

In general the structure is OK but there are problems related to definitions and concepts that seriously impair the readability of the chapter.

DEFINITIONS AND CONCEPTS

There are some major problems with definitions, presentation and the coherence of concepts, in particular for the EPEA and EGSS. These make the chapter hard to read and confusing to readers and should be corrected as follows:

Paragraph 30 states that 'characteristic activities are the production of environmental protection and resource management services by economic units for sale to those undertaking the activities'. This is not correct. Delete "to those undertaking the activities" and replace by "or own use".

Paragraph 31 states 'The definition of characteristic and connected products defines the full scope of expenditures on environmental activities.' This is not correct or misleading (compare to paragraph 70). Delete this sentence. Also the example given (purchase of a car for undertaking aspects of resource management activity) is not correct and should be deleted. The car would be an example of capital formation for a resource management activity. Instead add 'Examples of connected products are catalytic converters or particulate filters for vehicles.'

Paragraph 32 states that "The definition of characteristic and connected products is considered in detail in the compilation of Environmental Protection Expenditure Accounts (EPEA) explained in section 4.3".

However, no definition of connected products is given in section 4.3 or anywhere else in the chapter. We suggest adding (e.g. in paragraph 31 or in section 4.3) the following definition: "Connected products are products whose use directly serves environmental protection purposes but which are not characteristic services or inputs into characteristic activities. An example is septic tanks used by households which are not connected to the sewage system."

In paragraph 41, the sentence "The total expenditure includes expenditure on characteristic products, i.e. environmental protection services, and expenditure on connected products." is misleading or incomplete (total expenditure also includes capital formation, etc..... – see paragraph 70). Delete this sentence.

Table 4.3.1:

- The title of table 4.3.1 is 'Production' but it shows also imports. Change title to 'Supply' or better still move the imports and total supply part of Table 4.3.1 to Table 4.3.2 and make Table 4.3.2 a supply-use table.

- Table 4.3.1 tries to do two things at once by showing total supply including imports and the production and generation of income accounts of relevant producers. Table 4.3.2, on the other hand, is a small single row table that only shows total use. We suggest moving the imports row as well as the total supply rows to Table 4.3.2, make table 4.3.2 a supply and use table and restrict Table 4.3.1 to production.

- The category 'government producers' are included already in the other columns so it is necessary to delete the column 'government producers' and the footnote. Make two sub-columns under the column 'specialised producers' called 'government' and 'other'. Adapt paragraph 49 accordingly to reflect this change.

Table 4.3.2: the header rows is a mix of industries and sectors. For simplicity we suggest deleting 'industry' and replacing it by 'intermediate consumption', add 'final consumption' to households and government, and replace 'RoW' by 'Exports'. Delete the top row which says 'purchasers'.

Paragraph 57: Definition of expenditure is again not correct (compare to paragraph 70 and Table 4.3.3). Change text to say: "This includes (i) expenditure on environmental protection services, (ii) expenditure on connected products, (iii) expenditure on so-called adapted or cleaner goods that have been specifically modified to be more environmentally "friendly" or "cleaner" and whose use is therefore beneficial for environmental protection; and (iv) expenditure on capital formation for environmental protection activities.

The text includes a full definition of adapted or cleaner products. We suggest that the definition itself be moved up next to paragraph 31, where the characteristic and connected products are defined.

Table 4.3.3:

- delete 'for environmental protection purposes' from the connected products row (as it is already part of the definition of connected products),
- delete 'on non-environmental protection products' from the capital formation row (what has to be recorded here is the total capital formation for environmental protection activities so this apparent restriction is confusing in the table and these 'non-environmental' products are not defined anywhere in the chapter)
- Unshade the cell at the cross-section of 'other producers' and 'capital formation for characteristic activities'. See next comment for the reason.

Paragraphs 60 to 63 about capital formation are upside down. Move paragraph 63 to the top and state that all capital formation of specialist producers is covered. Start the current paragraph 60 with "In the case of non-specialist producers, two types of gross fixed capital formation for environmental protection activities can"

Paragraph 65: delete "number of newly constructed houses equipped with septic tanks" as this is not an example of an adapted product but of a connected product.

Paragraph 68: the statement "... this subsidy will not be recorded in the expenditure recorded by the unit receiving the subsidy" is wrong. The point is that the expenditure is recorded at purchasers' price that excludes the subsidy. The point is not who receives the subsidy. Delete "... by the unit receiving the subsidy".

Paragraph 69: is in the wrong place. Move to the section on financing (after paragraph 75). In the sentence "Where the expenditure is for environmental protection purposes the relevant amounts of tax revenue should be recognised as earmarked taxes for environmental protection and recorded against the expenditure of the units paying the taxes" replace "recorded against" by "shown as being financed by the units paying the taxes".

Paragraph 72: wrong reference to Table 4.3.2. Replace the first part of sentence 1 as follows: "The expenditure by user groups shown in table 4.3.3 can be cross-classified to show which units finance....."

Paragraph 81: The paragraph contradicts the previous paragraph 80. Paragraph 81 should be deleted or moved to section 4.2.2 (e.g. after paragraph 17) where it could be used to define environmental protection activities.

Paragraph 86 introduces sole-purpose products. This category seems to overlap with other categories. For example, the next two categories (specific services and environmental technologies) would satisfy the definition. We suggest to move paragraph 86 after paragraph 88 and re-label them 'Other sole-purpose products' here and in the whole chapter. (The same re-ordering should be done in Table 4.3.4.)

Paragraph 88: The last sentence gives for cleaner technologies the examples of catalytic NOx purifiers and cars with environmentally friendly cooling. Both these examples seem to be wrong. In the terminology chosen for the chapter, NOx purifiers would be sole purpose products and cars with environmentally friendly cooling (what is that?? CFC-free air conditioning systems?) would be adapted products.

Paragraph 91: the definitions and the terms used here are the same as for the EPEA, e.g. 'specialised producers whose primary activity is environmental protection..', 'non-specialised producers' etc. However, the different categories of producers are not necessarily the same in EGSS and EPEA. It is necessary to warn the reader here and refer to section 4.3.4.

Table 4.3.4:

- same comment as for Table 4.3.1: The 'government producers' are included already in the other columns so delete the column 'government producers' and the footnote. You could make two sub-columns under the column 'specialised producers' called 'government' and 'other'.
- The row 'share of environmental goods and services' is in fact a component of total output and should be presented like this.

Paragraph 94: can be deleted – it duplicates paragraph 90.

Table 4.4.1: take out social benefits. See also comment on paragraph 130.

Paragraph 112: the listing of taxes here is not in accordance with the SNA hierarchy of taxes – please align.

Paragraph 116: The treatment of tradable emission permits is not yet definitive. Need to adapt the phrasing in (i). In (iv) the last sentence should be clarified to read: " Consistent with the general scope of environmentally related taxes, payments to government for the use of land or natural assets are treated as rent and therefore are excluded from resource taxes. For detail on rent see paragraph 120."

Table 4.4.2 uses different categories from those shown in paragraph 112 – please align.

Paragraph 115: please add at the beginning of the 2nd sentence "Those taxes that are earmarked for environmental protection...".

Paragraph 119: We have major doubts about this inclusion of VAT. Please replace 'should' by 'could'. We disagree with the statement that this tax is 'equal to VAT rate multiplied by

the amount of the environmental tax' as this ignores the fact that VAT is deductible for most but not all producer units in the economy. We think that the deductible VAT can under no circumstances be considered an environmental tax.

Paragraph 121 is unclear. It starts with 'Rent is the income receivable by the owner of an environmental asset....' This reads like (but is not) a definition of rent. We suggest to rephrase the paragraph as follows:

"The income receivable by the owner of an environmental asset for putting the asset at the disposal of another institutional unit is rent. Rent is paid on the use in production of non-produced assets such as land and sub-soil assets. Rent is distinct from rentals that are paid by users of produced assets to the owners of those assets. Examples include rentals paid on the hire of buildings or of equipment and the hire of cars for transport by tourists. Rentals are treated as payments for services."

Paragraph 124: The 2nd sentence states: "Such sales of goods and services [NB by government] constitute production by general government units and are often referred to as "fees"." This needs to be clarified. It should read as follows: 'Such provision of goods and services constitute production by government units and any payments made by the users are often referred to as "fees".'

Paragraph 129: Delete this paragraph. Instead, in the first sentence of paragraph 128 explain which of the payments of government are 'often labelled subsidies'. (I.e. separate out the payments of government units for goods and services etc.)

Paragraph 130: Should explain/define more clearly the different types of transfers, not only subsidies.

It should also define the term "Environmentally related subsidies and similar transfers" in the heading. The paragraph could start as follows: "An environmentally related subsidy or similar transfer is a transfer which is intended for supporting activities for protecting the environment as well as activities for saving natural resources. It includes subsidies, social benefits to households, investment grants and other current and capital transfers." (Then the paragraph should continue by explaining each term briefly.)

Paragraph 155: Should clarify that licences to corporations are not meant here. Paragraph should read 'A licence granted to a household for recreational fishing is considered, by convention, as payment of a tax.'

Paragraphs 139-141: These transfers paid by non-government units are inside a section called 'payments by government'. Either move this text before paragraph 110 and state there that the rest of the section will be on payments to and from the government, or give a general explanation in paragraph 110 of the coverage of the following text and make paragraph 139-141 a separate sub-section.

CLASSIFICATION OF ENVIRONMENTAL ACTIVITIES

Paragraph 25 and following, and Annexes A4.1 to A.4.4 – Classification of environmental activities.

The latest version of the CEA classification included in the chapter has not been approved by anyone. It is not yet of sufficient quality and clarity, especially in the resource management group and regarding the overlaps with the resource use group and with activities related to natural disasters.

We therefore suggest the following:

(A) Make it clear in the text (paragraph 26) that the CEA is a tentative classification for the parts outside the CEPA classification. Introduce the CEPA in the text. State that the CEPA is one of the classifications of the UN family whereas the CEA is not.

(B) Delete the part on resource use from the CEA on page 6 (regarding resource use see our response to question 1 below)

(C) Delete the Annexes A4.1 to A4.4 from the SEEA.