained through annual reports of environmental organisations.
- Table illustrating environmental protection competencies: why do only the "disposal enterprises" represent the business sector? What does it mean? Also, there should be an X in the publicly owned disposal enterprises/waste cell and in the in-house/nature protection cell.

4.3 Basic concepts for EPA and EPE

This is a section where there is an extraordinary use of various interchangeable terms, with the result of bringing confusion. However, it is possible to reorganise this section so that it is more coherent with the supply-use framework, such as in the following illustration:

Scope of production of environmental goods and services

4.3.1 External environmental protection activities

Principal activities

Secondary activities

4.3.2 Internal or ancillary environmental protection activities (own use)

4.3.3 Environmental gross output versus environmental value added

- What is important in this section 4.3 is to distinguish 1) the different types of production: principal, secondary and in-house (ancillary); and 2) the concept of production, i.e. the distinction between gross output and value added. The presentation of the **supply and use framework** should follow straight from here.
- It is important to make the link with section 4.4 in terms of concepts and vocabulary. The different types of production need to be explained.
- We need a precise definition of specialised producers (should it be for instance, those producers for whom more than 50% of the revenue is derived from environmental products?).
- We also need to make the connection between specialised/non specialised production on one hand and primary/secondary/ancillary production on the other hand from a measurement point of view.

Services, adapted and connected products (specific products)

- The issue of distinguishing between services, adapted and connected products is secondary and could be discussed in section 4.7 as an illustration of the different categories of products and services composing environmental protection. The interest of the accounts is to present different types of activities (e.g. monitoring, end of pipe versus integrated processes, R&D), domains (e.g. air prevention, wildlife protection).
- Environmental services (why call them characteristic? It just is more confusing): the use of "service" is confusing in the text; I suggest to provide examples.
- Statistics Canada considers that the following distinctions between environmental goods, technologies and processes are interesting:
 - end of pipe facilities and equipment
 - integrated infrastructure and equipment and clean technologies
 - environmental services
 - green products (are they connected products?)

The terms adapted and connected are confusing and should be changed. How useful is it to distinguish adapted products? What are they exactly?

Capital stock models: this issue would be better placed in 4.7 as an extension because it is important to discuss the basic structure of the accounts first.

4.4 Supply-use framework

This section is an important introduction to the accounting framework for environmental protection. It can be considered as a starting point and hint at alternatives and extensions of the framework. However, the illustration that is used in Table 2 is somewhat misleading because of the terms employed. We have produced an alternative table and propose to use it. In the example provided, terms are adjusted and clarified in order to avoid possible confusion (see Excel file).

It is important to emphasise here that the framework is for a measure of gross output and not one of value added. A discussion on measurement of environmental value added should be presented here or in 4.6.

It would be useful to emphasise that different examples can be used instead of waste to present different types of supply and use frameworks according to the domain, the activity type or the sector.

It would also be necessary to emphasise that even though this framework is very aggregated, the development of that framework is likely to require very disaggregated data and detailed estimates in order to allow for aggregation.

4.5 Main data sources

The content of section 4.2.3 should be presented here and expanded (see above).

4.6 A full set of accounts

This section should include a discussion on environmental value added, as one measure of non-duplicated production.

4.7 Extensions and applications

This is the section where to include the discussion on capital stock estimation (for environmental protection).

As mentioned above, the environment industry should be included as part of the core chapter rather than as an extension. Therefore, the discussion on the classification of the environment industry ought to be included to the sections 4.1 to 4.3. This would also avoid repeating the concepts of internal and external services.

Discussion on repercussion expenditure and maintenance costing, as mentioned earlier, needs to be clarified.

- What are repercussion expenditures? If there is nothing to present on this, there is no need to talk about them in this section
- Maintenance costing: Its use needs to be clarified (cost-benefit analysis)
- Avoidance cost?
- Distinguish between cost borne and cost caused

Natural resource use and management account

As mentioned earlier, the coverage of such an account needs to be discussed since it is breaking ground with "traditional" environmental protection accounting. The discussion included here should belong to 4.1 on the scope of the accounts and needs to be made more positive. Instead of talking about exclusions (sounds negative), why not transform the section in the line of what should be included and why?

An account for the prevention of natural disasters

How can one prevent such disasters? Should not the account deal with the minimisation of the impacts of natural disasters?

Links to physical data

This is a proper section to include such a topic since not much has been done up to now on this issue but everybody wants to do it. It is important to make a note that the capacity to link environmental protection activities to physical data is limited by the timing

issue: an expenditure made at time t may not have an impact before period $t+1$ or $t+2$. How do we take this into account?