Ecosystem Services – Exercise

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A SYSTEM APPROACH FRAMEWORK FOR COASTAL RESEARCH & MANAGEMENT

BONUS-BaltCoast received funding from BONUS (Art 185), funded jointly by the EU and Baltic Sea national funding institutions

Ecosystem Services – Exercise

Objectives:

- Assess the impact of different management scenarios in the provision of ecosystem services
- Communicate the results to general public

General description:

- Group work: 2 groups of 12 people (same groups as previous exercises)
- Tasks:
  - Assess the impact of each scenario in the provision of ES
  - Communicate which scenario would be the best fitting for the management and development plans
  - Pros and Cons about the exercise
- Time: 1.5h – 1h assessment + 0.5h preparation of presentation using PPT

Ecosystem Services – Exercise

Neringa Municipality Stakeholder Meeting – 25/08/2017

Background:

- Neringa Municipality is located in the UNESCO Heritage site Curonian Spit and Lithuanian National Park
- Main economic activity is tourism, which is being affected (on the lagoon side) by environmental problems (eutrophication and *E. coli* contamination and low water transparency)
- The Municipality wants to look at possible future management options to overcome these problems, having in mind the Nature preservation and conservation

Ecosystem Services – Exercise

– On the table there are three different hypothetical measures/scenarios:

Scenario 1

Macrophyte Stands

Scenario 2

Mussel Farm

Scenario 3

Infrastructure & advertisement

Ecosystem Services – Exercise

- Neringa Municipality wanted to have an holistic perspective about the impacts (positive and negative) of each scenario. Therefore they invited experts from different fields to join the meeting

- You were one of the selected experts your task will be to contribute with your knowledge about the impacts of the different scenarios on ecosystem services provision

- The municipality appointed a Moderator to guide afterwards discussion and finally communicate the results of the assessment

Ecosystem Services – Exercise

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Ecosystem Services – Exercise

Class	Indicator
Wild plants, algae and their outputs	Harvest
Wild animals and their outputs	Landings
Animals from in situ aquaculture	Harvest
Plants and algae from in situ aquaculture	Harvest
Surface water for drinking purposes	Use of Water
Fibres and other materials from plants, algae and animals for direct use or processing	Harvest
Materials from plants, algae and animals for agriculture	Harvest
Surface Water for non-drinking purposes	Use of Water

Class	Indicator
Experiential use of plants, animals and land-/seascapes in different environmental settings	nº of visitors taking part in activities related to biota
Physical use of land-/seascapes in different environmental settings	Nº of tourists (within 1 km of coastal zone)
	Nº of Tourist Boat
Scientific and Educational	Scientific studies, Documentaries, educational publications
Entertainment	Nº of movies and broadcasts in the area
Aesthetic	Nº of pictures
Bequest	Extent of marine protected areas

Class	Indicator
Filtration/sequestration/storage/accumulation by ecosystems	N-fixation
	Denitrification
Dilution by atmosphere, freshwater and marine ecosystems	Average of beach closures per year
Mass stabilisation and control of erosion rates	Extent of selected emerged, submerged and intertidal habitats
Buffering and attenuation of mass flows	Sediment accumulation rate
Flood Protection	Shoreline erosion rate
Maintaining nursery populations and habitats	Submerged and intertidal habitats diversity
	Occurrence of Oxygen concentration < 6 mg/L
	Secchi depth
	Nursery areas
Pest and Disease control	Harmful Algal Bloom Outbreaks
	Presence of alien species
Decomposition and fixing processes	Nitrogen removal
	Water residence time
Chemical condition of salt waters	Nutrients concentration
	Salinity
	pH
Global climate regulation by reduction of greenhouse gas concentrations	PP

Ecosystem Services – Exercise

-5	Very high negative enhancement
-4	High negative enhancement
-3	Medium negative enhancement
-2	Considerable negative enhancement
-1	Slight negative enhancement
0	No enhancement
1	Slight positive enhancement
2	Considerable positive enhancement
3	Medium positive enhancement
4	High positive enhancement
5	Very high positive enhancement

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Thank you and good luck!

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