



Ecosystem Service	Education and training interactions with nature
CICES class name	Characteristics of living systems that enable education and training
CICES Section	Cultural (Biotic)
CICES Class code	3.1.2.2

Brief Description

- Teaching nature
- The biophysical characteristics or qualities of species or ecosystems (settings/cultural spaces) that are the subject matter for in situ teaching or skill development

Sample Indicators

Indicator values from			
Experiment or direct measurement		Survey	
Expert assessment		Statistical- or census data	
Model or GIS		Literature values	
Stakeholder participation		Not provided	

Table 1: Farm Scale

Indicator	Unit	Indicator values from
^[1] Four-level index based on the provision of walking trails/ecotourism/environmental education	Index poor-fair-good-excellent	

Table 2: Regional Scale

Indicator	Unit	Indicator values from
^[2] Number of educative panels in the area	#	
^[4] Number of environmental-education related facilities	# * ha ⁻¹	
^[3] Spatial mapping by stakeholders: stakeholders could place green stickers on a map to mark the supply hotspots of this ecosystem service. Red stickers were used to mark locations where the supply of this service is declining. Two different sizes of stickers were used to represent a radius of 0.75 km or 1 km, respectively.	Index 0-5	



^[6] For services that can be monetized: value of cultural services	USD / km ² * year	⊘
^[6] For services that can not be monetized: qualitative value assessment using Likert-scales	-	⊘

Table 3: National Scale

Indicator	Unit	Indicator values from
^[5] Number of didactic farms	#	⊘



References

No.	Citation
1	Fleming WM, Rivera JA, Miller A, Piccarello M (2014) Ecosystem services of traditional irrigation systems in northern New Mexico, USA. <i>International Journal of Biodiversity Science, Ecosystem Services and Management</i> 10(4): 343-350. DOI: 10.1080/21513732.2014.977953
2	Felipe-Lucia MR, Comin FA (2015) Ecosystem services-biodiversity relationships depend on land use type in floodplain agroecosystems. <i>Land Use Policy</i> 46: 201-210. DOI: 10.1016/j.landusepol.2015.02.003
3	Palomo I, Martin-Lopez B, Zorrilla-Miras P, Del Amo DG, Montes C (2014) Deliberative mapping of ecosystem services within and around Donana National Park (SW Spain) in relation to land use change. <i>Regional Environmental Change</i> 14(1): 237-251. DOI: 10.1007/s10113-013-0488-5
4 ²⁰ *	Pham HV, Torresan S, Critto A, Marcomini A (2019) Alteration of freshwater ecosystem services under global change - A review focusing on the Po River basin (Italy) and the Red River basin (Vietnam). <i>Science of the Total Environment</i> 652: 1347-1365. DOI: 10.1016/j.scitotenv.2018.10.303
5	Maes J, Liqueste C, Teller A, Erhard M, Paracchini ML, Barredo JI, Grizzetti B, Cardoso A, Somma F, Petersen JE, Meiner A, Gelabert ER, Zal N, Kristensen P, Bastrup-Birk A, Biala K, Piroddi C, Egoh B, Degeorges P, Fiorina C, Santos-Martín F, Naruševičius V, Verboven J, Pereira HM, Bengtsson J, Gocheva K, Marta-Pedroso C, Snäll T, Estreguil C, San-Miguel-Ayanz J, Pérez-Soba M, Grêt-Regamey A, Lillebø AI, Malak DA, Condé S, Moen J, Czúcz B, Drakou EG, Zulian G, Lavalle C (2016) An indicator framework for assessing ecosystem services in support of the EU Biodiversity Strategy to 2020. <i>Ecosystem Services</i> 17: 14-23. DOI: 10.1016/j.ecoser.2015.10.023
6	Gasparatos A, Romeu-Dalmau C, von Maltitz GP, Johnson FX, Shackleton C, Jarzebski MP, Jumbe C, Ochieng C, Mudombi S, Nyambane A, Willis K (2018) Mechanisms and indicators for assessing the impact of biofuel feedstock production on ecosystem services. <i>Biomass & Bioenergy</i> 114: 157-173. DOI: 10.1016/j.biombioe.2018.01.024

^{20*} The impact area discussed on this factsheet is not a focus of the cited paper