Orienting Ecosystem Services and the diagnostic Social-Ecological Framework for holistic landscape research

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Think of your “home” land-/ seascape!
A landscape is “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.”

(European Landscape Convention, 2000)
Ecosystem Services (ES)

Ecosystem services are the benefits people obtain from ecosystems. (MEA, 2005)

„Firstly, ecosystem services are ‘the verb of nature’. [...] They are what nature DOES. [...] what it does for people. [...] Ecosystem services are about thinking about the whole, not just the narrow bits [...].“ (Everard, 2015)
ES cascade

Biodiversity

ECOSYSTEM
SUPPLY SIDE

Functions

Ecosystem Service

Human
Well-being

value

ECOSYSTEM
DEMAND SIDE

Biodiversity

Biophysical value-domain

socio-cultural value domain

monetary value-domain

GOVERNANCE
Diagnostic SES Framework (SESF)

Social, economic and political settings

ECOLOGICAL SYSTEM
- Resource System
- Resource Units

SOCIAL SYSTEM
- Governance
- Actors

Interactions → Outcomes

External ecosystems
SES research

1. Social & ecological processes

2. Maintain ecological functions & human well-being

3. Governance, formal and informal institutions

(a) System knowledge

(b) Target knowledge

(c) Transformative knowledge

Core aspects
Knowledge types
System knowledge

Ecosystem Services

Diagnostic SES Framework

Seppelt et al., 2011; Milcu et al., 2013; Luderitz et al., 2015

Ostrom, 2007
Target knowledge

Ecosystem Services
• cultural ES allow more subjective view on ES (Schröter et al., 2014; Daniel et al., 2012)
• socio-cultural valuation: assessment of individuals’ perspectives (Scholte et al., 2015)

Diagnostic SES Framework
• emergent aspect: move beyond system knowledge production (Fischer et al., 2015)
• action situations: understand interactions and attributes of involved actors (McGinnies & Ostrom, 2014)
Transformative knowledge

Ecosystem Services

Diagnostic SES Framework
Compatibility of ES and SESF I

• pure SESF or ES-based analysis would not capture the whole problem complex
• alleviate biases towards resource focus or danger of monetization
• linking epistemology (knowledge types) of both concepts through ontological structures ES & SESF)
## Compatibility of ES and SESF II

<table>
<thead>
<tr>
<th>What ES can learn from SESF</th>
<th>What SESF can learn from ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• incorporate SES tier scheme</td>
<td>• broaden considered values: not only economic, but also biophysical &amp; socio-cultural</td>
</tr>
<tr>
<td>• analyze governance</td>
<td>• consider biodiversity &amp; ecosystem functioning as fundamental basis for SES</td>
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<tr>
<td>– services-to-ecosystems</td>
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</tbody>
</table>

What **ES & SESF** both can **improve**

engage more with transformative knowledge application
sector

resource
distribution

equity

aesthetic

# of users

sense of place

crop production

property rights

biodiversity

regional climate regulation

lobbying

timber market

sector

of

users

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sector
THANK YOU!

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