

Paras 70 – 72 - Suggest these paras combine with para 90 and Table 3.2.5 (all relate to Groups of Residuals)

Para 73 – We support this definition of solid waste and believe this should be the starting point for construction of the physical solid waste account. It should be made explicit that this definition of solid waste includes both products (discarding unit receives benefits) and residuals (discarding unit does not receive benefits).

Para 74 - Solid waste includes all materials sent to or collected by waste collection or treatment schemes including landfill establishments. The majority of these establishments are coded to industry ISIC 38: Waste collection, treatment and disposal activities - but not exclusively - this should be reflected in the tables. Solid waste also includes those same materials if they are discarded directly to the environment – whether legally or illegally.

Para 75. Solid waste may also include products exchanged between economic units but in practice a precise delineation of the products that are included as part of solid waste is difficult to define. The primary considerations are (i) whether benefits are received by the discarding unit from the receiving or collecting unit, and (ii) the extent to which processing or treatment is required by the receiving unit to use the product in its own production processes.

Consideration (i) determines whether solid waste is defined as either a product (discarding unit receives benefits) or a residual (discarding unit does not receive benefits), but does not, in itself, help to determine whether a product is waste or not.

Consideration (ii) is the primary consideration in determining whether a product is waste or not. A discarded material no longer desired by the owner/user and purchased by someone else (i.e. benefits to discarding unit) & reused by the new owner in its original state (i.e. without processing/treatment) is a second-hand product, NOT a waste product.

Although we are in agreement with Table 3.2.4, suggest it confuses to present as a 2x2 table like this - and probably the title is a bit misleading. Suggest separate discussion of issues with perhaps some specific examples. Maybe Table 3.2.4 could be divided into two tables, one of which is titled "Treatment of solid waste as residuals and products" and "Treatment of products as solid waste" or similar.

In summary:

1. Solid waste covers discarded materials no longer desired by the owner or user. It includes both residuals and products.
2. Solid waste residuals are unwanted and discarded materials for which the discarding unit receives no benefit.
3. Solid waste products are materials for which the discarding unit receives benefits and the receiving unit has to process/treat the product before reusing (otherwise it is just a second-hand product).

A diagram showing how all the concepts fit together would be very useful - ie residuals - waste/natural resource etc., products etc.

Comments below relate to 3.6.4 Solid waste accounts - paras 221-225 & Table 3.6.2.

We support the elevation of 3.6.4 Solid Waste Accounts to its own section. Would bring the earlier discussion of solid waste (paras 73-76 and above discussion) into this section.

Generally, once a material has been defined as solid waste, the distinction and separation in the physical solid waste account between a solid waste product or solid waste residual is a bit of a distraction & added complication, at least initially (& we can't make that distinction anyway in Australian physical accounts).

Whether or not someone paid for it at the time of discarding may be a valid question - and payments for recovered materials will be explicit in the monetary tables - but is it the most important question to structure the physical tables around, as appears to be for Table 3.6.2?

For Australia, one of the key policy questions is: of the total amount of solid waste material discarded, how much ends up in landfill vs. how much is recovered. (A key national policy in this area being to decrease amounts to landfill). Secondary to this would be whether the solid waste material is defined as a product or a residual.

Overall, we do NOT find the distinction between residuals & products based purely on whether money received for the discarded material useful in Table 3.6.2 - (and in practice we won't have those splits anyway - we know how much waste material is received at the facilities, but not whether payment was made for that material). These distinctions will be made in the monetary waste account. The earlier version of Chapter 3 talked about 'primary residuals' and 'transformed residuals' - we prefer this concept (although we suggest using the term 'waste material' to avoid any connotation about whether payment has or hasn't been made for a material).

Prefer to see the physical solid waste account as a multi-step approach. This would be clearer and more straightforward for answering a variety of policy questions. i.e.

Stage 1: Supply (generation) of primary waste (by industry, households, imports, recovered residuals) and use of primary waste (mainly - but not exclusively - ISIC 38) and exports and environment.

Stage 2: Supply and use of 'transformed' waste materials. That is, the supply of waste materials that have been processed or treated in some way and supplied back into the economy - can generally refer to as a waste product as the supplier will generally be receiving benefits for this product. Will mostly (but not exclusively) be the supply of secondary raw materials from ISIC 38 - but excludes manufactured new final products from secondary raw material - whether or not these are self-produced. These would simply be manufactured products rather than solid waste products.

The following are comments (and confirmation) relating specifically to the relevant paragraphs and Table 3.6.2. Would be good to see a more explicit link between the description in the paras and the table.

Para 221. Solid waste accounts are useful in organising information on the generation of waste and the management of flows of solid waste to recycling facilities, to controlled landfills or directly to the environment. Measures of the volume of waste in aggregate or of quantities of specific waste materials may be important indicators of environmental pressure. The construction of solid waste accounts allows these indicators to be placed in a broader context with economic data in both physical and monetary terms. Would like to see a section - or at least a reference to - monetary solid waste account with some compare/contrast to the physical tables.

Para 222 Spell out "EWC"

Para 223. The account highlights two key areas. First, the generation of waste of specific substances by industries and households. This solid waste must either flow directly to the environment or be collected or taken for treatment, storage or use within the economy. This section of physical use table represents "use of residuals"? The account assumes that the activity of treating, storing and using solid waste is undertaken by establishments within ISIC 38 "Waste collection, treatment and disposal activities" but it is noted that this activity may be undertaken by establishments for whom this activity is undertaken as a secondary activity or as own-account production. To aid interpretation, the activities within ISIC 38 may be broken down into Landfill, Incineration to generate energy, Other incineration activity and Recycling and reuse.

It is noted that the activity within ISIC 38 may often be undertaken by general government units.

SEEA 2003 specifically mentioned those industries involved in 'recycling' flows were 'recycling industries' (ISIC 37) and 'wholesale trade in waste and scrap' (ISIC 5149). Revised ISIC now effectively includes the old ISIC 37 in ISIC 3830 - Materials recovery (described as 'Recycling and reuse' here). But there is no explicit mention of materials recovery occurring in the wholesale trade as was mentioned previously - (now ISIC 4669 Wholesale of waste and scrap and other products n.e.c.). Is this intended to be covered by the statement "...it is noted that this activity may be undertaken by establishments for whom this activity is undertaken as a secondary activity..."? In this case, this would actually be the primary activity of some of these businesses, and therefore would legitimately be undertaking these activities as a primary activity but not belong to the Waste collection, treatment and disposal industry. If this is right, then perhaps Table 3.6.2 should better reflect this?

Also, our survey & research has shown that waste materials generated by a business may be directly provided to a "reprocessor" that recovers/reuses it, but is not part of ISIC 38. The extent to which this occurs could be significant & should also be reflected in Table 3.6.2 (or is that bottom section of use table?).

Para 224. Second, the account considers flows of solid waste that are products rather than residuals following the distinction described in Section 3.2. Second section in each of Physical supply & physical use tables? These flows of products may be recorded in two cases. In the first case the product is identified at the time of disposal of the solid waste by the generating (disposing) unit. It is a product because even though it is no longer of use to the generator, it is of value to another economic unit who is willing to both pay for the solid waste and also treat or reprocess the waste to use it in their production process. This would be included in second section of physical supply table - Transactions in solid waste - in the "Other industries" column, and also appear, and on the use side the second section - Transactions in solid waste - in the "Other industries" column? What about the purchase (& use) of waste 'products' by ISIC 38? - this is greyed out in Table 3.6.2 – though this definitely occurs in Australia. Second section in supply table - Transactions in solid waste - in recycling & reuse & incineration columns. These flows therefore do not permanently accumulate in landfill or return to the environment but re-enter the supply of products. In both cases, the supply of products from solid waste is shown as being used as either intermediate consumption of businesses or final consumption of households. Second section in use table - Transactions in solid waste - other industries & households. These flows are referred to in Table 3.6.2 as transactions in solid waste.

Para 83 - emissions to water exclude those materials not carried by normal flows. Total loads during flood events will far exceed base flows. This is crucial in the Australian context which is prone to extreme events.

The tables only quantify residuals during a specific period and do not account for accumulation of residuals from previous periods, or potential non-linear impacts. We recognise that the chapter acknowledges this point in para 92.