DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
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System of Environmental Economic Accounting

SEEA Central Framework 2028 update

Scoping note for issue B1: "Description of PSUTs (in the SEEA Central Framework)"

Version for SEEA CF Technical Committee review, July 2025

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Note: This note is prepared in the context of the SEEA Central Framework update, mandated by the United Nations Statistical Commission in 2024, expected to finish by 2028. There are 29 update issues, and the initial task is establishing a clear scope for all of the issues. This scoping note provides a short description of a specific issue with the aim of supporting a common understanding of the work that will be needed to fully investigate and articulate the alternative approaches and recommendations for change or addition to the SEEA Central Framework. Scoping notes will be discussed by the relevant task team and inform on the further work related to the issue.

1 Background to the issue

1. The short description of issue B1: "Description of PSUTs (in the SEEA Central Framework)" from the March 2025 final list of issues endorsed by the UN Statistical Commission (https://seea.un.org/sites/seea.un.org/files/documents/CF_update/seea_cf_issues_final_list_march_2025.xlsx) is:

   "Physical supply and use tables (PSUTs) are the guiding framework for organizing data on physical flows in SEEA. An updated SEEA CF could elaborate the description of PSUTs to better highlight how they can be used for policy (e.g. circular economy policies). In addition, while PSUTs have a sound conceptual framework, some text could be added to help compilers enhance the consistency between the different types of accounts (e.g. energy, emissions, waste, economy-wide material flow accounts, plastics). It should be noted that there is a strong link between this issue and issues A4, A6, B2, B5 and D3 and these issues should be addressed in coordination."

2. Physical supply and use tables (PSUTs) are the guiding framework for organizing data on physical flows in SEEA-CF and Chapter 3 in SEEA CF is based on the rationale that PSUT is the organizing framework.

3. But the complete implementation of a full PSUT which includes all kinds of physical flows is very demanding to develop. And a PSUT with all types of physical flows is not always necessary, since useful analysis can be conducted with any of the individual components of a full set of physical flow accounts.

4. The SEEA-CF Sections 3.2 and 3.3 describe the PSUT approach and principles of physical flow accounting. Following this general introduction to PSUTs, the following sections describe Physical Flow Accounts for the following individual components: energy (3.4), water (3.5), materials (3.6) including nutrients, emissions, solid waste, and EW-MFA.

2 Motivation for considering a change to the SEEA Central Framework

5. An updated SEEA CF could better explain how PSUTs can be used for policy (e.g. circular economy policies).

6. Emerging interest in measuring and analyzing circular economy has increased the relevance of physical supply and use tables.

7. PSUTs have a sound conceptual basis but some text could be added to help compilers enhance the consistency between the different types of accounts (e.g. energy, emissions, waste, economy-wide material flow accounts, plastics).

8. In recent years some countries (e.g. NL and DK) have succeeded in implementing and making regular publications of complete physical supply and use tables as part of their environmental-economic accounting systems with a regular update. Providing insights gained in the regular production of complete PSUTs could be helpful.

9. At the same time, experiences with and guidelines for new types of physical supply and use tables for specific materials, for instance, for plastics have emerged.

10. These new developments and insights should be reflected in SEEA CF in order to bring it up to date.

3 Nature of the proposed change and research questions

11. There is no need to make major changes to the overall PSUT framework described in Chapter 3. However, the order of the different topics in Chapter 3 may be improved by re-organizing the chapter. Re-thinking chapter 3 could be helpful in the revision process.

12. The changes in the SNA-2025 regarding biomass need to be considered in the context of the PSUTs. The system of national accounts (SNA) 2025 introduced some changes with regards to the treatment of cultivated versus non-cultivated biomass growth. Possible effects on the SEEA-CF need to be explored and taken into account if relevant.

13. The update should focus on the balance of the text. It should, for instance, be considered to put more emphasis on describing complete physical flow accounts including all types of natural inputs, products and residuals. This will form a basis for users of SEEA CF to better understand the connection to the monetary supply and use tables, MSUTs, of the national accounts, and give a clearer picture of links between individual physical flow accounts, for instance, energy accounts on one side and air emissions accounts on the other.

14. Description of PSUTs for plastic flows (cf. UNEP and UNITAR guidelines and country examples) could be included.

15. Although the SEEA-CF is not an implementation guide, the possibility to implement PSUTs for other types of specific materials, for instance, packaging materials, could be mentioned/clarified further. In relation to this, it could be explained how the basic PSUTs can be combined with coefficients for the content of specific materials or substances (e.g. plastics) in composite products.

16. Generally, the text in SEEA-CF (2012) Sections 3.2 and 3.3 should be scrutinized to see where clarifications and adjustments can be introduced to take into account new developments and insights:

    a. Further clarification of the appropriateness of using the residence versus the territory principle for physical flow accounts. For which kind of analysis are the two principles best suited?

    b. The revision issues B1 PSUT and B5 EW-MFA will be combined into one Guidance Note (GN). This will enable the overlaps and bridging needed to be addressed easier to be included in the revised text.

    c. How should products bought and sold abroad vs. processing abroad be entered In the PSUTs? Merchanting needs a better description and an evaluation of the role of bridge tables to account for merchanting is also needed.

    d. Other international topics are the treatment of flows resulting from international tourism and the complex picture of ocean fishing – where non-resident fishing vessels fish in national waters, national fishing vessels fish in international waters and deliver fish to another country, etc.

    e. In practice, it may be appropriate to introduce balancing items for certain kinds of PSUTs in order to reconcile supply and use. How should that be described?

    f. Clarify how land is part of the PSUT framework.

g. Government consumption is not included as a use or supply category in the PSUTs, since it is assumed that all flows related to government consumption are service flows with no physical dimension (see e.g. para 3.29). While this is most often the case, it is not true for all market individual government consumption. More generally, it could be recognized that some services are associated with physical flows, e.g restaurant services, car repair, etc.

h. In para 3.31 it is stated that amounts of water, energy and materials that are incorporated into other products are recorded in the accumulation column of the use table. This may be appropriate when it comes to partial accounts, but it is not appropriate for complete PSUTs. This means that the balancing of complete PSUTs needs to be clearly described.

i. More text on the link and differences between EW-MFA and PSUTs (See SEEA-CF Revision Issue B5). For example, CBS (Statistics NL) uses EW-MFA data to populate their complete PSUT which may be a short cut in producing complete PSUTs. Should text on EW-MFA be included earlier in chapter 3?

j. Reflect how different data sources are used in the compilation of PSUTs – and discuss how data quality influences the quality of the PSUTs.

17. Although this issue was tagged as "textual" the revision would appear to be more substantial since the concepts of the PSUT lay the foundation for the physical flow accounts.

4 Links to other SEEA CF update issues

18. A2: Indicators: such as Circularity Rate, Circular Material Use Rate (CMUR)
19. A6: Introduction of thematic accounts and strengthening the link to policy. There are close links between PSUTs and the measurement and analysis of Circular economy
20. B2: Further clarifying treatment of losses (e.g. energy, water)
21. B5: Differences between PSUTs and EW-MFA
22. B7: Elaboration of waste accounts
23. It is also noted that PSUTs and EW-MFAs are related to the following three topics which have been placed on the research agenda and are not planned to be included in the 2028 revision work:
    - B8: Further guidance on recording own account production
    - B9: Creation of a classification of residuals
    - B10: Further clarifying treatment of goods sent for processing abroad and providing guidelines
24. D3: Inclusion of accounts for physical produced assets

    If implemented in the right way, PSUTs are tools to estimate the accumulation of all kinds of materials, including produced assets, durable household goods, waste etc.

5 Existing materials

25. Revisiting SEEA-2003 could be useful since it has some elaborated description of PSUTs (see pages 102-115).
26. Statistical guideline on measuring flows of plastics along the life cycle – UNEP/ UNITAR – to be released in 2025. See: https://ewastemonitor.info/plastic-monitoring-with-upcoming-unep-unitar-statistical-guideline/
27. System of National Accounts 2025 (Pre edit version)
28. Some Documents from NL and DK regarding complete PSUTs
29. In developing the Guidance note it will be necessary to identify the relevant experts and stakeholders for the purposes of both drafting the content of the note and also ensuring appropriately wide consultation. Two experts have been identified, Ole Gravgård Pedersen (Statistics Denmark) and Roel Delahaye (CBS Statistics Netherlands) since both have been actively working on complete PSUT regular publications. Additional experts and stakeholders will need to be identified.