



**University of
Zurich^{UZH}**

Department of Geography / Human Geography

Hopes and Fears regarding the implementation of the Ecosystem Services Approach in Switzerland

**ACES-Conference Washington DC, Session 5G,
Decision Making in Ecosystem Services, December 10, 2014**

Roger Keller, PhD Student

Promotion Committee

Prof. Dr. Norman Backhaus (Main Supervisor)

Prof. Dr. Adrienne Grêt-Regamey, ETHZ

Dr. Marcel Hunziker, WSL

Prof. Dr. Ulrike Müller-Böker



What to except from this presentation?

- Research questions and research design
- First findings of ES approach screening

Focus: Implementation of ES approach into policy

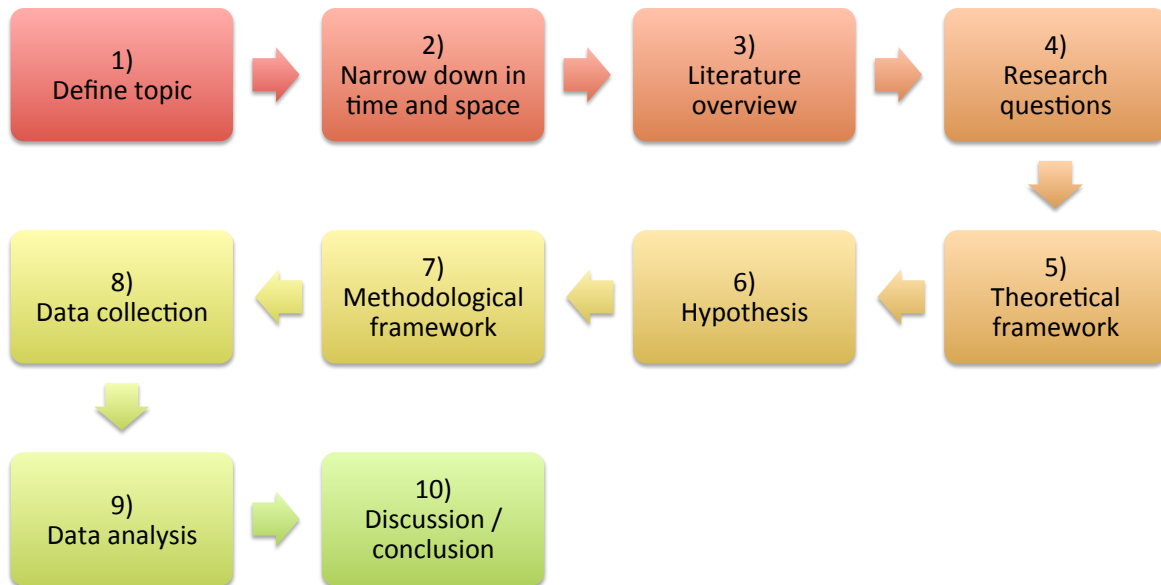
- How to implement the ES approach:
 - frameworks
 - implementation levels
- ES implementation in Switzerland:
 - goals
 - expectations: hopes and fears
- Outlook



Research questions and design

Two main research questions:

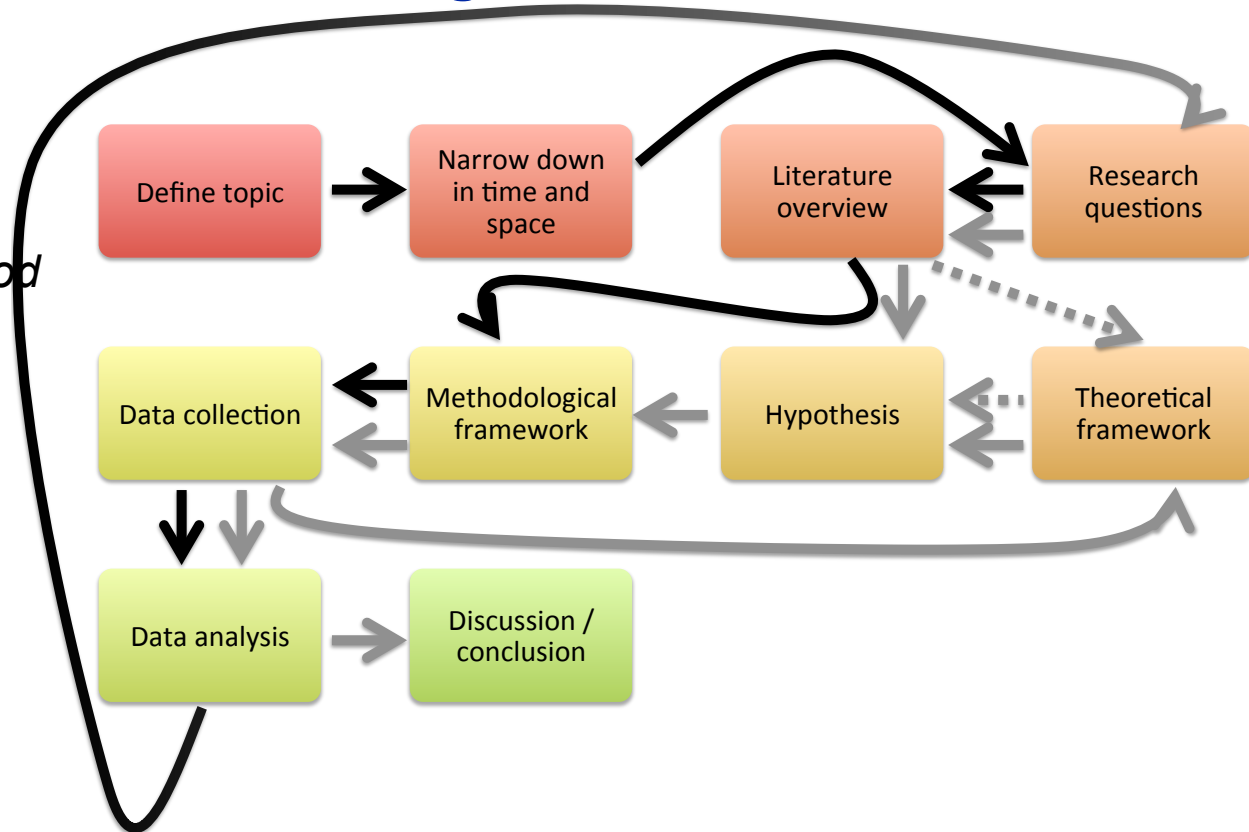
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2. *How can the Ecosystem Services concept be implemented into policy and practice?*



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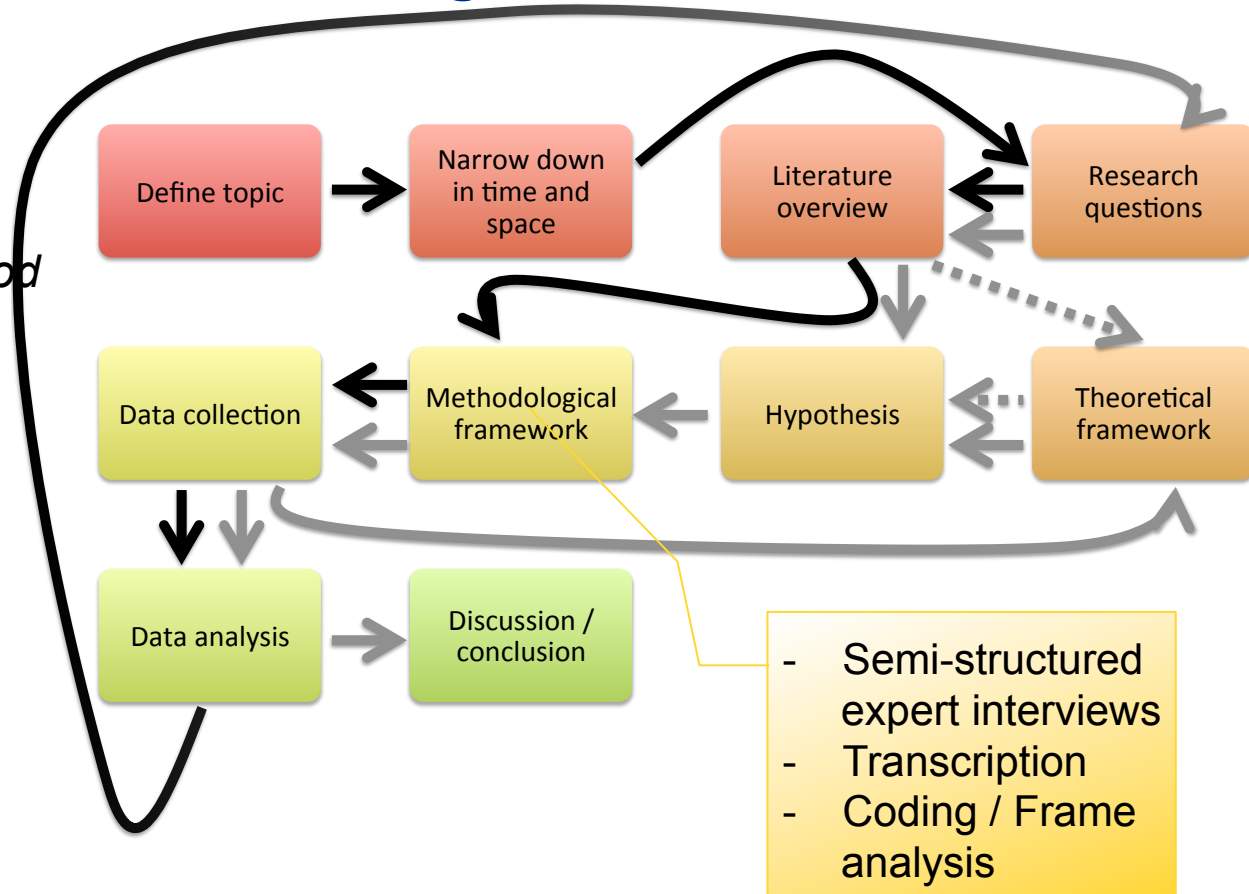
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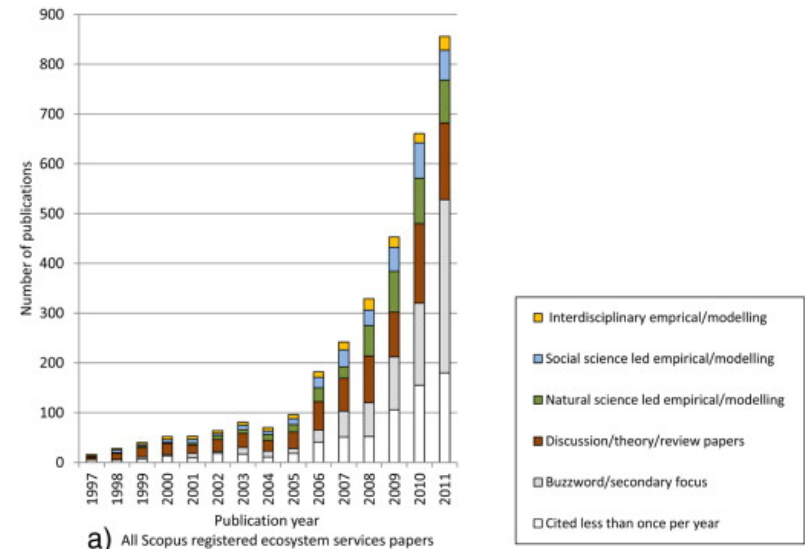
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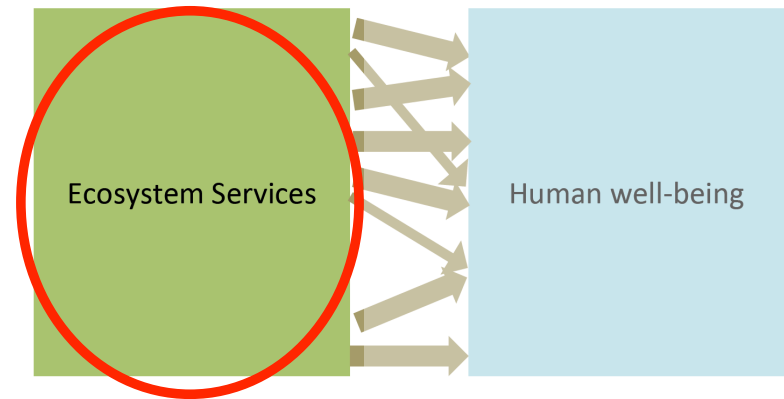
First findings of ES approach screening

- Focus of ES-research lies on ecosystem functioning/services
→ links between ES and human well-being are often ignored
- Valuation of ES is a highly disputed area
→ Ethical values seem to be under-considered
- Category of „cultural ES“ is difficult to define
→ Social scientists need to be included into ES research community



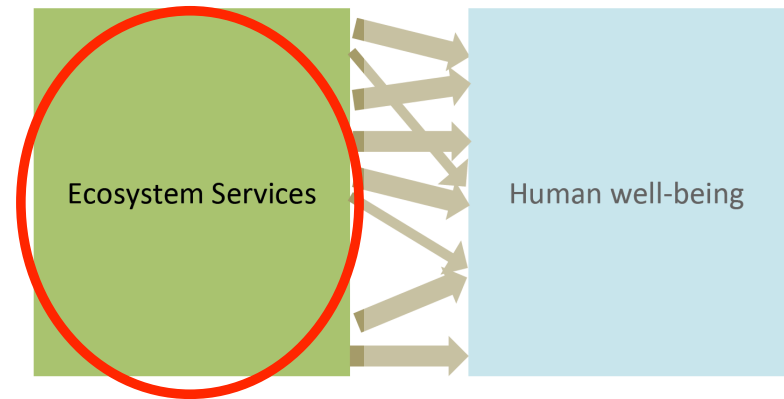
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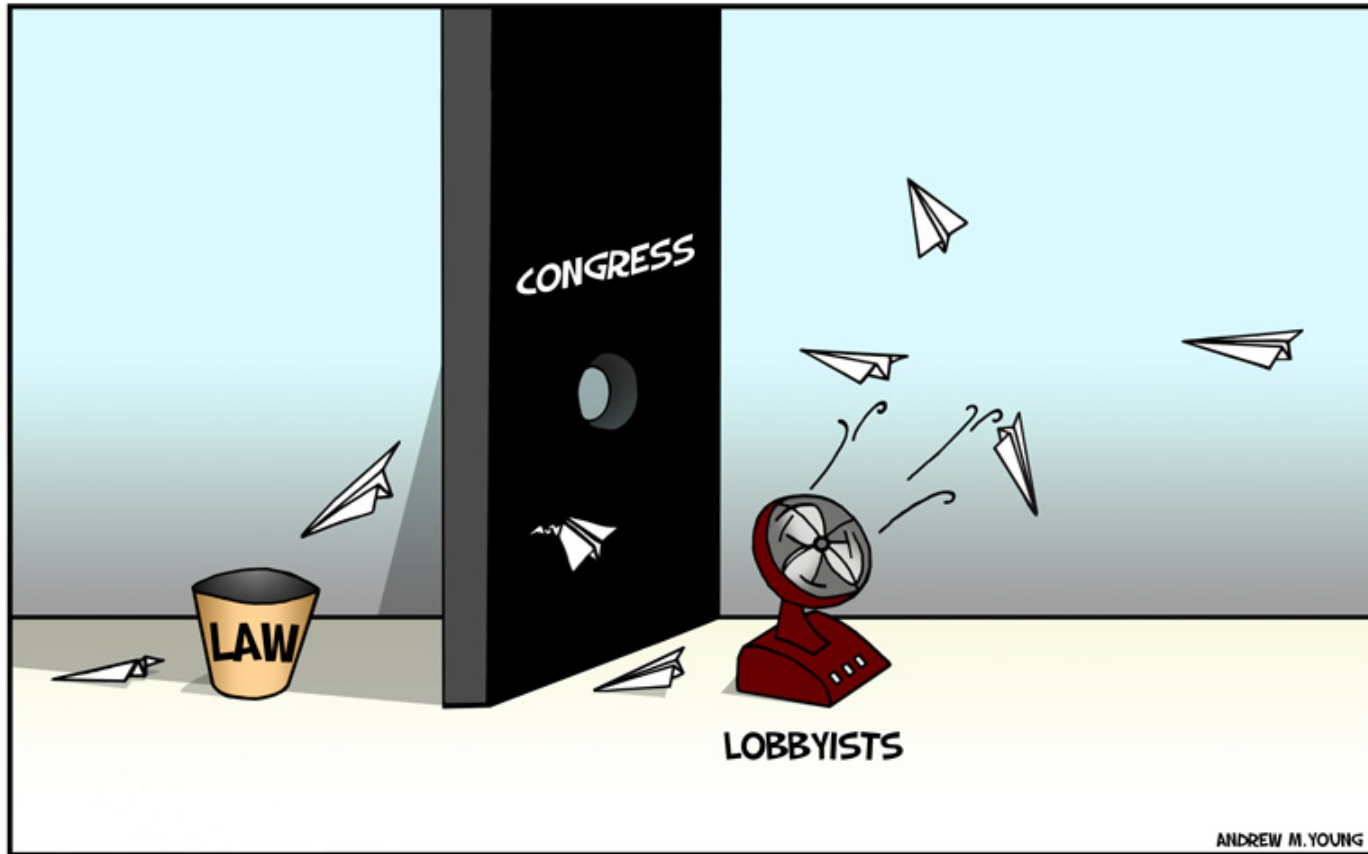
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„Cultural ecosystem services are perhaps best understood as those that do not fit well in other sectors of ES research“ (Chan et al. 2012:9)

Science-Policy Transfer

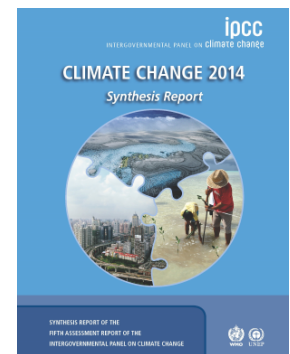
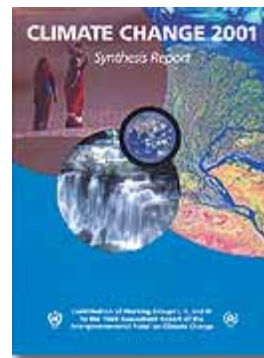
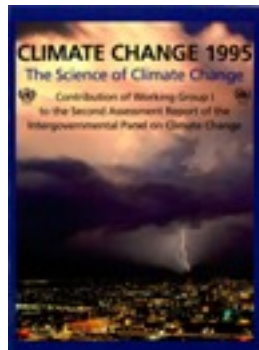
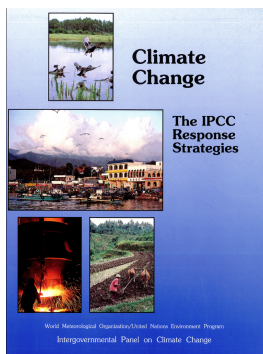


Source: <http://www.andrewmyoung.com/portfolio/2012/08/the-union-of-concerned-scientists-art-contest/>

SCIENCE-BASED POLICY AS A PAPER AIRPLANE



Example: IPCC





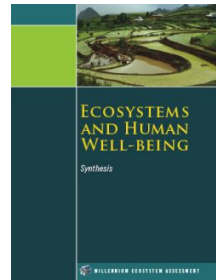
Intergovernmental Platform on Biodiversity & Ecosystem Services (IPBES)

Objectives 2014-2018

- 1) Strengthen the capacity and knowledge foundations of the **science-policy interface** to implement key functions of the Platform
- 2) Strengthen the **science-policy interface** on biodiversity and ecosystem services at and across subregional, regional and global levels
- 3) Strengthen the **science-policy interface** on biodiversity and ecosystem services with regard to thematic and methodological issues
- 4) Communicate and evaluate Platform activities, deliverables and findings



Source: <http://www.ipbes.net>



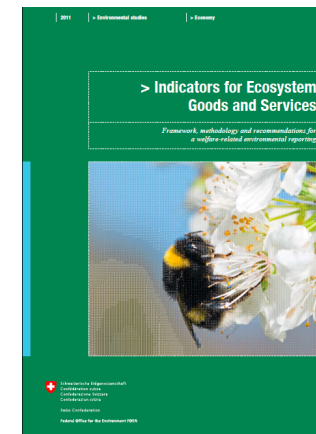
European Environment Agency



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation

25 April 2012

Swiss Biodiversity Strategy



Sources: Millennium Ecosystem Assessment 2005 / www.cbd.int /
www.ipbes.net / www.eea.europa.eu / European Union 2011 /
Schweizerischer Bundesrat 2012 / Staub et al. 2011



Situation in Switzerland



Schweizerische Eidgenossenschaft
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Swiss Confederation

25 April 2012

Swiss Biodiversity Strategy

Goal 6:

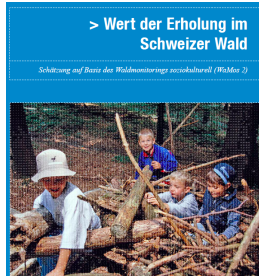
„By 2020, ecosystem services are recorded quantitatively. This enables their consideration in the measurement of welfare as complementary indicators to gross domestic product and in regulatory impact assessments.“

Source: Schweizerischer Bundesrat (2012)



Situation in Switzerland

Study: The value of recreation in the Swiss forest



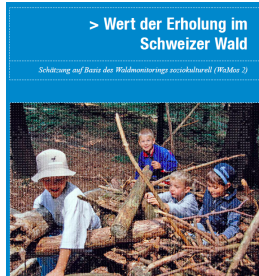
„...demonstrates the importance of the forest as a recreational space for Switzerland.“ Source: von Grünigen & Montanari (2014)

- comprehensive survey of over 3000 persons
- calculated with “expenditure method” (travel cost method was not fully applied due to lack of information of forests visited)
- 290-590 CHF per person (>18 yrs) per year
- total utility value of approx. CHF 3 billion



Situation in Switzerland

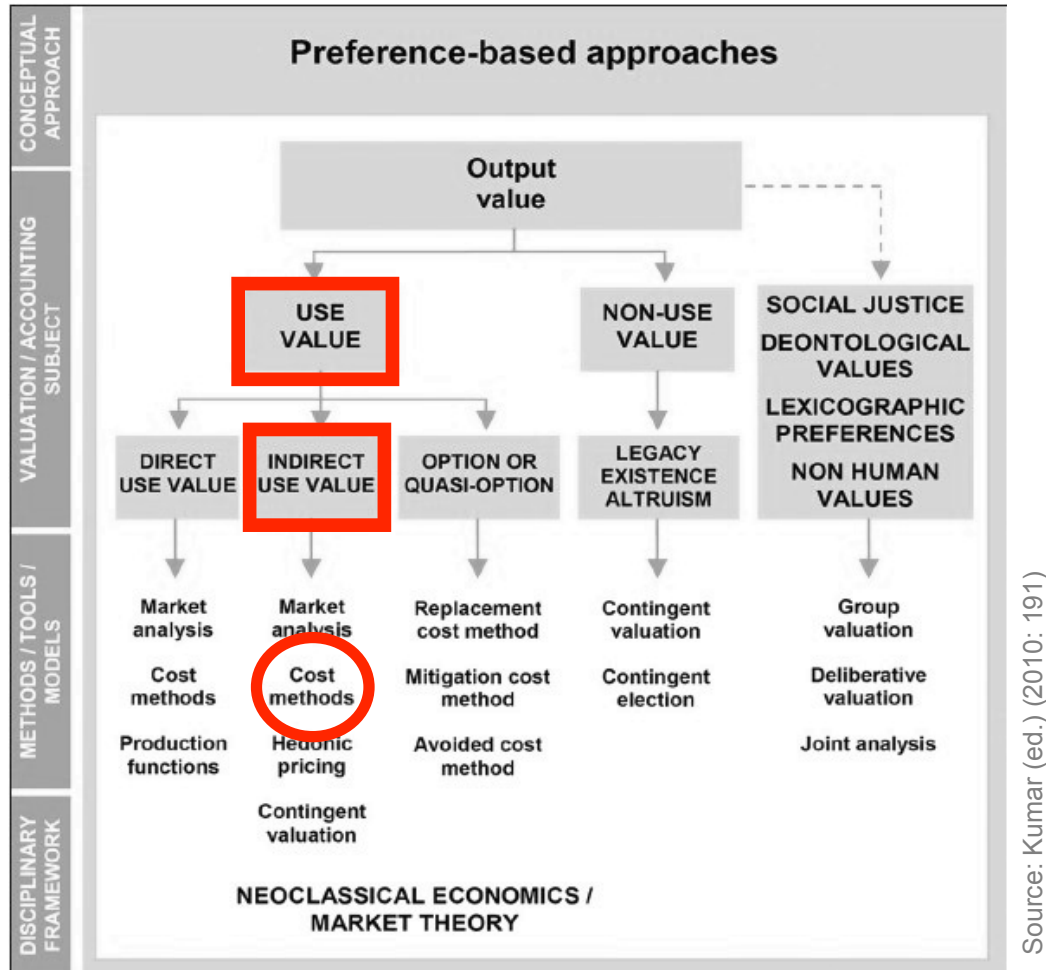
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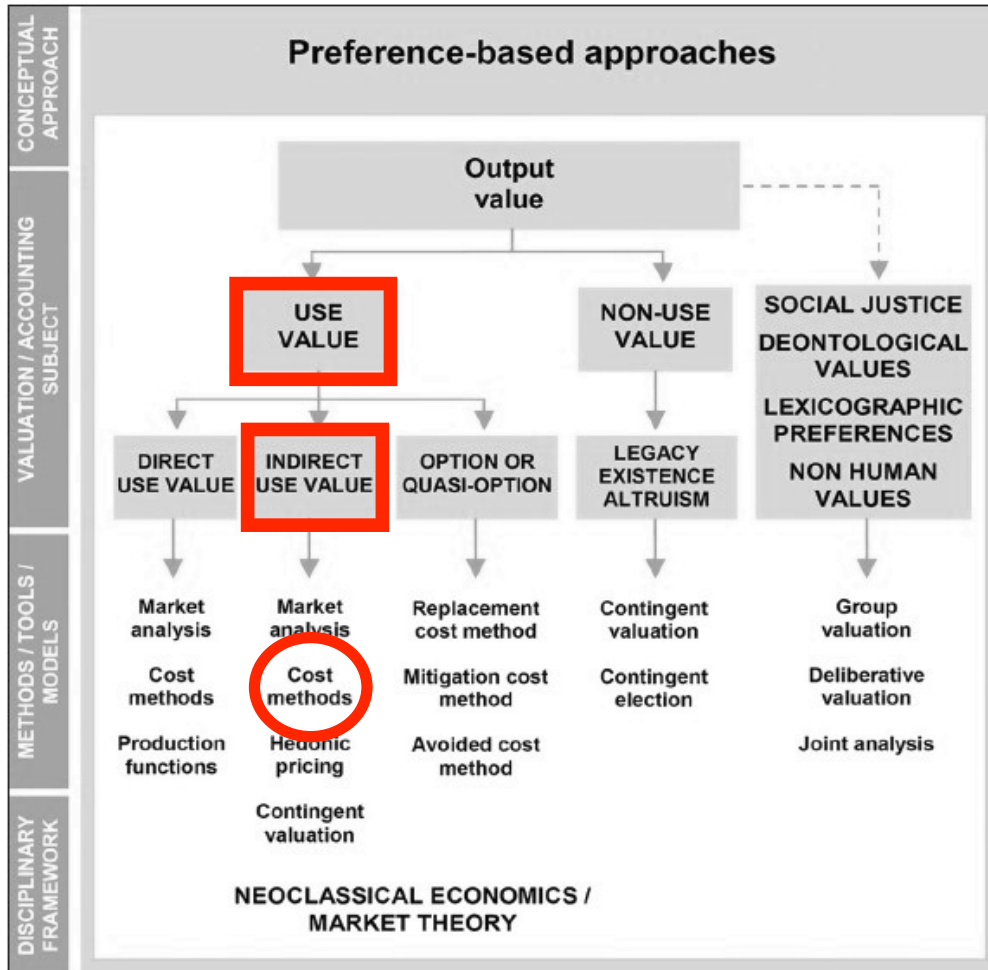
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Example: Recreational value of the Swiss forest



Example: Recreational value of the Swiss forest



Source: Kumar (ed.) (2010: 191)

„Value is often not fully captured in monetary terms, though, so it is important to characterize value in multiple dimensions, including, for example, health, livelihood support, cultural significance” (Daily, 2011:6).



Situation in Switzerland

Application of ES in planning processes

➔ Online-Tool
developed by ETHZ
and paid by the Swiss
Federal Office for the
Environment (FOEN):
<http://oesl-check.ethz.ch>



Source: <http://oesl-check.ethz.ch>



Challenges and chances regarding ES implementation



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra



HSR
HOCHSCHULE FÜR TECHNIK
RAPPERSWIL
FHO Fachhochschule Ostschweiz



Expert interviews:

- What do they know about the ES concept?
- What are the chances of the ES concept?
- How could the ES concept be used?
- What are the challenges regarding the implementation of the ES concept?



Stadt Zürich

Tiefbau- und Entsorgungsdepartement



CIPRA
LEBEN IN
DEN ALPEN



Science and Policy
Platform of the Swiss Academy of Sciences
Swiss Biodiversity Forum



SVS/BirdLife Schweiz



Stiftung Landschaftsschutz
Schweiz



Fondation suisse pour la protection
et l'aménagement du paysage



First results out of expert interviews

Hopes	Fears
<ul style="list-style-type: none">- ES as additional arguments- Wish for widespread quantification of ES- Chances for awareness raising- Switzerland should play a pioneer role	<ul style="list-style-type: none">- Refusal of quantitative valuation- Fear of commodification- Demystification of nature- Attention: Numbers are subject to manipulations- Monetization as perverseness



Outlook

- Analysis of expert interviews with MaxQDA
- Further expert interviews beginning 2015 (total of approx. 30)
- Analysis of case study in Switzerland (probably agriculture)

Finish:

- Final draft: Summer 2015
- PhD exam: Autumn 2015
- Publication: Beginning 2016



Thanks for your attention...



Sources: <http://centriq.com/techsmarktc.aspx>



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Theoretical framework



Not one theoretical approach, but different entry points:

- **Action theories**
-> Rational Choice Theory (RCT)
- **Practice theories**
-> Actor Network Theory (ANT)
- **Perception theories**
-> Cultural values model
-> Landscape model

„There can be few terms in the social sciences whose usage is more diverse, and often vague, in meaning than 'theory'“
(Hammersley, 2004:1123).

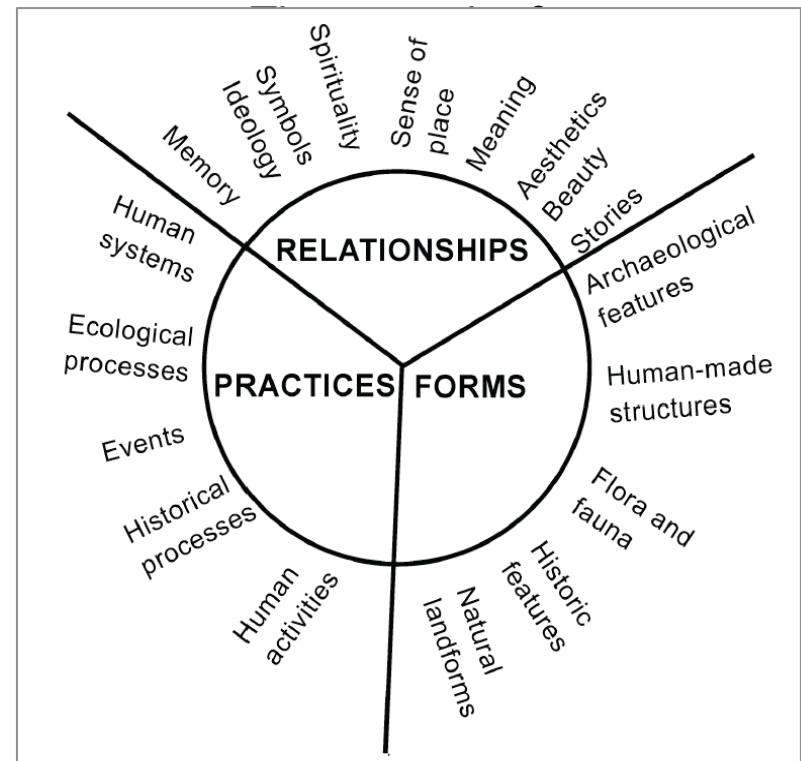
Hammersley, Martyn (2004): Theory. The SAGE Encyclopedia of Social Science Research Methods. Lewis-Beck, Michael S.; Bryman, Alan und Liao, Tim Futing. Thousand Oaks, London, New Delhi, SAGE Publications. 3: 1123.

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