



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
 STATISTICS DIVISION  
 UNITED NATIONS

**SEEA Revision**

**SEEA Experimental  
 Ecosystem Accounting**

**Comment form**

## Comment form for the Consultation Draft

**Deadline for responses: 15 January, 2013**  
**Send responses to: [seea@un.org](mailto:seea@un.org)**

Your name:	Roy haines-Young
Your country/organization:	UK, University of Nottingham and on behalf of EEA
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To submit responses please save this document and send it as an attachment to the following e-mail address: [seea@un.org](mailto:seea@un.org).

The comment form has been designed to facilitate the analysis of comments.

In Part I general comments on the structure and content of the draft document are sought. In Part II any other comments, particularly those of a technical nature should be included.

### Relevant documents

Before submitting responses you are encouraged to read

*Cover Note to the Consultation Draft*

*SEEA Experimental Ecosystem Accounting – Consultation Draft*

### Part I: General comments

In the box below please supply any comments on the structure of the document, the balance of material and the coverage of the draft including any thoughts on missing content.

Comments on the style, tone, and readability of the text are also welcome.

**Please reference paragraphs numbers or section numbers as appropriate.**

Click here and start typing (The length of your response is not limited by this text box.)

These comments refer to Section 3.3 (the substantive section dealing with CICES)

The text below is the executive summary of a longer report based on the consultation we have led for the EEA between August and December 2012. It also reflects discussions with the EEA. The full classification and accompanying report is attached to this e-mail and can be downloaded from the CICES website: [www.cices.eu](http://www.cices.eu)

The full report should be quoted as: Haines-Yong, R. and Potschin, M. (2013): CICES V4.3 – Revised report prepared following consultation on CICES Version 4, August-December 2012. EEA Framework Contract No EEA/IEA/09/003

## Summary of Recommendations from Consultation on CICES, January 2013

*This paper is the executive summary of a longer report prepared by the University of Nottingham for the European Environment Agency. Copies can be downloaded at [www.cices.eu](http://www.cices.eu)*

1. We confirm the need to **frame the** Common International Classification of Ecosystem Services (**CICES**) **around human needs**, and recommend that CICES is regarded primarily as an attempt to describe ecosystem outputs as they directly affect human well-being, so that discussions about appropriate assessment frameworks (economic, social, aesthetic and moral) can take place.
  - We recommend that ecosystem outputs are regarded as things fundamentally dependent on living processes, and so abiotic outputs from nature are not described as an ecosystem service for the purposes of CICES.
2. While there has been some discussion about what constituted ‘**final services**’, the proposition that CICES should be confined initially to the ecosystem outputs directly consumed or used by a beneficiary was widely supported. **We recommend that this approach is maintained in the further development of the classification for accounting and other purposes.**
  - It should be recognised, however, that the CICES classification nevertheless provides a framework in which information about supporting or intermediate services can be nested and referenced, and this may be particularly useful in a mapping context.. We suggest therefore that CICES should be explored through the development of experimental accounts, especially in the context of using accounts to check the integrity of underlying ecological assets.
3. The consultations confirmed the importance of making a **clear distinction between final ecosystem services, ecosystem goods or products and ecosystem benefit**, and recommend the following definitions as the basis for CICES:
  - Final ecosystem services are the contributions that ecosystems make to human well-being. These services are final in that they are the outputs of ecosystems (whether natural, semi-natural or highly modified) that most directly affect the well-being of people. A fundamental characteristic is that they ***retain a connection to the underlying ecosystem functions, processes and structures that generate them.***
  - Ecosystem goods and benefits are things that people create or derive from final ecosystem services. These final outputs from ecosystems have been turned into products or experiences that are not functionally connected to the systems from which they were derived. Goods and benefits can be referred to collectively as ‘products’.

- Human well-being is that which arises from adequate access to the basic materials for a good life needed to sustain freedom of choice and action, health, good social relations and security. The state of well-being is dependent on the aggregated output of ecosystem goods and benefits, the provision of which can **change** the status of well-being.
4. To emphasise the contribution of the CICES services to human well-being, we recommend that **further work is done on cross-referencing these services to standard product and activity classifications**, and to classifications of beneficiaries to facilitate the valuation process and help identify the ways different types of capital combine to support human well-being. This recommendation does not have immediate consequences for the proposed structure of CICES but indicates the different roles that it might fulfil in enabling the translation between and integration of different assessment approaches.
  5. As an outcome of the CICES consultation, **we therefore propose a more comprehensive framing of the concept of ecosystem services than that implied by the SEEA2012**. We suggest that in the forthcoming work on experimental ecosystem accounts there is a focus on the nature of the production boundary and a discussion of the concept of ‘natural’ within the Central Framework so that convergence between the systems might be achieved. At this stage however, we recommend that the concept of ‘natural’ is not used to define the boundary of the classification but rather the notion of **connection between the services and the underpinning ecological structures and processes**. Services are connected to underlying ecological structures and processes, products and benefits are not.
  6. **On the basis of these findings we recommend modifying the structure of CICES at the 3-digit level as shown in Table 1. We also recommend, however, that CICES is presented in Volume II at the full, 4-digit level, because this better captures the richness of the material provided by the consultees. It will also make the testing of the classification more rigorous.** The full classification and the examples of services are provided in the attached spreadsheet.
  7. The hierarchical structure of CICES has been designed so that the categories at each level are non-overlapping and without redundancy. The categories at the lower levels also inherit the properties or characteristics of the levels above. As a result CICES can be regarded as a classification *sensu stricto*. We recommend the following definitional structure:
    - a. **Provisioning services:** all nutritional, material and energetic outputs from living systems. In the proposed structure a distinction is made between provisioning outputs arising from biological materials (biomass) and water. The consultation confirmed the classification of water as problematic, because it was regarded by some as primarily an abiotic, mineral output. The majority argued, however, that it should be included; convention and wider usage of the notion of an ecosystem services also suggests that it is appropriate to do so. In addition, water bodies of all scales host communities of species that provide ecosystem services themselves.
    - b. **Regulating and maintenance:** covers all the ways in which living organisms can mediate or moderate the ambient environment that affects human performance. It therefore covers the degradation of wastes and toxic substances by exploiting living processes; by reconnecting waste streams to living processes it is in this sense the opposite of provision. Regulation and maintenance also covers the mediation of flows in solids,

liquids and gases that affect people's performance as well as the ways living organisms can regulate the physico-chemical and biological environment of people.

- c. **Cultural Services:** covers all the non-material, and normally non-consumptive outputs of ecosystems that affect physical and mental states of people. The consultation suggested that this area was particularly problematic in terms of the different terminologies used by the wider community, which often does not make a distinction between services and benefits; the term recreation is, for example, particularly problematic in this respect. We also note that all services, whether they be provisioning or regulating can have a cultural dimension. However, it is valuable to retain the section for Cultural, and to make the category distinct.

**We recommend therefore that cultural services are primarily regarded as the physical settings, locations or situations that give rise to changes in the physical or mental states of people, and whose character are fundamentally dependent on living processes; they can involve individual species, habitats and whole ecosystems.** The settings can be semi-natural as well as natural settings (i.e. can include cultural landscapes) providing they are dependent on *in situ* living processes. In the classification we make the distinction between settings that support interactions that are used for physical activities such as hiking and angling, and intellectual or mental interactions involving analytical, symbolic and representational activities. Spiritual and religious settings are also recognised. The classification also covers the 'existence' and 'bequest' constructs that may arise from people's beliefs or understandings.

8. In the present structure of CICES we recommend that further details about the location and types of ecosystems are included by users at the class and class-type level. Thus it is at this level where users could identify whether a particular service is arising from a terrestrial, freshwater or marine ecosystem, for example, or in the case of cultural services whether the setting is a formal (designated) or informal (non-designated) species or location.
9. We note that our recommendation that CICES should be restricted to the outputs of ecosystems dependent on living processes is not supported by all members of the scientific community, who sometimes regard abiotic outputs as services. **In order to continue the dialogue and to account for human exploitation of other natural resources, we propose defining a separate but complementary classification that covers abiotic outputs. Both would retain the same underlying logic.**
  - Given that the experimental ecosystem accounts being developed through the System of Economic and Environmental Accounts (SEEA) process are mainly concerned with outputs dependent on living processes, the initial effort should be on the part of CICES that emphasises biodiversity, but the long term goal should be a combined classification that integrates outputs across ecosystems and from other natural resources.

Table 1: CICES V4.3 at the 'three digit level'

Section	Division	Group	
Provisioning	Nutrition	Biomass	
		Water	
	Materials	Biomass, Fibre	
		Water	
	Energy	Biomass-based energy sources	
		Mechanical energy	
Regulation & Maintenance	Mediation of waste, toxics and other nuisances	Mediation by biota	
		Mediation by ecosystems	
	Mediation of flows	Mass flows	
		Liquid flows	
		Gaseous / air flows	
	Maintenance of physical, chemical, biological conditions	Lifecycle maintenance, habitat and gene pool protection	
		Pest and disease control	
		Soil formation and composition	
		Water conditions	
		Atmospheric composition and climate regulation	
	Cultural	Physical and intellectual interactions with ecosystems and land-/seascapes [environmental settings]	Physical and experiential interactions
			Intellectual and representational interactions
Spiritual, symbolic and other interactions with ecosystems and land-/seascapes [environmental settings]		Spiritual and/or emblematic	
		Other cultural outputs	