(A) Form of the asset accounts
is incomplete or terminology is not consistently used in a number of places, e.g.:
- Catastrophic losses are missing from the physical Table 5.5.3 but they are described in the text explaining the table (paragraph 189) and are included in its monetary counterpart Table 5.5.4. Either add catastrophic losses to both tables and to the text or remove in all places.
- Normal losses are called 'normal reductions in stock' in table 5.3.1 but 'Normal loss of stock' in Tab le 5.3.2. In both cases the term should be 'Normal losses' to align with the term "catastrophic losses". Use plural consistently.
- Natural growth for fish is defined in paragraph 370 as meaning the increase in size whereas recruitment is the growth in numbers of fish. This is inconsistent with the Table 5.9.2 where there is no recruitment shown. Need to align paragraph 370 and table 5.9.2.
- There seems to be inconsistency between showing Gross catch in tables 5.9.2/3 and para 387 "for asset accounts the concept of gross removals is most appropriate".

(B) Land classifications
are not properly worked out. The land use classification in Table 5.6.1 is a mix of land use and land cover classification. This is already clear from the wording where the names of some categories refer to use and others do not (e.g. inland waters are pure land cover). The mix of use and cover also becomes evident in confusing statements such as paragraph 240 that national parks can be in several categories of land use.

One reason for the confusion is probably that the whole section is implicitly based on one type of data source related to land (remote sensing - i.e. satellite images or aerial photographs). This source has to deduce the land use from the land cover thus mixing the two concepts. Other sources (land registries, ground observation) can provide data clearly separated into land use and land cover. Land accounting tables as described in the SEEA can be compiled from both kinds of sources. The SEEA text should not be based on the features of particular source data. The strengths and weaknesses of different sources should be reflected clearly in paragraph 229.

Eurostat promotes a clear separation between Land Cover and Land Use and suggests the following:

FOR LAND USE: Table 5.6.1 should be changed as follows:
Level 1:
- Agricultural, Forestry and Aquacultural use
- Land used for industrial and services production, infrastructure, residential and recreational purposes
…- Unused and abandoned areas
Level 2 for the first category should be renamed as follows:
- Agricultural use
- Forestry use
- Aquacultural use

The terminology in paragraph 238 and in Table 5.6.7 should be aligned accordingly.

FOR LAND COVER:

The text and classifications in Tables 5.6.2 and 5.6.3 include mixed classes of land cover. For example, Table 5.6.3 includes "Agricultural mosaics" or "artificial surfaces and associated areas". The latter seems to include e.g. urban parks.
Such categories are a reflection of the data source used and of the scale of resolution of this source but the text does not refer to scales at all. Explain the limitations that are introduced by scale effects in the text.
The text also does not explain what the difference is between "land cover" and "mappable land cover" nor what the purpose of the two types is for environmental accounting. See for example paragraph 252 which requests that countries establish tables for both land use and for the mappable land cover which then allows (paragraph 253) to show land use by land cover. This sets land cover equal to mappable land cover and is not clear.
Proposed solution:
Skip the discussion of mappable land cover (Paragraphs 246, 247) and delete Table 5.6.3. Delete paragraph 252. This text and the table may be used in the SEEA experimental accounts.

In the annex A5.3, the same problems as described above occur - land use is often defined by cover, e.g. under land use one can find "Forest", "land under permanent meadows and pastures", etc. Eurostat does not agree to the annex as it stands as it does not follow the concepts and accounting principles of the SEEA central framework. As such a detailed annex is not needed in the SEEA central framework anyway, we suggest deleting this annex.

(C) Detailed comments
Several paragraphs are somewhat unclear and require editing. A few illustrative examples are given below.
Paragraph 44 is unclear. It requires using information relating to the reference data. Such information will typically not be available. What is probably meant is that available information should be re-calculated such that it refers to the reference dates.
Paragraph 45 is about the physical flow of extracting resources and refers to the "activity of removing of environmental assets through processes of production". Suggest to delete 'activity of'.
Paragraph 46 (and already 43) categorically states that each asset will be measured in different measurement units and hence aggregation is not possible. However, several assets may be measured in the same units (e.g. tonnes) and even if not several can be aggregated, e.g. using a common energy unit. Suggest deleting this sentence from paragraph 46 and clarifying paragraph 43.
Paragraph 96 on valuing assets in situ rather than after their removal requires that 'care needs to be taken in using market based approaches'. This term 'market based approaches' is not explained and only used again in Chapter 5 in paragraphs 152-157 to mean NPV. The text needs to be made clearer with regard to what compilers would need to take care of.
Paragraph 143 requires compilers to ' …multiplying the rate of return on produced assets by an estimate of the value of the stock of relevant produced assets and adding an estimate of depreciation'. This text confuses the value of produced assets with a method to make at such an estimate (deducing consumption of fixed capital from the gross stock) and should be made clearer, especially the part on 'adding an estimate of depreciation'. What is meant is
Paragraph 306: the definition given is incomplete ("…at a minimum breast height (??) from the ground…..") and needs to be reworked.
Paragraph 311 and 312 and Tables 5.8.2 and 5.8.3: the term "other naturally regenerated forests" is used to denote one category of forest. However, the way the sentences are written leads to confusion, e.g. "…planted forests and other naturally regenerated forests…."

implies that planted forest is also naturally regenerated. Consider redrafting, e.g. reordering the terms.
Paragraph 325: make clear that a part of the felling residues are removed from the forest, i.e. this para should be about felling residues left in the forest.
Paragraph 332: replace 'natural timber resources' by 'non-cultivated timber resources for reasons of style.
Paragraph 354, Table 5.91 etc: the term 'cultured fish' is used in the text and tables as a synonym for 'cultivated'. In the SEEA the term 'cultivated' should be used as the standard term.
Paragraph 369 states that not being able to distinguish cultivated fish would provide useful information – need to clarify.
Paragraph 385 states that "In physical terms…….expenditure used to realise the harvest (e.g. in terms of fishing days multiplied by vessel power) should be recorded….". The term 'expenditure' here is used with a strange meaning – need to clarify.
Paragraph 392 states that for fish the reappraisals will be …"reflected in …other flows". Need to clarify that this means that no separate flows for reappraisals are recorded (note Table 5.9.3 has no entry for reappraisals).
Paragraph 440: refers to two primary reasons. It is not clear from the text which these two are. The text states that prices have tended to be based on the transport costs rather than the volume of water – not clear what the difference is – does this refer to fixed versus variable costs?
Paragraph 432: **Soil water** is an item that poses considerable difficulties, hence some general remarks: While the earth's vegetation typically depends on water from the soil to grow, the volume of soil water is very small as compared to surface and groundwater. The distribution of soil water is inhomogeneous in time and space, and in places with high groundwater tables the differentiation between soil water and groundwater may be difficult. At present it is not realistic to arrive at a reliable measurement, estimate or model result of the total soil water content for a large area. Therefore soil water is not routinely covered by water statistics. Most current scientific approaches rely locally on lysimeters or for larger scales on remote sensing but which can only determine soil moisture in the upper layer.
The definition in 432 does not clearly specify whether all soil water should be covered or only the fraction that is accessible to plants at a given point in time (root zone). In the latter case, the extent of the soil water zone will vary over the vegetation period and be also dependent on the crop, as the fraction of the soil water that can be taken up by the plant also depends on the species.
It should be possible to roughly calculate the amount of water used by crops from the respective harvest, but this is still not a proxy for the stock.
We suggest adding some text to make users of SEEA aware of the problems related to soil water. An additional paragraph could be inserted after 437 to explain the problem of defining the soil water stock. A warning should be added to paragraph 436. e.g. "… for soil water, it is unlikely to arrive at a reliable stock at all."
Paragraph 438 i: With subsurface irrigation techniques, water is also returned to the soil water. So the text should read "…water is returned to the environment into surface, **soil** and groundwater…"
Paragraph 438 ii: Depending on the properties of the soil and the intensity of precipitation, a fraction of the precipitation will be surface runoff and not infiltration into the soil column. For such cases (major flooding!), the second sentence of 438 ii is not correct.
Paragraph 439 i: The first sentence, as it stands, does not comply with agreed concepts in water statistics, as it excludes abstraction for other uses than consumption and production

activities. We suggest the following change: "Abstraction represents the amount of water removed from any source, either permanently or temporarily, during the accounting period. **The abstracted water may be directly returned or used, e.g.** for final consumption **or** production activities. Water used…"
Like for hydroelectric power generation, it should be recommended to identify separately also the water volumes used (abstracted + returned) for cooling purposes, as they constitute a considerable fraction of the total abstraction.
Paragraph 439 ii: Second but last sentence, add text at the end: "…determined by precipitation **and the soil's properties.**" (moisture content is also determined by the soil's pore structure and pore volume)
Last sentence: Replace "can only" by "**will typically**". (there are measurement methods)
Paragraph 441: states 'NPV …. generally do not work …. resource rent …. is commonly negative'. Need to clarify to what 'generally' and 'commonly' refers to here. The link to the previous paragraph is not clear enough.
Paragraph 442: The text should explain that the wrong choice of spatial scale may entrain misleading results, especially in regions/countries with high climatic diversity (e.g. Spain with a humid North-west but rather dry South-east where a high water demand for irrigation in intensive agriculture is observed.).
Paragraph 444: The text should explain that both the financial and the hydrological year may be inappropriate to well reflect water resource issues (and their economic consequences). This can be the case in regions with high seasonal variability where a mismatch between availability and demand in terms of time can be observed (e.g. some parts of the Mediterranean basin).