A bottom-up practitioner-derived set of Essential Variables for Protected Area management.

Supplement B: EcoPotential WP9, part B – third survey form - 2017

ECOPOTENTIAL

Improving future ecosystem benefits through Earth Observations

Questionnaire for Work Package 9, on requirements of protected areas

Date	
Name of the represented Protected Area (PA)	

Questionnaire structure:

PART A: Protection measures, governance and management	Error! Bookmark not defined.
PART B: Environment	2
PART C: Economic development	
PART D: Social and cultural development	Error! Bookmark not defined.
PART E: What does your PA need from EcoPotential?	Error! Bookmark not defined.
PART F: Information on citizen science in the PA	Error! Bookmark not defined.

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You can indicate the following options:

Questionnaire respondents							Data can be used by third parties			
	the answers to the survey and appearance of personal name in the		General data (authorise the use of the data but stay anonymous)		Personal data		General data			
	Yes No		Yes	No	Yes	No	Yes	No		

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PART B: Environment

B.1. Most important Ecosystem Functions and Ecosystem Structures

Can you indicate the most important Ecosystem Functions and Ecosystem Structures that play a role in your PA:

Ecosystem	Specify (if possible)	Import	ance								
Structure or Function		Very high	High	Average / moderate	Small	Very small	Not present / not mentioned				
Biodiversity	Status, Changes, Endemism, protected species										
Carbon cycle	Storage, Sequestration										
Climate regulation	Change of microclimate										
Element cycling	Biogeochemical cycling, Hydro-geo-eco processes										
Food chain energy transfer	Energy flow										
Gene pool	Genetic resources										
Habitat suitability	Habitat availability, Feeding and breeding grounds, Ecotypes										
Hydrodynamics	Currents, Water flow, Water regulation and retention										
Land- and sea- scape	UNESCO World Heritage										
Nutrient regulation											
Population dynamics	Recruitment, Seed dispersal, Reproduction, Pollination, Succession, Resilience, Grazing, Predation, Species distribution										
Primary production											
Raw materials	Sand, Pebbles, Amber										
Secondary production											
Sediment characteristics	Soil composition, structure and formation, sediment transport, erosion										
Weather	Temperature, Evaporation										
Water surface characteristics	Albedo										

* Examples of Ecosystem functions and structures are: Biodiversity, Carbon cycling, Nutrient dynamics, Climate regulation, Element cycling, Food chain energy transfer, Gene pool, Habitat (heterogeneity, suitability), Primary production (plants), Secondary production (animals), Population dynamics (density or growth of trees, recruitment of animals, flowering), Raw materials, Sediment characteristics, Salinity, Water dynamics

B.2. Most important Ecosystem Services

Can you indicate the most important Ecosystem Services that play a role in your PA, and what the benefits are:

Ecosystem Service	Specify the ES (and its Importance								
	benefit) if possible	Very high	High	Average / moderate	Small	Very small	Not present / not mentioned		
Animals of economic use	Aquaculture, Bait, Beekeeping, Cattle, Fishing, Shellfish								
Biodiversity conservation	Protection of species, habitat and genetic resources								
Charismatic landscape	Aesthetic values, Cultural heritage, Iconic landscapes								
Charismatic species									
Climate regulation	incl. Carbon sequestration								
Education and research									
Energy production	Hydropower, Wind farms, Geothermic water								
Fire Protection	Wildfire regulation								
Flood and coastal protection	Flood and erosion protection, Coastal protection								
Food provision for animals	Grazing, Fodder								
Food provision for humans	Food collection								
Habitat for feeding and breeding									
Hunting	Selling licenses								
Hydrological regulation	Water flow maintenance								
Leisure activities	Recreation and tourism, Birdwatching								
Materials of economic use	Mining, Salt, Amber extraction								
Plants of economic use	Agriculture, Cork, Fruits, Timber, Mushrooms, Berries								

Pollination	Seed dispersal			
Prevention of erosion				
Raw materials	Sand, gravel, shell extraction			
Sedimentological regulation	Maintenance of soil fertility, Soil formation			
Spiritual significance				
Transport facilitation	Shipping lanes			
Waste and Toxicant mediation	Denitrification, Wastewater treatment, Nutrient regulation, Pest and disease control			
Water regulation	Fresh water, Water storage, Supply of drinking water			

^{*} Examples of Ecosystem Services are: Aesthetic qualities: Animals of economic use (cattle, fish aquaculture of oysters), Biodiversity conservation, Charismatic landscape, Charismatic species, Climate regulation, Education and research, Energy production, Fire Protection, Flood and coastal protection, Food provision for animals, Food provision for humans, Habitat for feeding and breeding (for fish or birds), Hunting, Hydrological regulation, Leisure activities, Materials of economic use (mining, salt), Plants of economic use (timber, fruits, grain), Pollination, Prevention of erosion, Raw materials (sand, gravel, shells), Resilience, Sedimentological regulation (soil protection, land incrementation), Spiritual significance, Transport facilitation, Waste and Toxicant mediation, Water regulation (fresh water storage)

B.3. Most important pressures

Can you indicate the most important pressures in your PA, that can form a threat to the afore mentioned Ecosystem Functions and Structures (question B1) or to the Ecosystem Services (question B2):

Pressure	Specify the pressure (if	Import	ance						
	possible)	Very high	High	Average / moderate	Small	Very small	Not present / not mentioned		
(Illegal) human activities	Poaching, Picking of plants, Illegal logging, Illegal fisheries								
Agriculture									
Bad management	Inappropriate water management								
Change in land use	Abandonment of farming, Decrease of crops, Urbanisation, Harbour Extension								
Change in species	Species loss, Successional stagnation, Aging of wild stocks, Food competition with cultured species, Prey decline								
Civil engineering	Increased number of dams								
Climate change	Change in precipitation or snow cover, Droughts, Sea level rise, Global Warming								
Diseases	Pests								
Disturbance	Anthropogenic disturbance, Off-road vehicles, Transport								
Encroachment									
Eutrophication	Hypertrophic conditions								
Exotic species	Invading species								
Extreme weather	Storm surges								
Fire									
Fisheries	Bycatch in gill nets								
Habitat loss	Habitat fragmentation, Loss of connectivity, Forest decay, Reduction of salt-marshes								
Harmfull Algae	Algal blooms								
Hydrological changes	Deepening shipping lanes, Hydraulic modification, Increased turbidity,								

	Increased wave action, Ground-water extraction			
Increased salinisation				
Landscape disturbance	Visual ruining, Gas platforms			
Overexploitation	Intensive agriculture, Overfishing, Too high tourist density			
Pollution	Pesticides, Atmospheric Pollution, Sonar and sound pollution			
Predation	Incl by exotic species as rats and cats			
Sediment dynamics changes	Avalanches, Erosion, Embankments within wetlands, Dredging, Siltation			
Tourism	Recreational activities			

^{*} Examples of Pressures/Threats are: (Illegal) human activities, Agriculture, Bad management, Change in land use, Change in species, Civil engineering, Climate change, Diseases, Disturbance, Encroachment, Eutrophication, Exotic species, Fire, Fisheries, Habitat loss, Harmful Algae, Hydrological changes, Increased salinisation, Industry, Landscape disturbance, Local policy and politics, Overexploitation, Pollution, Predation, Sediment dynamics changes, Tourism