

Civil-Public-Private-Partnerships (cp³):

collaborative governance approaches for policy innovation to enhance biodiversity and ecosystem services delivery in agricultural landscapes



Ecosystem service classification system

Milestone M.07

Authors:	Roy Remme
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List of abbreviations

cp³ = civil-public-private-partnerships

ES = Ecosystem services

1. Ecosystem service classification system

There are multiple ecosystem service (ES) classifications used in scientific literature, with the three most commonly used classification systems being those of the MA (2005), TEEB (2010) and the CICES (Common International Classification of Ecosystem Services, Haines-Young and Potschin, 2010). All three classification systems share three common ES categories: provisioning, regulating and cultural services. There are also differences between the classification systems. The MA includes the category 'supporting services', which are not included in the other two classification systems. The TEEB classification includes habitat services, which are excluded from the other classification systems. CICES is primarily targeted at supporting international ecosystem accounting efforts.

For the cp³ project the TEEB (2010) classification will be used. The categories and sub-categories of ecosystem services are shown in Table 1. The TEEB classification was chosen above the MA and CICES classifications because of the explicit inclusion of habitat services. The inclusion of habitat services in addition to provisioning, regulating and cultural services makes biodiversity visible within the ES concept, underlining its importance. The MA and CICES do not include habitat in the classifications, and therefore do not make explicit how biodiversity fits within the classification system.

Table 1: TEEB classification system ecosystem services, as applied for cp³. Source: TEEB (2010)

Categories	Sub-categories
Provisioning	Food Fresh water Raw materials Genetic resources Medicinal resources Ornamental resources
Regulating	Air quality regulation Climate regulation Moderation of extreme events Regulation of water flows Waste treatment Erosion prevention Soil fertility maintenance Pollination Biological control
Habitat/supporting	Habitats for migratory species (including nursery service) Maintenance of genetic diversity
Cultural	Aesthetic appreciation Recreation and tourism Inspiration for culture, art and design Spiritual experience and sense of place Information for cognitive development

2. Proposed use of three level classification system

In the cp³ project a three level classification system will be used (Table 2). The first level provides the general categories: provisioning, regulating, habitat and cultural services. The second level splits these ES into more specific sub-categories, such as 'food', 'climate regulation' and 'recreation and tourism'. The first two levels are constant and are used for all cp³ case studies.

The third level provides the specific ES that are found in a specific case study. The specific ES within each sub-category vary between case studies, depending on the products and services that are being provided in an area. For example, in Berg en Dal, the sub-category 'food' can contain the specific ES 'grapes' (ES 1), 'game meat' (ES 2) and 'fish' (ES 3), while this sub-category may contain 'arable crops' (ES 1), 'game meat' (ES 2) and 'mushrooms' (ES 3) in Spreewald. For each case study an ES assessment will be done to develop a list of specific ES. These lists will be used for further assessment and quantification of ES per region.

Table 2: Template for three level classification system ecosystem services for the cp³ project. The number of specific services may vary per case study area. Based on TEEB (2010).

Categories	Sub-categories	Specific services	
Provisioning	Food	ES 1	
		ES 2	
		ES 3	
	Fresh water	ES 4	
		ES 5	
	Raw materials	ES 6	
		ES 7	
	Genetic resources	ES 8	
		Medicinal resources	ES 9
		Ornamental resources	ES 10
Regulating	Air quality regulation	ES 11	
		ES 12	
	Climate regulation	ES 13	
		ES 14	
	Moderation of extreme events	ES 15	
	Regulation of water flows	ES 16	
		ES 17	
	Waste treatment	ES 18	
	Erosion prevention	ES 19	
	Soil fertility maintenance	ES 20	
Pollination	ES 21		
Biological control	ES 22		
Habitat/supporting	Habitats for migratory species (including nursery service)	ES 23	
	Maintenance of genetic diversity	ES 24	
Cultural	Aesthetic appreciation	ES 25	
	Recreation and tourism	ES 26	
		ES 27	
	Inspiration for culture, art and design	ES 28	
	Spiritual experience and sense of place	ES 29	
	Information for cognitive development	ES 30	


3. References


Haines-Young, R., Potschin, M., 2010. Proposal for a Common International Classification of Ecosystem Goods and Services (CICES) for Integrated Environmental and Economic Accounting. University of Nottingham, Nottingham, United Kingdom.

MA, 2005. Ecosystems and Human Well-Being: Synthesis report. Island Press, Washington DC, USA.

TEEB, 2010. The Economics of Ecosystems and Biodiversity: ecological and economic foundations. Earthscan, London and Washington.

Impressum

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 has three project partners:



Leibniz-Centre of Agricultural Landscape Research (ZALF)



Organisation for International Dialogue and Conflict Management (IDC)



Wageningen University, Department of Environmental Sciences (WUR)

Contact info project coordination:

Leibniz-Centre for Agricultural Landscape Research (ZALF)
 Eberswalder Strasse 84 |
 15374 Müncheberg | Germany
 E: cp3@zalf.de | W: www.cp3-project.eu