

Mapping of ecosystem services

Introduction

The ecosystem is a multipurpose, coherent part of nature. Examples are forest, pasture, meadow, lake, wetland, pond, field, and part of the river flow with surrounding vegetation. The size of ecosystems is not specified, so an ecosystem may be a small forest, or spacious rainforest as well. Ecosystems give us various benefits in the form of goods and services, such as food, water, wood, air purification, soil formation and pollination. However, human activity alters the ability of ecosystems to provide us with such services. In the past, the importance of ecosystems has often been ignored. Mostly, they were considered as public property and thus not sufficiently appreciated. Currently we are witnessing the loss of some of the services and their replacement with costly alternatives. An example is a forest that formed clouds and rainfall. When we cut down the forest, the soil began to dry out and we had to invest in irrigation equipment. A better way is to understand the economic value of ecosystem goods and services and to invest more in ecosystems, which will also save our resources in the long term.

Learn about the problem

Use the internet, (scientific / popular) literature or in collaboration with experts to find available information on ecosystem services. Also focus on the following questions:

- What ecosystems are in your area?
- What services these ecosystems provide?
- Do you think that you also use some of these ecosystem services?
- Which ecosystems are endangered in your country/region? Explain why and localise them on the map.
- Do you think that humanity uses ecosystems sustainably?

Recommended resources

[Source 1:](#)

A beginner's guide to ecosystem services



[Source 2:](#)

Ecosystem services



[Source 3:](#)

Fragmentation of natural and semi-natural areas



Verify the occurrence of a problem in your area with your own research

Goal

Students can identify ecosystems in their surroundings and interpret the concept of ecosystem services. At the same time, they can name and assign basic services and goods that we get from ecosystems. Students are aware of the need for sustainable use of natural resources.

Tools & Materials

- online maps (e.g. Google maps) or territory map
- recording card
- a list of ecosystem services (link is in recording card)
- mobile phone (with internet connection) or GPS device
- a board / flipchart / tablet or similar
- camera / mobile to record activity

Implementation

Use the online maps to explore the allocated territory and try to identify the ecosystems that are located there (park, meadow, field, creek, pond, etc.). Choose the ecosystems you visit. Adjust the number of chosen ecosystems to the number of people involved and the time you can devote to this activity. Alternatively, assign the individual ecosystems to particular members of your group. Then print the map of the selected territory. Printed maps should be large enough to allow you to navigate and record the necessary information (e.g. ecosystem boundaries, taking notes).

Mapping process

Take the printed territory map, recording card, list of ecosystem services, mobile phone with internet access or GPS device and camera to the field. Visit selected ecosystems and write down the necessary information on the recording card. We recommend that you mark the ecosystem boundary in the map and enter the selected code (e.g. M1 as meadow #1) inside it to distinguish ecosystems from each other. Also make photo documentation in the field to support the information recorded. Include current positive and negative human interventions that affect the number and sustainability of ecosystem services (column “Notes”).

Analysis of results and proposal of solution

What types of ecosystems and ecosystem services have you identified? Which ecosystems were the largest? Which ecosystems are most at risk and why? Can you propose measures to help protect ecosystems or promote sustainability of services provided? Are there ways to increase the number of ecosystems, or to increase the number of services provided? Write down your ideas and select the ones you can implement.

Implementation of the solution and evaluation

Did you implement the selected solution? If so, what result did you get? Did you, your school, family or community help with implementation of the solution? How did they react to your initiative? Have you managed to increase the number of ecosystems or ecosystem services provided, or to support the sustainability of those existing? Do you think there is a better / more effective solution for the problem?

How did you feel after implementing the selected solution?

Frustrated	Disappointed	Rather Negative	Neutral	Rather Positive	Satisfied	Enthusiastic
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Publicity

Record and share photos on social networks with [#mybioprofile](#) during the activity. Help others to join us.

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