



forum '14  
alpinum

Plenary Session 3: Governance of Alpine resources

Regional governance of alpine environmental resources –  
perspectives  
and a capitalisation approach for sustainable spatial  
development projects

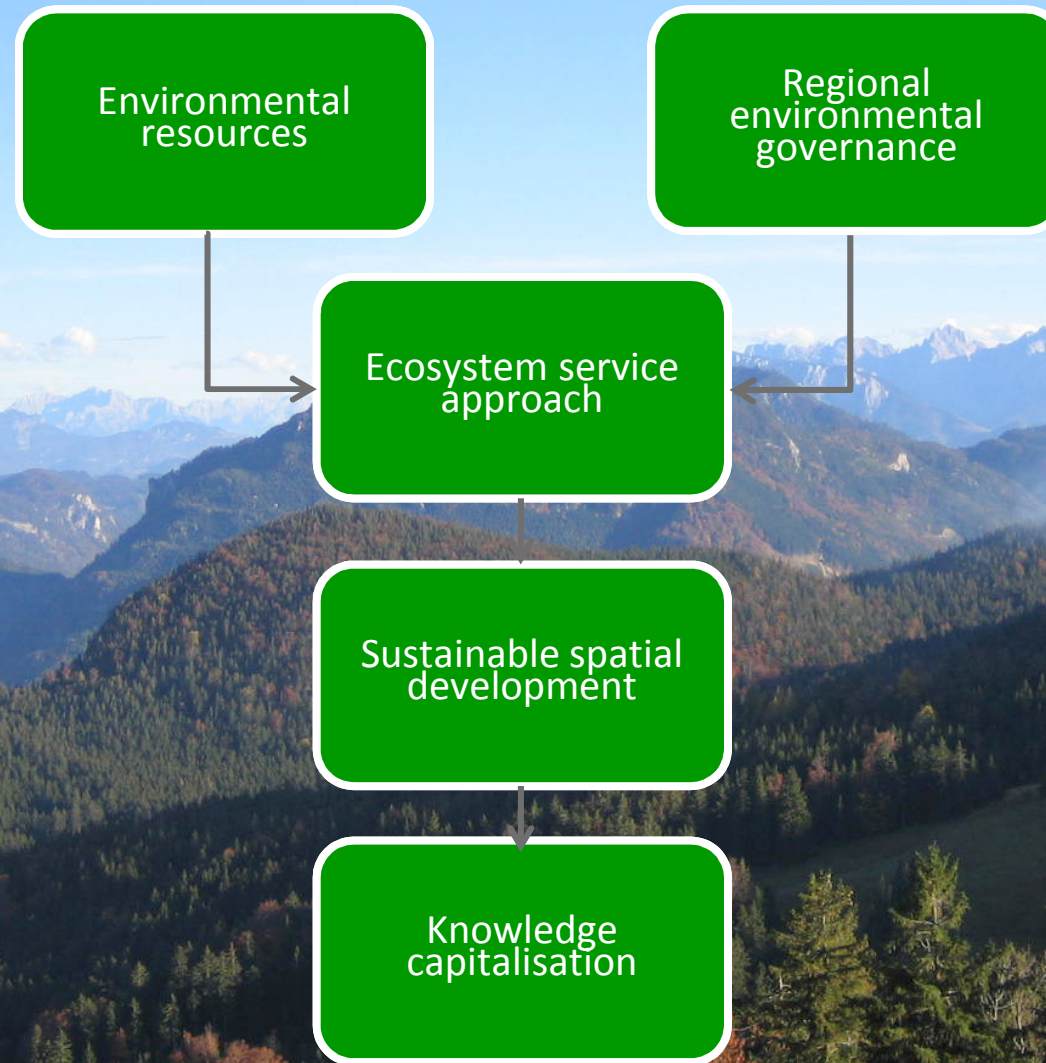
Darfo Boario Terme September 18th 2014

Stefan Marzelli

ifuplan



# Agenda



# Alpine environmental resources



## **Environmental resources**

All components or services of the environment which are used as resources or services by man

In a broader sense the use of ecosystem services

# Alpine environmental resources



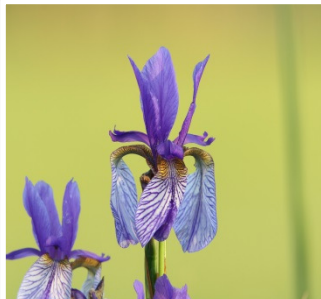
## Freshwater Provision

- water supply from the Alps feeds the main river systems of Rhine, Danube, Rhone and Po catchment areas ; provision of freshwater for about 160 million citizen (EEA 2009)



## Recreation

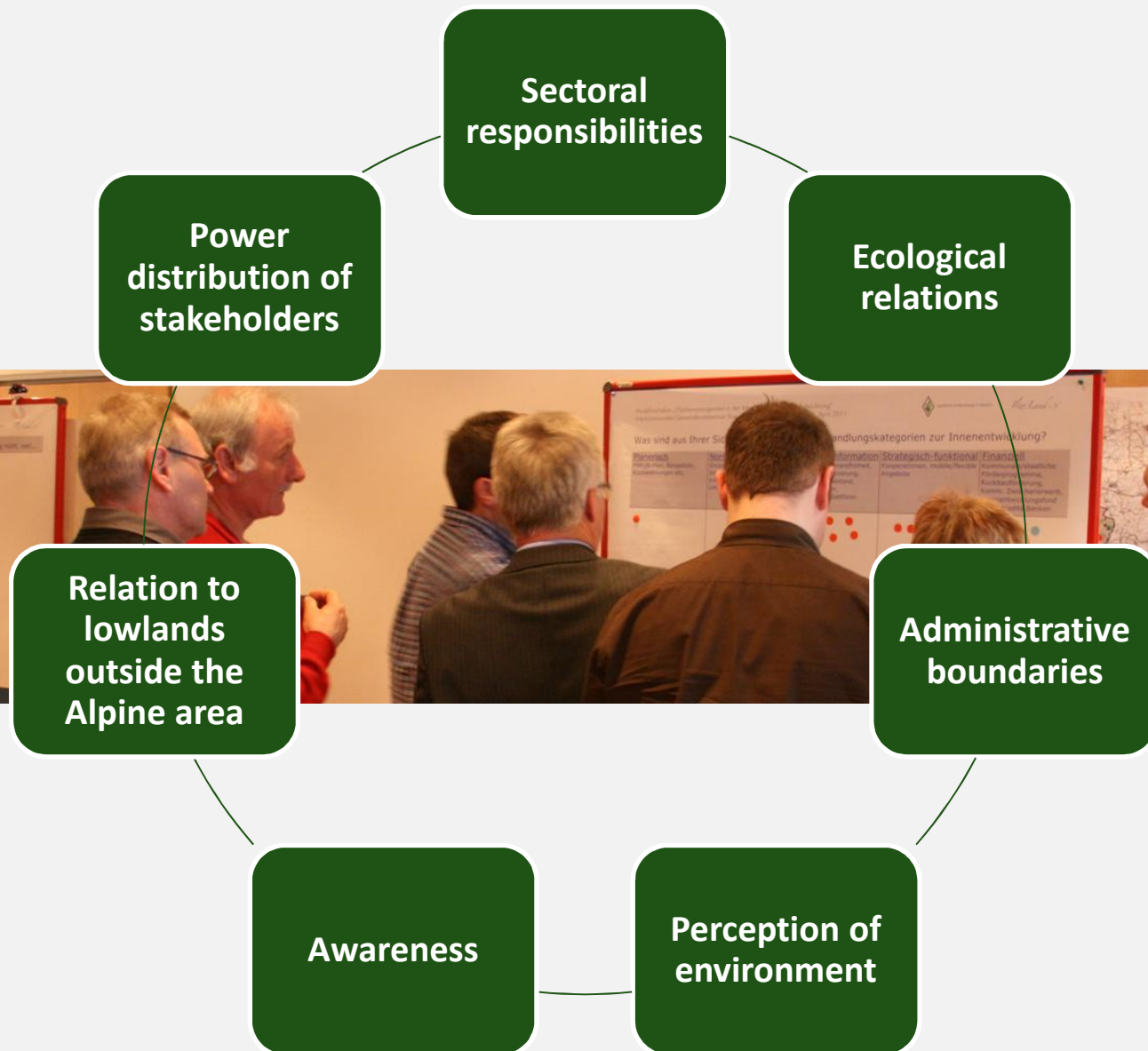
- 1.5 million hotel beds in the Alps and about 5 million beds for other overnight stays (Bätzing 2002)



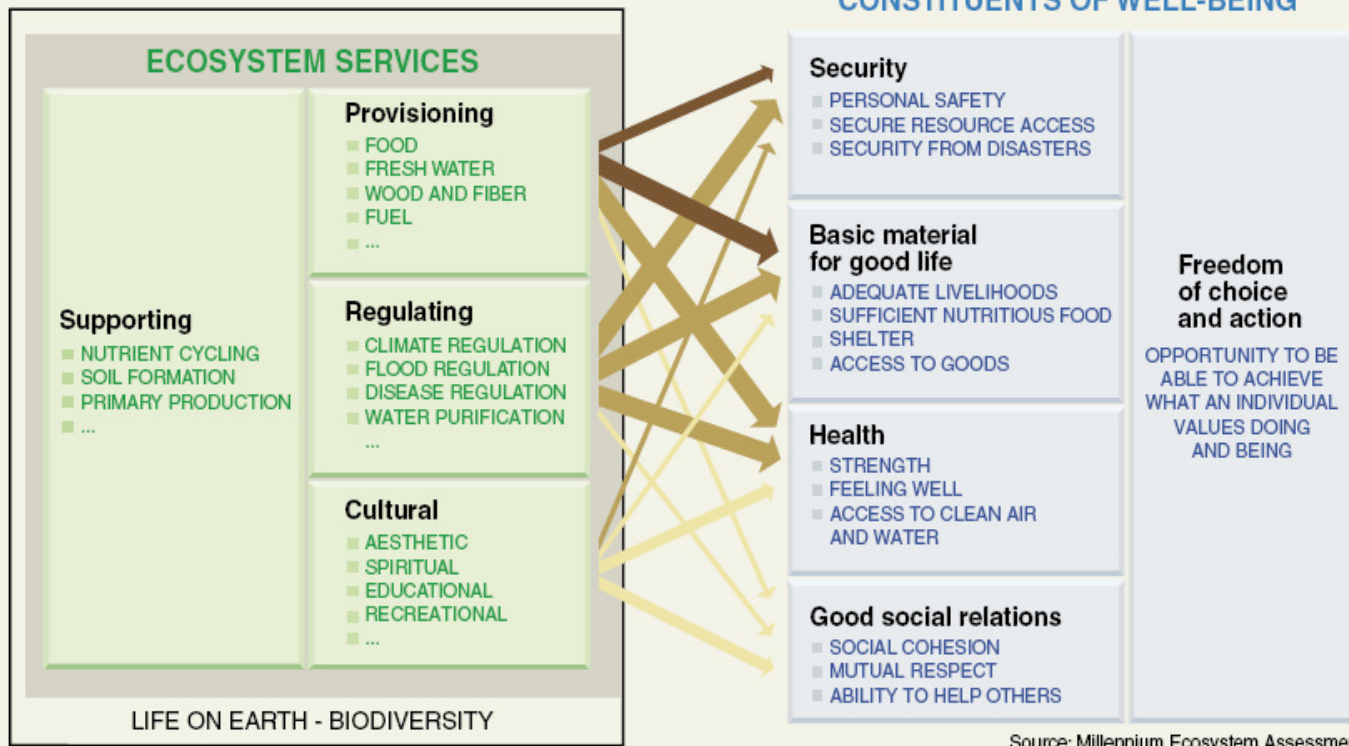
## Biodiversity

- hot spots of species diversity in Europe
- area with large non-fragmented habitats and work as a migration corridor in Europe

# Some challenges of regional governance



# Ecosystem services and human well-being



Source: Millennium Ecosystem Assessment

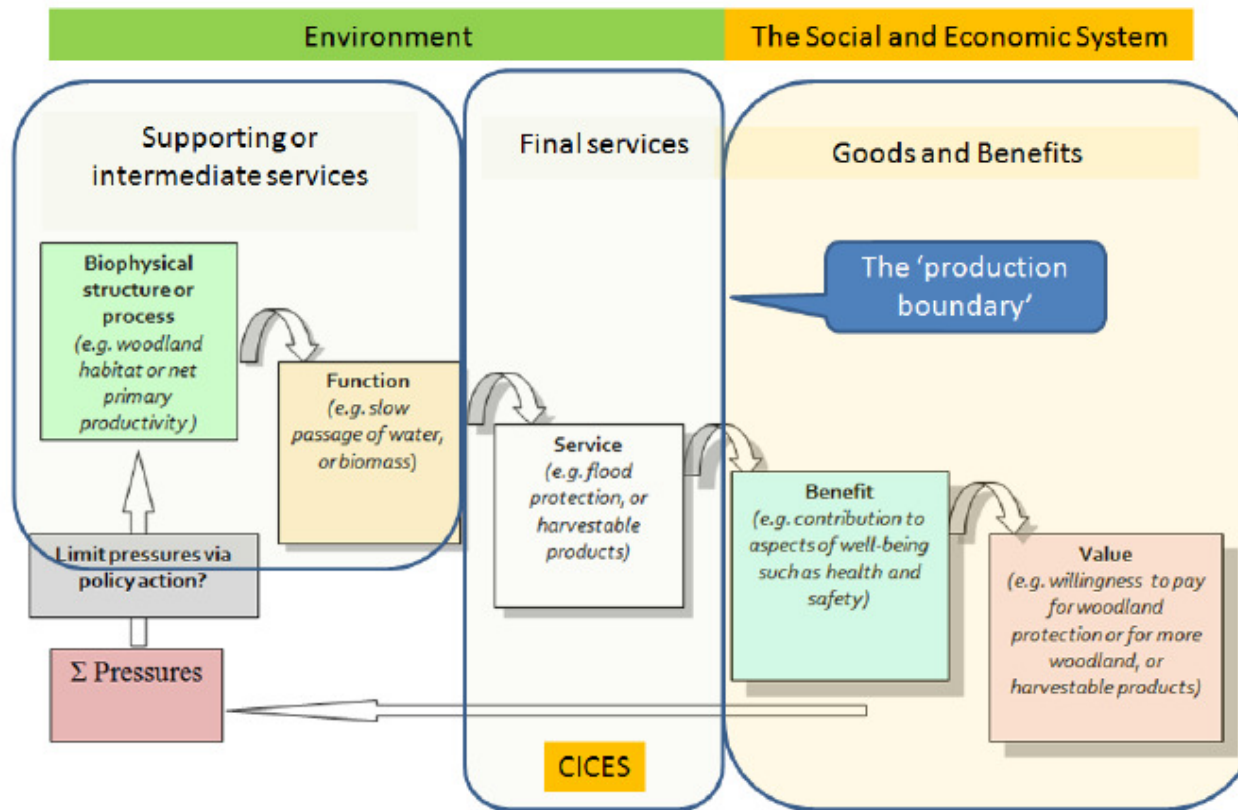
**ARROW'S COLOR**  
Potential for mediation by socioeconomic factors

**ARROW'S WIDTH**  
Intensity of linkages between ecosystem services and human well-being

Low      Weak

MEA (2005): Ecosystems and human well-being. Synthesis report

# Ecosystem service cascade



Haines-Young & Potschin (2013): Common International Classification of Ecosystem Services (CICES): Consultation on Version 4

# Implementation of the ecosystem service approach



International TEEB approach (The Economics of Ecosystem Services and Biodiversity)



European Biodiversity Strategy

- Target 2 Action 5: „will map and assess the state of ecosystems and their services in their national territory by 2014”

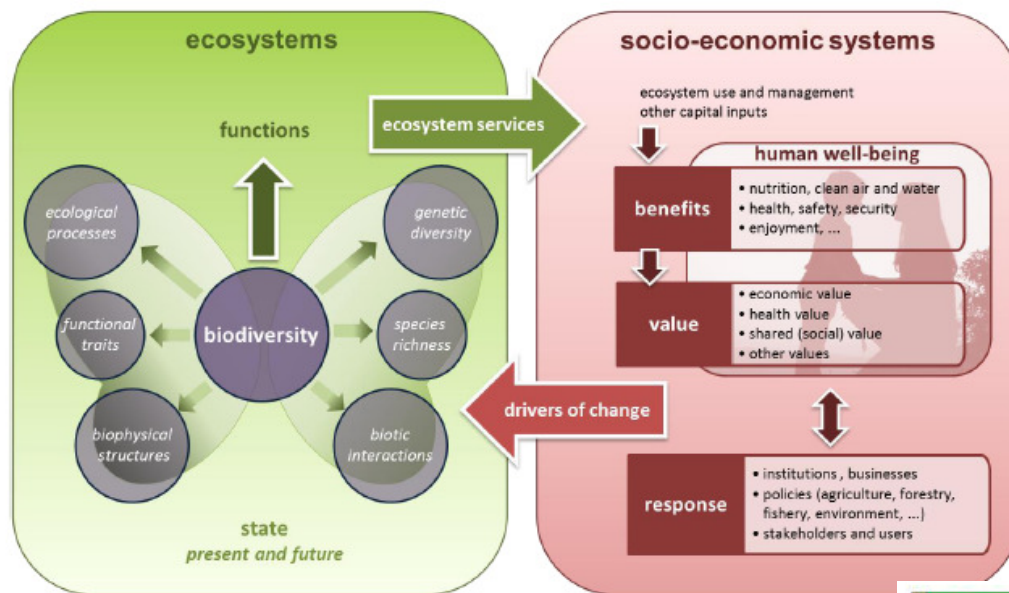


National level: first approaches

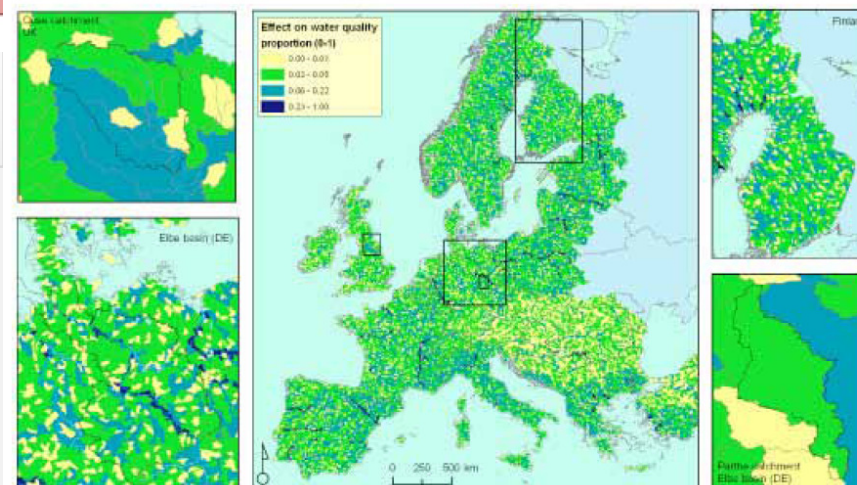
- Approaches in different European countries such as UK, Spain, Portugal, Switzerland



# Ecosystem service approach at European level

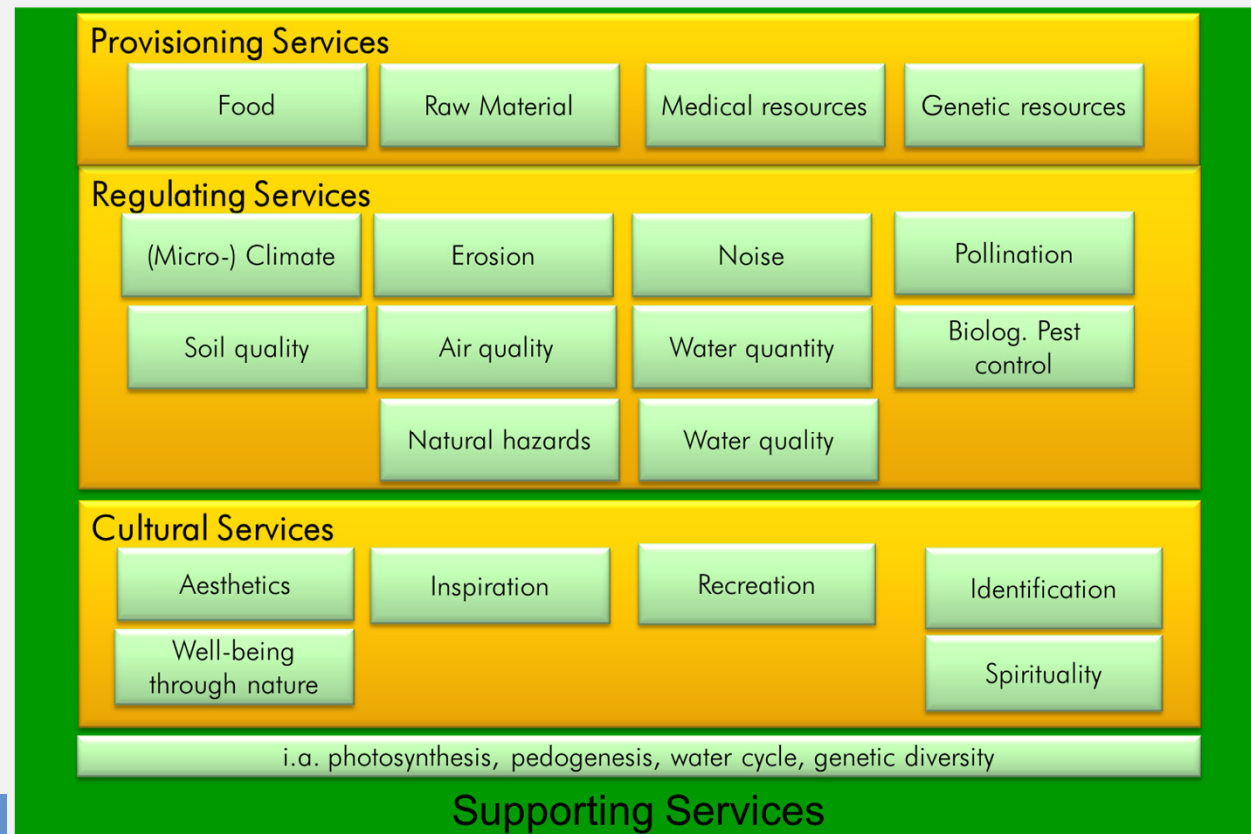


Conceptual framework for EU wide ecosystem assessments Maes et al. (2013): Mapping and assessment of ecosystem their services



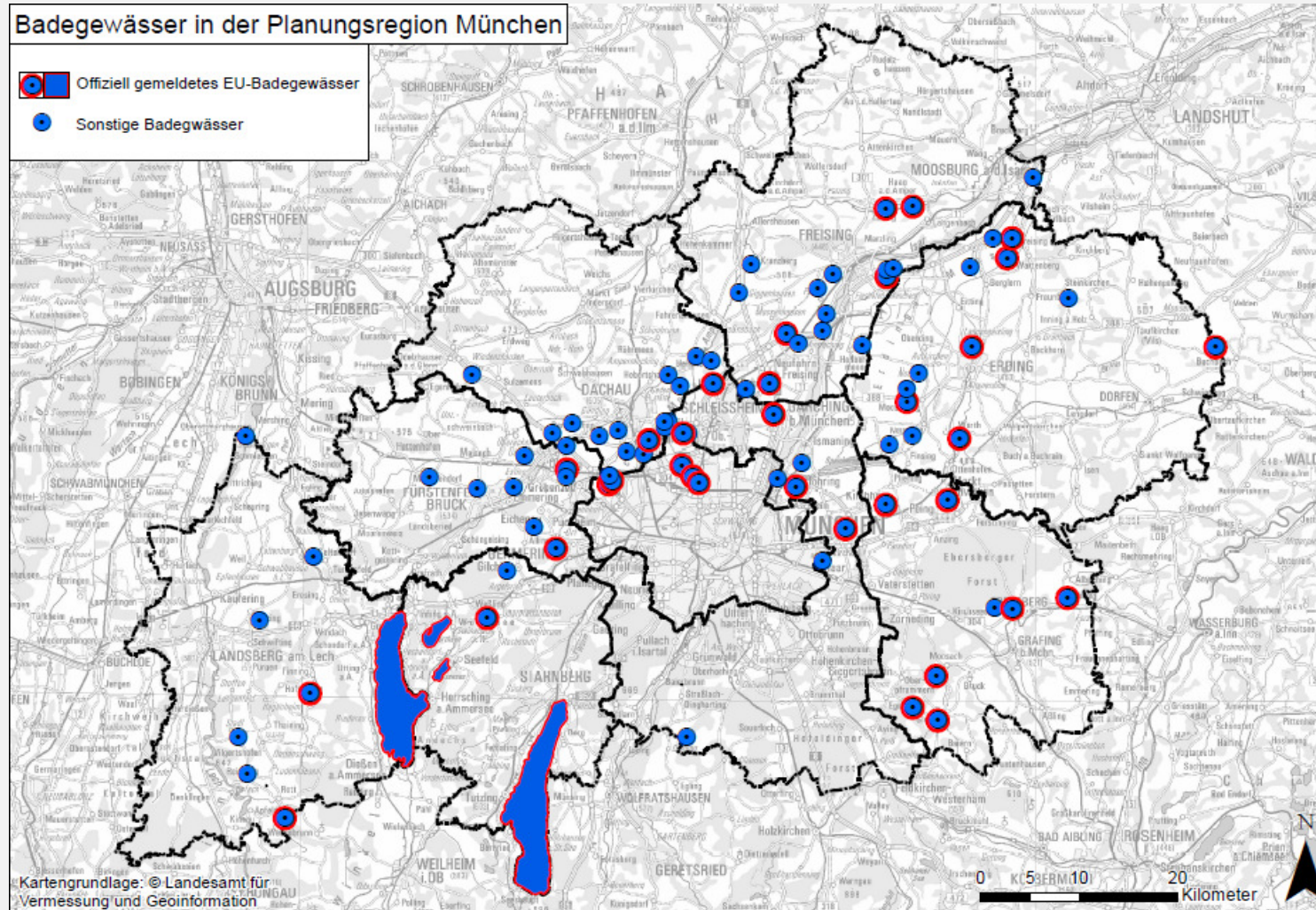
Nitrogen removal in Europe per subcatchment  
Maes et al. (2011) doi: 10.2788/42116

# Ecosystem service approach at national level



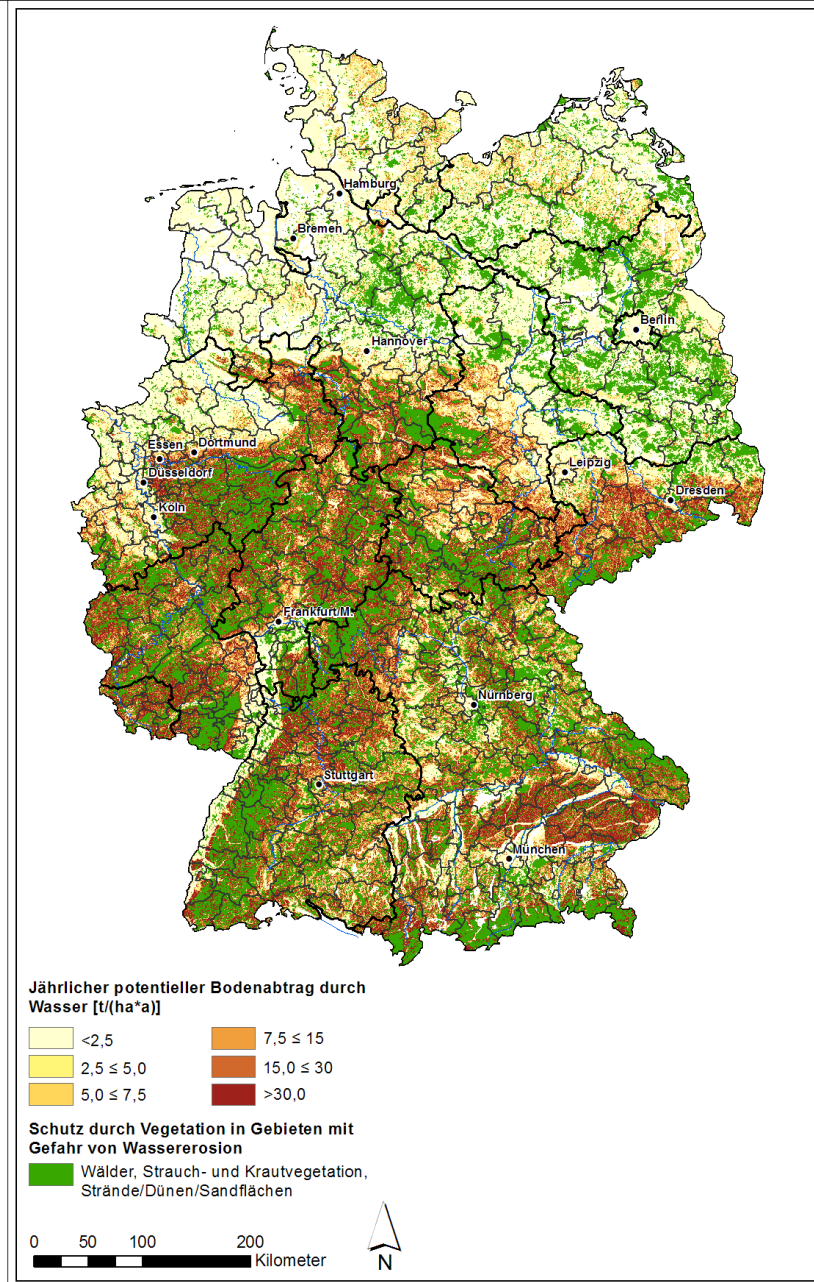
# Cultural services: recreation bathing waters

## Bathing water– EU and regional level information



Data sources: EEA, district data

# Soil erosion – regulation by vegetation at national level



# Sustainable Spatial Development

## **Spatial development**

... integrates all spatially relevant aspects of sectoral policies and processes

## **Sustainable spatial development**

... transfers the general sustainability objectives to spatial development, by this bridging the gap between the concept of sustainability and its spatial implications.

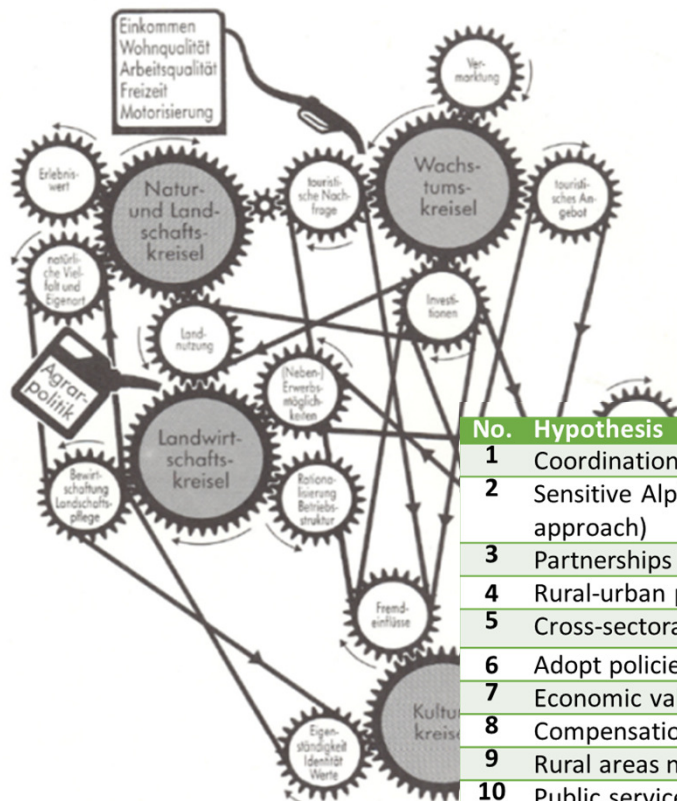
... has the potential to bring ecosystem services and their management into a spatial dimension.

### **Examples for transfer to spatial development objectives**

- Densify settlements and economically use land resources
- Reduce traffic through co-ordination of urban development and public transport and promote environmentally compatible tourism
- Safeguard environmental quality and protect the population from immissions and risks from waste treatment, disposal and natural hazards
- Protect, promote and establish links between unintersected and semi-natural stretches of land
- Decentrally concentrate economic activities, central-place-functions and settlement nodes

Keiner (2005)

# Complexity reduction of sustainable spatial development



- Reducing the complexity of sustainable spatial development
- Avoiding over-simplistic cause-effect conclusions
- Development of hypotheses based on existing transnational documents on spatial development (such as Alpine Convention

No.	Hypothesis
1	Coordination of sector policies to prevent exploitation of natural resources and single-sector economies
2	Sensitive Alpine territory requires appropriate and diversified measures (consensus-oriented multi-stakeholder approach)
3	Partnerships & trade-offs between inner- and outer-Alpine areas
4	Rural-urban partnership requires vital networks and processes
5	Cross-sectoral and integrated approaches are needed to slow down impacts in rural areas
6	Adopt policies that recognize the multi-functionality of the primary sector
7	Economic valorisation of natural resources and ecosystem services initiates new compensations schemes
8	Compensation schemes between urban and rural areas
9	Rural areas need to cooperate and complement each other
10	Public services are under pressure and cuts will particularly affect small and isolated mountain communities
11	Competition between global and regional economic cycles
12	Changing consumer patterns require adaptation of tourism evolution
13	Value creation in the primary sector generates payment schemes and opportunities for regional economic development
14	Resource efficient economies become economically competitive and implement sustainable structures
15	Ageing population requires adaptation and offers opportunities for Alpine areas
16	Alps are a hotspot for maintaining and restoring ecosystem services
17	Changes in energy sector requires more energy efficiency and causes land use
18	Urban development and increasing land take pose a risk
19	High mobility level punctually triggers economic growth and at the same time

Source: Krippendorf, J. (1988)

## Regional environmental governance – how ?

**How to contribute and how to improve regional governance of Alpine environmental resources ?**

**High complexity of temporal and spatial ecosystem management and spatial development needs innovative approaches and sound knowledge**

**One (simple) approach: Dissemination and capitalisation of existing knowledge**

# Knowledge capitalisation – what is the challenge?

## **Problem identified:**

...many projects conducted in the Alpine Space Programme

- are not well known,
- results are not accessible
- information is lost
- synergies remain undetected
- gaps are not identified.

## **Objective:**

...to maintain and disseminate results of Alpine Space Programme project results

...and to contribute to a balanced and shared territorial development in the Alpine Space.

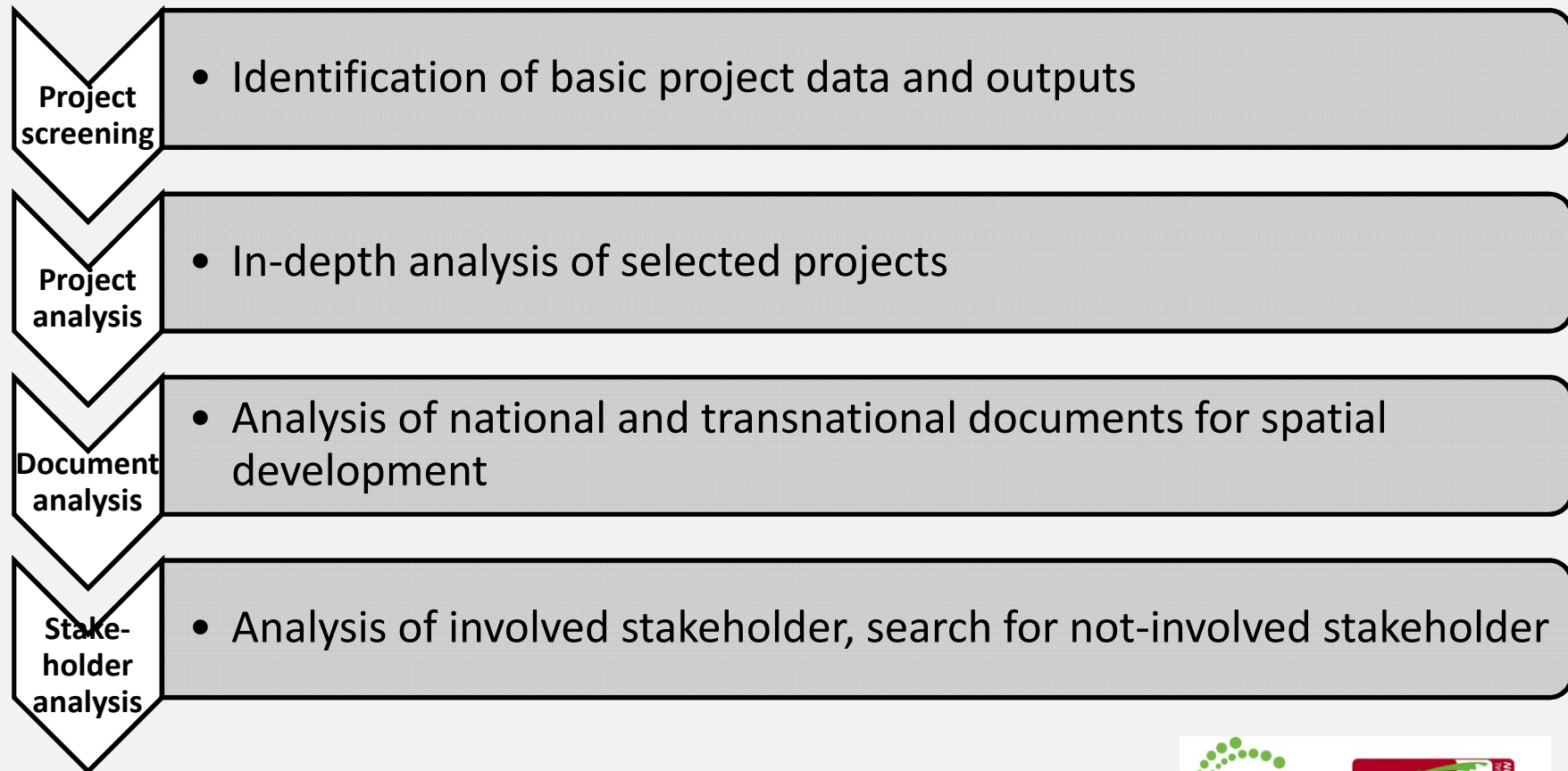


# Knowledge capitalisation – the WIKIAlps approach

Thematic fields of the Alpine Space programme

“inclusive growth”

“resource efficiency and ecosystem management”



# Knowledge dissemination – the WIKIAlps

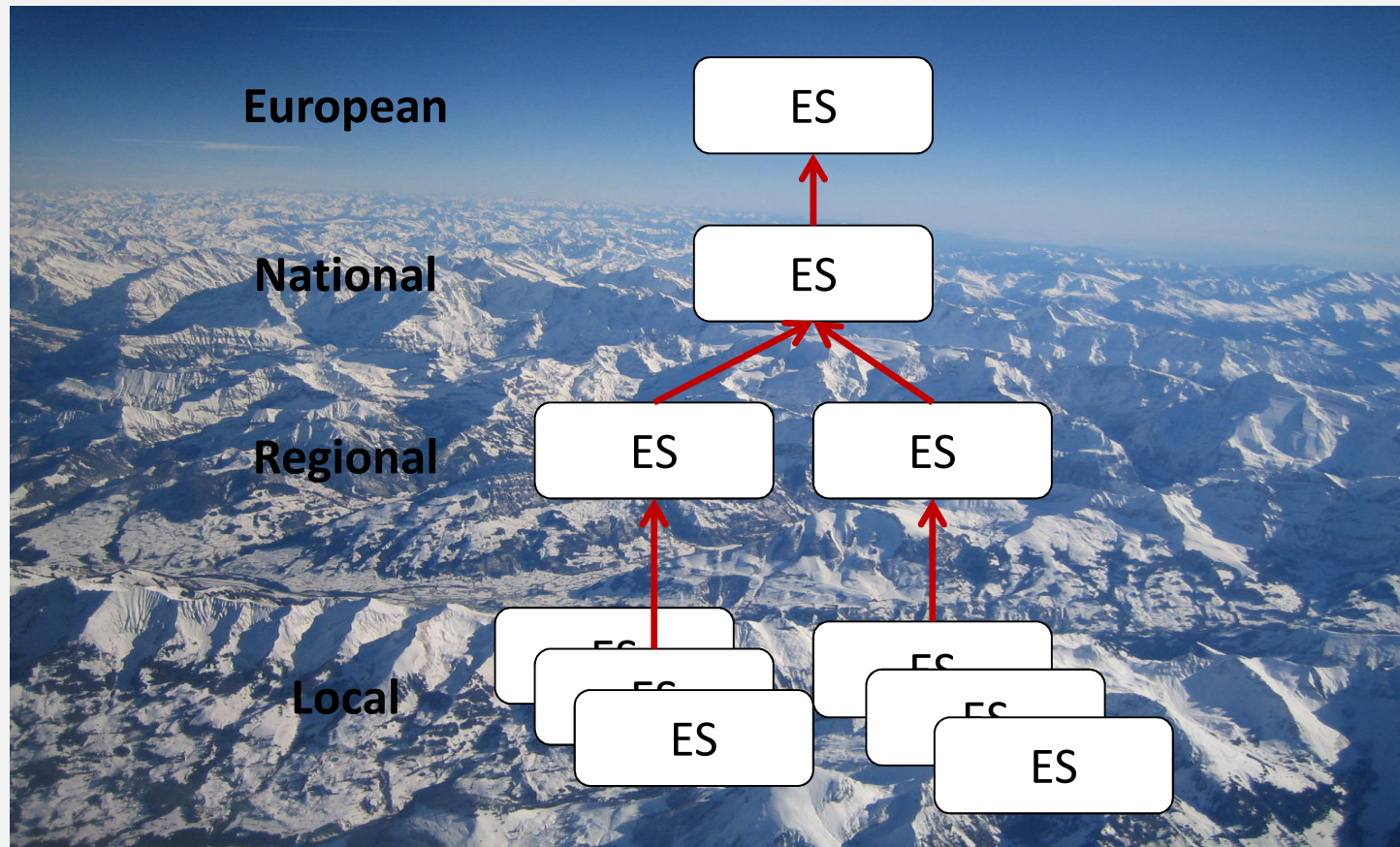
The screenshot shows the WIKIAlps website interface. At the top, there are navigation links and a search bar. The main content area features a central diagram titled "WIKIAlps roadmap" which illustrates the project's process: "Analysis of ..." (involving stakeholder perspective, policy perspective, and project perspective) leads to "Provision of aggregated information in ..." (WIKIAlps platform), which then leads to "Identification of synergies and formulation of recommendations" (including guidelines, tools, and databases). The central goal is "... sustainable spatial development".

Text on the page includes:
 

- WIKIAlps – for a sustainable spatial development in the Alpine space**
- WIKIAlps aims to facilitate a balanced and shared territorial development in the Alpine Space providing operative information ready-to-use for spatial policy design.**
- What can you find in WIKIAlps?**
- All about Alpine spatial development seen from three different perspectives:
  - Project perspective** - Re-organised outcomes of selected Alpine Space projects.
  - Policy perspective** - Identification of transnational needs in spatial development on the basis of selected official documents.
  - Stakeholder perspective** - Competences matrix of stakeholders involved in spatial development in the Alpine Space.
- To start the WIKIAlps experience use the road map below, the navigation menu on the left, the word cloud on the right or the search function at the top of the page.

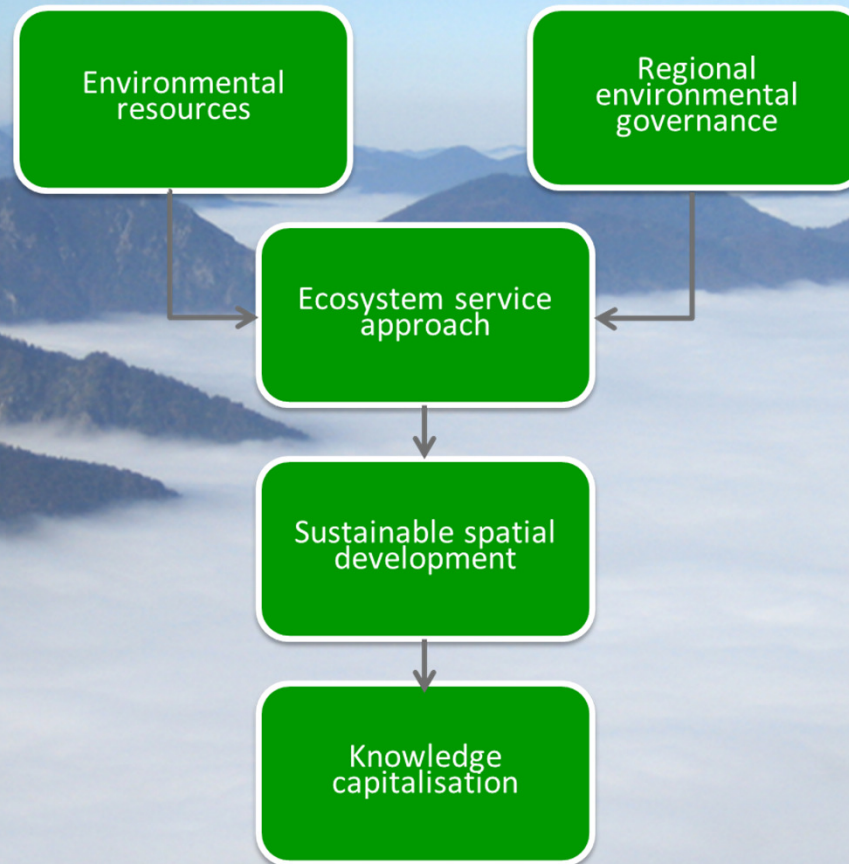
- Easy accessible project information
- Links between projects via keywords, hypotheses and topics of sustainable spatial development
- Amendments of information and comments by registered users
- Stakeholder information

# Long term perspective for regional governance



- Ecosystems services and their spatially and temporal provision as a topic for sustainable spatial development
- Provision and demand of ES within the Alpine area and outside the Alpine area as a task of regional governance and spatial development
- Ecosystem services as a basis for regional compensation schemes

# A path for regional governance of Alpine environmental resources?



Learn more about WIKIAlps in workshop 3.2 in the afternoon

**Thank you for your attention !**