

Indicators of Ecosystems Services

by

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Definition: „*Ecosystem services*“ (ESS) are related to the benefits that humans can get from ecosystems and „*Ecosystem functions*“ (ESF) refer more to the natural processes and their resilience and integrity. But there is not clear distinction between ecosystem functions and ecosystem services.

Ecosystem services and Ecosystem functions have been used for a long time ago and they are mostly heavily and sometimes even irrecoverably impacted.

Ecosystem functions can be divided into:

- A/ Natural
 - habitat (support of biological processes)
 - regulation of energy and matter cycles (soil protection, water storage,)

- B/ Cultural
 - wood production
 - non-timber products (collecting herbs, mushrooms, hunting, ...)
 - water resource provision
 - recreation
 - education

Ecosystem services can be divided into:

- A/ Supporting – more connected to ecosystem functions
- B/ Provisioning – food, freshwater, wood and fiber, fuel, gas, ...
- C/ Regulating – climate regulation, flood regulation, land slice regulation, fire regulation, diseases regulation, ...
- D/ Cultural – aesthetic, spiritual, educational, recreational

Indicators:

Should be a **quantitative variable** → give information on the system's actual status;
a **combined or aggregated measure** → integrate over very many such indicator observations.

Relationship between functions, services and indicators is very complex and difficult. Sometime more ecosystem functions can provide more services and can be described by many indicators. There is challenge to develop common indicator frameworks because they can vary in time and spatial scales.

