DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS

System of Environmental Economic Accounting

SEEA Central Framework 2028 update

Scoping note for issue B7: "Elaboration of waste accounts (in the SEEA Central Framework)"

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Revised after discussions in TT-B and written comments

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 B7: "Elaboration of waste accounts" 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:
   "The SEEA CF has not described waste accounts holistically, and during the past 10 years several advancements have been made with waste accounts. Based on this, the description of the waste accounts should be further elaborated and improved, including the description of recycling and transformed, re-introduced and avoided waste."

2. Waste accounts are one of the sub-accounts of the physical supply and use tables described in Chapter 3 and are presented in Section 3.6 Physical flow accounts for materials and specifically in 3.6.5 Solid Waste Accounts.

3. At least 20 countries are now implementing waste accounts in some form (https://seea.un.org/content/2024-global-assessment).

2 Motivation for considering a change to the SEEA Central Framework

4. Waste is now high on the political agenda in many countries and data on waste reduction, reuse and recycling is an important basis for circular economy analysis and, for instance, for establishing a number of indicators on recycling, circular material use, etc. Elaborated waste accounts are useful for developing these types of analyses and indicators.

5. Although waste accounts are described and summary supply and use tables for solid waste are presented in Chapter 3, the text and summary tables reflect that the interest in and experience with waste accounts were quite limited when the current SEEA CF was written.

6. Thus, based on experiences from the approximately 20 countries now implementing waste accounts, there is a need for further development of the framework, introducing new concepts, new uses of the accounts, and more generally, improving and expanding the description of waste accounts in the SEEA.

3 Nature of the proposed change and research questions

7. There is a need to develop the waste accounts in the following ways (Please note this is not an exhaustive list – contributions to this list are welcome):

   a. Description of what is "waste" and how countries can decide which flows are important to follow in their waste statistics and accounts. The definition of waste in waste statistics is often determined by the legislation in countries and there is no universally accepted definition or list of waste. There are only examples from countries. (See SEEA-CF §3.271). When the definition of "waste" is linked to legislation there is a need to discuss how to deal with materials that lose its waste status when legislation is changed. It is also important to cover the topic of comparing figures between countries if each country is counting different things as 'waste'. Could a universal 'SEEA definition of waste' be the way forward?

b. The definition of waste should be reviewed and evaluated against recent experience gained from the development of waste statistics and accounts. This is the current definition, in §3.84 and 3.85:

> "3.84 Solid waste covers discarded materials that are no longer required by the owner or user. Solid waste includes materials that are in a solid or liquid state, but it excludes wastewater and small particulate matter released into the atmosphere.
>
> 3.85 Solid waste includes all materials sent to or collected by waste collection or treatment schemes including landfill establishments. Solid waste also includes those same materials if they are discarded directly to the environment, whether legally or illegally. In addition, solid waste may include some discarded materials exchanged between economic units, for example, scrap metal, for which the discarder receives payment. In these circumstances, the solid waste is considered a product (since the solid waste has a positive value) rather than a residual. Further delineation of the distinction between solid waste residuals and products is contained in section 3.6, as part of the description of physical flow accounts for solid waste."

c. Relevant terminology needs to be reviewed. The following terms (among others) could be included in the review: by-products, secondary raw materials, scrap. Evaluating if and how these concepts are to be included in the waste accounts is needed.
d. Consider the introduction of industry level information as a *supply table* using industries x waste type production, which would support industry-level policies.
e. Consider the introduction of an industry-level *use table* that shows the industry/sector that collects and treats waste or uses waste as a secondary raw material.
f. Further develop the waste accounts to support the tracking of materials supporting recycling and circular economy policies.
g. Elaborate on the double counting that can occur in waste accounts. This is waste-of-waste that occurs after treatment of waste. This can be especially relevant with respect to circular economy and recycling recordings in the accounts.
h. Identification and coordination of new concepts, terminology (for example, secondary raw materials, intermediate waste residuals/products), update/expand waste treatment operations, and new uses of waste accounts all need to be elaborated.
i. Descriptions of waste residuals and waste products – intermediates and final – and where these would go in a waste PSUT system and in overall economy PSUTs.
j. Identification of data sources for waste data, e.g. the recording of waste products in international trade statistics and production statistics and the recording of waste flows in waste statistics.
k. The current SEEA-CF currently limits waste accounts to solid waste and some types of liquid wastes – does this need further clarification? Does the system boundary for waste need to be expanded to include more types of waste or are these simply considered residuals?
l. International trade in waste has led to some environmental problems with certain waste types, for example plastics and electronics. How to include these flows should be reviewed

and where appropriate basic references to the Basel Convention should be provided since these might provide data sources beyond those of international trade statistics.

m. Some waste flows are linked to specific ecosystem pressures. Including a large description is outside of the scope of the SEEA-CF manual, however a few examples of waste-related ecosystem pressures could be mentioned to show the link between certain wastes and ecosystem pressures, for example leakage to the environment (for example, to air and groundwater) from landfills.

n. Another topic that needs clarification is the recording of waste to landfill, which would be considered a stock of waste. Some of which may be worth recovering or "mining," such as aluminum cans from the landfills deposited before recycling of aluminum was prevalent. There are other specific recording topics related to landfills that need to be investigated.

o. Consider the links between waste statistics and waste accounts and provide some general information with the transformation between these two systems. The UNSD/UNEP Questionnaire on Environment Statistics (https://unstats.un.org/unsd/envstats/questionnaire) Section on Waste (https://unstats.un.org/unsd/envstats/Questionnaires/2024/q2024_Waste_English.pdf or https://unstats.un.org/unsd/envstats/Questionnaires/2024/q2024_Waste_English.xls) could provide a starting point for describing the links.

8. While waste accounts have a considerable interest on their own, the development of a more comprehensive and coherent framework for waste accounts will also be very useful in relation to other topics on the revision list. This is especially the case for topic B.1 Description of PSUTs, since waste accounts are indispensable elements in establishing complete PSUTs, which describe the full flow of materials through the economy. There would be a natural transition from PSUTs to waste – which should be considered when re-organizing the chapter on physical flows.

4 Links to other SEEA CF update issues

9. There is a close link to B1. Description of PSUTs.

10. Issue B9. Creation of a classification of residuals. The boundary between waste that becomes an input product and when it is a residual is important to consider in the development of a classification of residuals.

11. Issue B11. Borderline cases for the production boundary – important for when waste from one production process becomes an input for another and the role of recycling in these cases.

12. Issue A2. Indicators – especially connected to the circular economy and recycling, which were not major topics in the SEEA-CF 2012.

13. Issue A5. Harmonization with other international classifications and updates of relevant frameworks/manuals.

14. Issue A6. Introduction of thematic accounts and strengthening the link to policy.

5 Existing materials

15. According to the global assessment, 20 countries are working on waste accounts. Materials from these countries could be a starting point. (https://seea.un.org/content/2024-global-assessment).

16. Eurostat, Manual on waste statistics - A handbook for data collection on waste generation and treatment - 2013 edition (https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-ra-13-015).

17. Diverse materials and reports from Eurostat such as the report by ICEDD and Argus, 20 December 2024, "LOT 5: SECONDARY RAW MATERIALS AND WASTE ACCOUNTING, Final Report, Service Contract Number 2022.0396"

18. UNECE (2024). Guidelines for Measuring Circular Economy (Part A: Conceptual Framework, Indicators and Measurement Framework) https://unece.org/statistics/publications/guidelines-measuring-circular-economy-part-conceptual-framework-indicators

19. Conference of European Statisticians Framework on Waste Statistics – 2022 edition https://unece.org/statistics/publications/conference-european-statisticians-framework-waste-statistics

20. 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. These experts and stakeholders have not been identified at this stage.