

Transboundary Water Issues in a Macro-regional Context: the Danube Basin Danube Strategy, Pillar: Protecting the Environment

Joint Stakeholder Conference



**Translate ecosystem services
into social benefits**

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Ecosystem services (ESS):

Humankind goods and benefits that are supplied by ecosystems

UN Millenium Ecosystem Assessment (2001 – 2005)– Concept, structure

Millennium Ecosystem Assessment

Focus: Consequences of Ecosystem Change for Human Well-being



Security

Basic material for good life

Health

Good social relations

Freedom of choice and action

Supporting

Provisioning

Regulating

Cultural

The dilemma:



History?

Overview?

Some details?

Research, case studies, good practices

There are some important conclusions:

More retained water involves better agricultural production or smaller floods

Buffer zone along the river reduces diffuse pollution

Wetlands or floodplains may contribute to healthy drinking water supply

Forests can clean air and runoff

Pollination by healthy population of insects

Where possible, ESS are **more cost-effective** than technical solutions.

ESS highly depend on the **state of the ecosystem**

Results are sometimes too general, but mainly quantified ...still....

**Results are hardly to be applied generally
due to special local circumstances and conditions – scale dependence**

Research, case studies, good practices

Research is still needed for:

quantifying the relationship between the state of the ecosystem and its impact on the resources (amount and/or quality) -

clarifying economic issues:

to estimate the value of the ESS for human purpose/benefit?

to include „external” costs related to the protection of ecosystem in the economic assessment?

to „pay” for ESS?

= compensatory schemes, cooperative agreements

different markets, biodiversity credits,

cost of replaced technology: „Polluter pays” to „Beneficiary pays”

....

However, not all ES can be monetized, some of them should be managed/protected in a non-market based manner

Research, case studies, good practices

Large projects:

The Economics of Ecosystems and Biodiversity (TEEB) of UNEP, (2010)

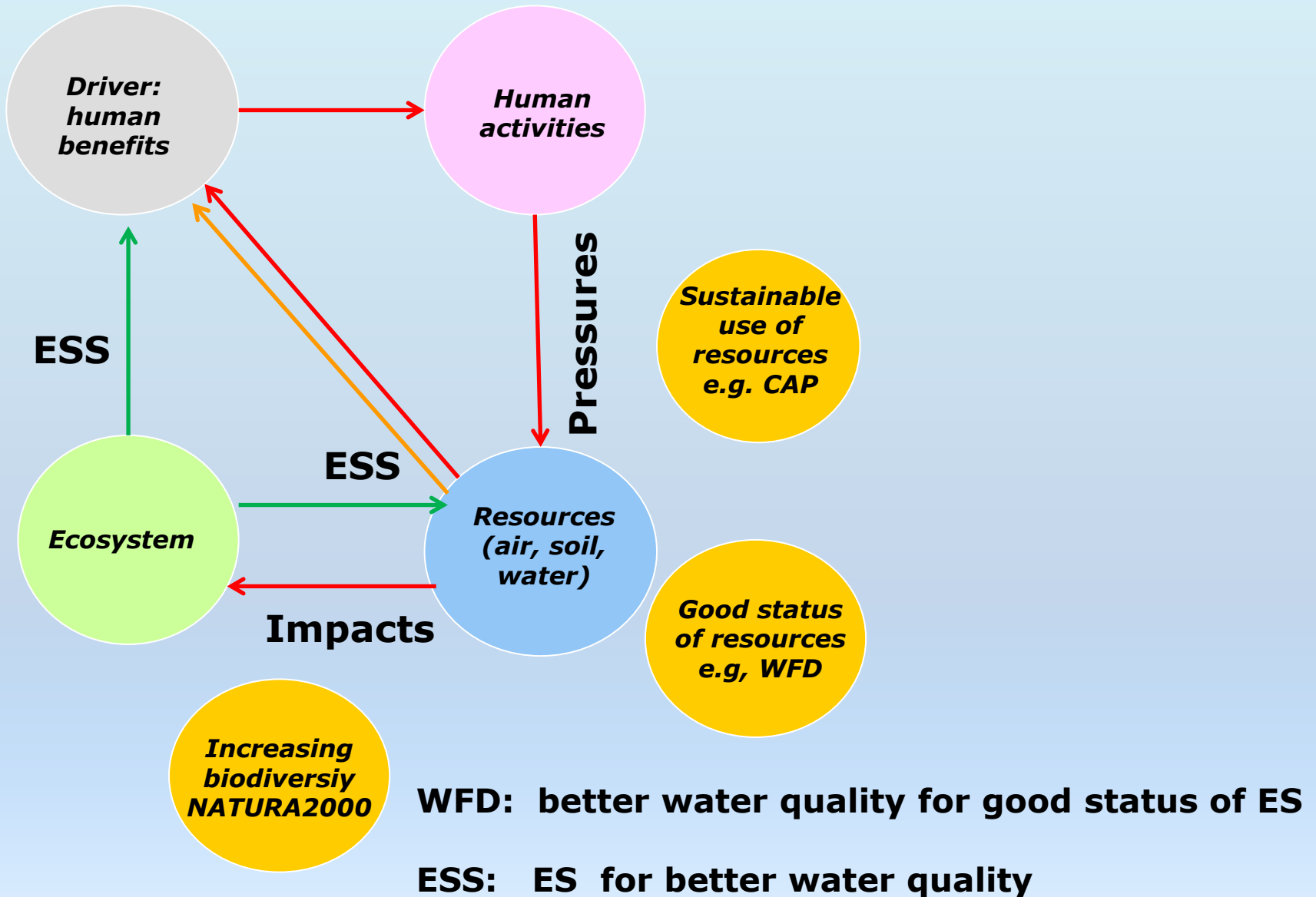
Partnership for European Environmental Research (PEER) of JRC, (2012)

Knowledge Network for EUropean expertise on biodiversity and ecosystem services (KNEU) , 2012 -

**Improved knowledge, mapping, assessment and valuation of ESS
are necessary but not sufficient**

**How to include ESS into
assessment, policy, decision making, planning?**

Integration of ESS in environmental assessment



Large scale policies and strategies

United Nations:

Convention of Biodiversity (CBD)

Concept of ESS is integrated in the current CBD Strategic Plan

To improve the knowledge on ESS is a relevant target of the Strategic Plan of the CBD

A better understanding of the links between biodiversity and ecosystem functions

Large scale policies and strategies

EU, Directives

The EU Habitat Directive

is focusing on the nature conservation areas.

Measures aim to restore injured ecosystems and to protect those in good status

The Water Framework Directive

appropriate functioning of the ecosystems is one of its main objectives

Measures are for assuring good status of water – convenient for ES.

Large scale policies and strategies

EU Strategies:

EU Biodiversity Strategy to 2020 (2011) integrates the sustainable use of ESS

the Council of the EU wants to integrate the relevant targets of the CBD Strategic Plan into all relevant EU sectors.

Blueprint to Safeguard Europe's Water Resources (2012)

considers ESS as one of the pillars of the assessment of impacts

In EU's Common Agricultural Policy (2011) restoring and preserving ESS is one of six priorities. Greening the CAP would improve water quality and increase the benefits to society

EU Strategy for the Danube Region considers the preservation ESS among the priorities

Role of ESS has to be reflected in the **2014-2021 financial period** at EU and national level, securing public funds as well.

(Fiscal reform : incentives, tax breaks and fiscal transfers??)

Large scale policies and strategies

EU Strategy for the Danube Region

Inside the pillar B *„Protecting the Environment in the Danube Region“*

4) To restore and maintain the quality of water

Emphasises the relation between ES and good quality of water

Buffer zones and enhancement of green farming

6) To preserve biodiversity, landscapes and the quality of air and soils

To contribute to the EU target on biodiversity until 2020.

To manage Natura 2000 sites and restore valuable ES

Green corridors

Education

Synergy and integration

Regarding ESS, many policies - together - create a complex and still only partly understood mixture of targets.

Including the ESS concept at lower level would lead to extended practical application for real social benefit, e.g. in

- **sectorial policies**
- **impact assessments for new legislation**
- **development of policies and development plans at national, regional and local level**
- **environmental impact assesment of investment/projects (e.g. transport, energy, mining, agriculture, fisheries, forestry)**

Continous monitoring of the process in order to be able to react and adapt the policy according to the practices and emerging problems.

Synergy and integration

Beside policies and strategies:

**Basic research:
Mapping, relationships,
economic instruments
e.g. PEER, KNEU**

**International projects
focusing on specific issues,
including assessment of ESS
e.g. CC-WARE**

**Local, regional projects
with specific local goal,
ESS is part of the EIA
e.g. flood protection, rural
development, waste water**

**A broad collaboration of all stakeholders involved,
(researchers, policy makers, stakeholder groups, consultants, citizens)

in an integrated ecosystem services approach**



Thank you for your attention