

Ecosystem Service	Symbolic meaning of nature
CICES class name	Elements of living systems that have symbolic meaning
CICES Section	Cultural (Biotic)
CICES Class code	3.2.1.1

Brief Description

- Using nature as a national or local emblem
- The biophysical characteristics or qualities of species or ecosystems that are recognized by people for their cultural, historical or iconic character and which are used as emblems or signifiers or some kind (e.g. national animals or flowers, Sherwood Forest)

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: Regional Scale

Indicator	Unit	Indicator values from
^[1] 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	
^[2] Willingness to pay (WTP) for landscape preservation, considering likely landscape changes	€	
^[2] Average travel cost of tourists	€ * yr ⁻¹	



[4] Inspiration, spiritual and religious values: Participatory mapping. Respondents in an online survey mark on a map the areas in their region where different cultural ecosystem services are supplied. Then, the proportion of markings in each of the investigated land cover classes is calculated. After that, values are calculated for subregions. The proportions are multiplied with the area extent of the respective land cover classes in the sub-region, and results for all land cover classes are summed up.	ha	
[5] Number of spiritual facilities per landscape	# * ha ⁻¹	
[6] Qualitative value assessment using Likert-scales	-	

Table 2: National Scale

Indicator	Unit	Indicator values from
[3] Symbolic species	Not specified	

References

No.	Citation
1	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
2	van Berkel DB, Verburg PH (2014) Spatial quantification and valuation of cultural ecosystem services in an agricultural landscape. <i>Ecological Indicators</i> 37: 163-174. DOI: 10.1016/j.ecolind.2012.06.025
3	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
4	Jaligot R, Chenal J, Bosch M, Hasler S (2019) Historical dynamics of ecosystem services and land management policies in Switzerland. <i>Ecological Indicators</i> 101: 81-90. DOI: 10.1016/j.ecolind.2019.01.007
5 ²² *	Phama 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
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

²²* The impact area discussed on this factsheet is not a focus of the cited paper



No.	Citation
	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