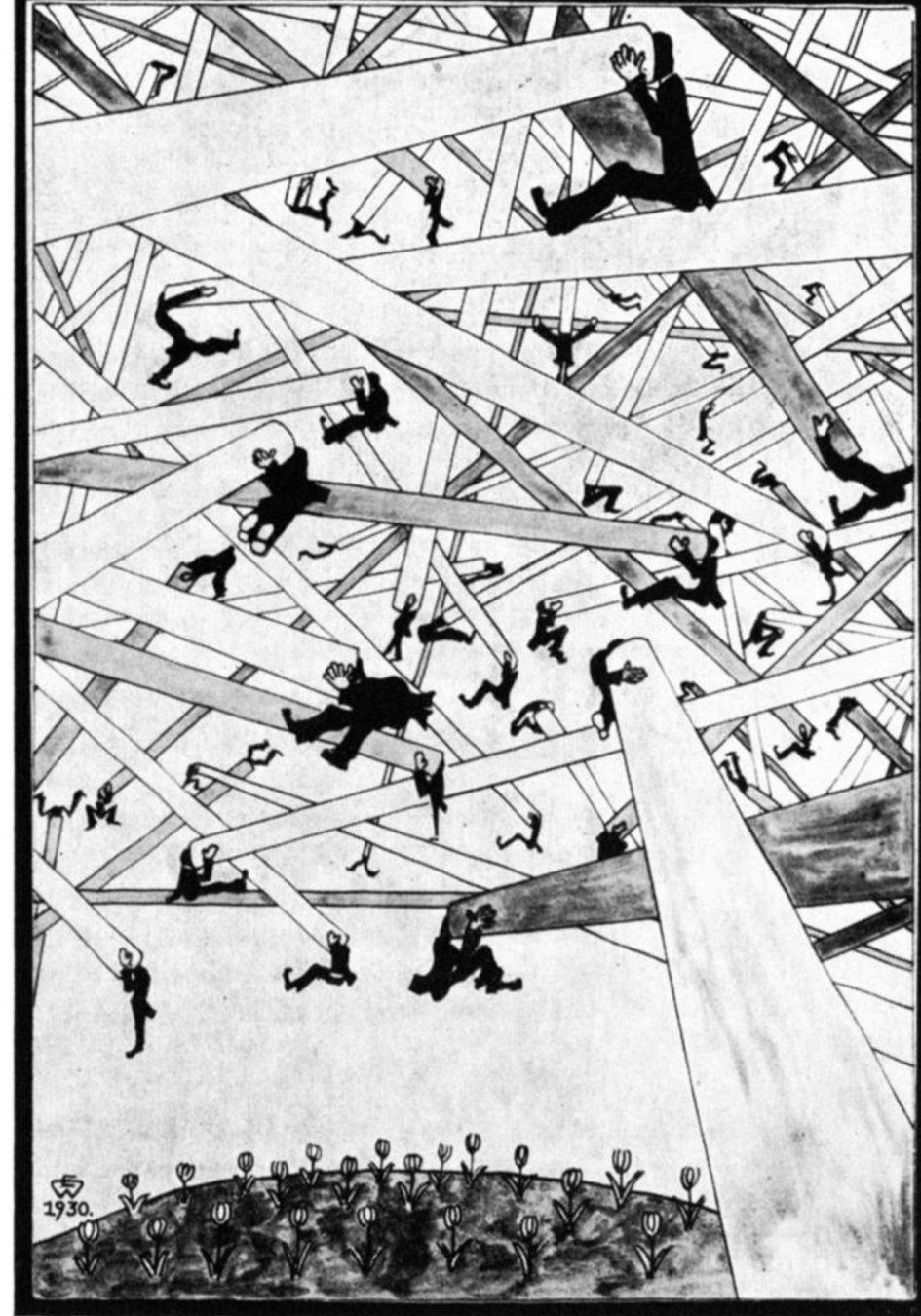


How can you work practically with interdisciplinary research?

Marie Stenseke

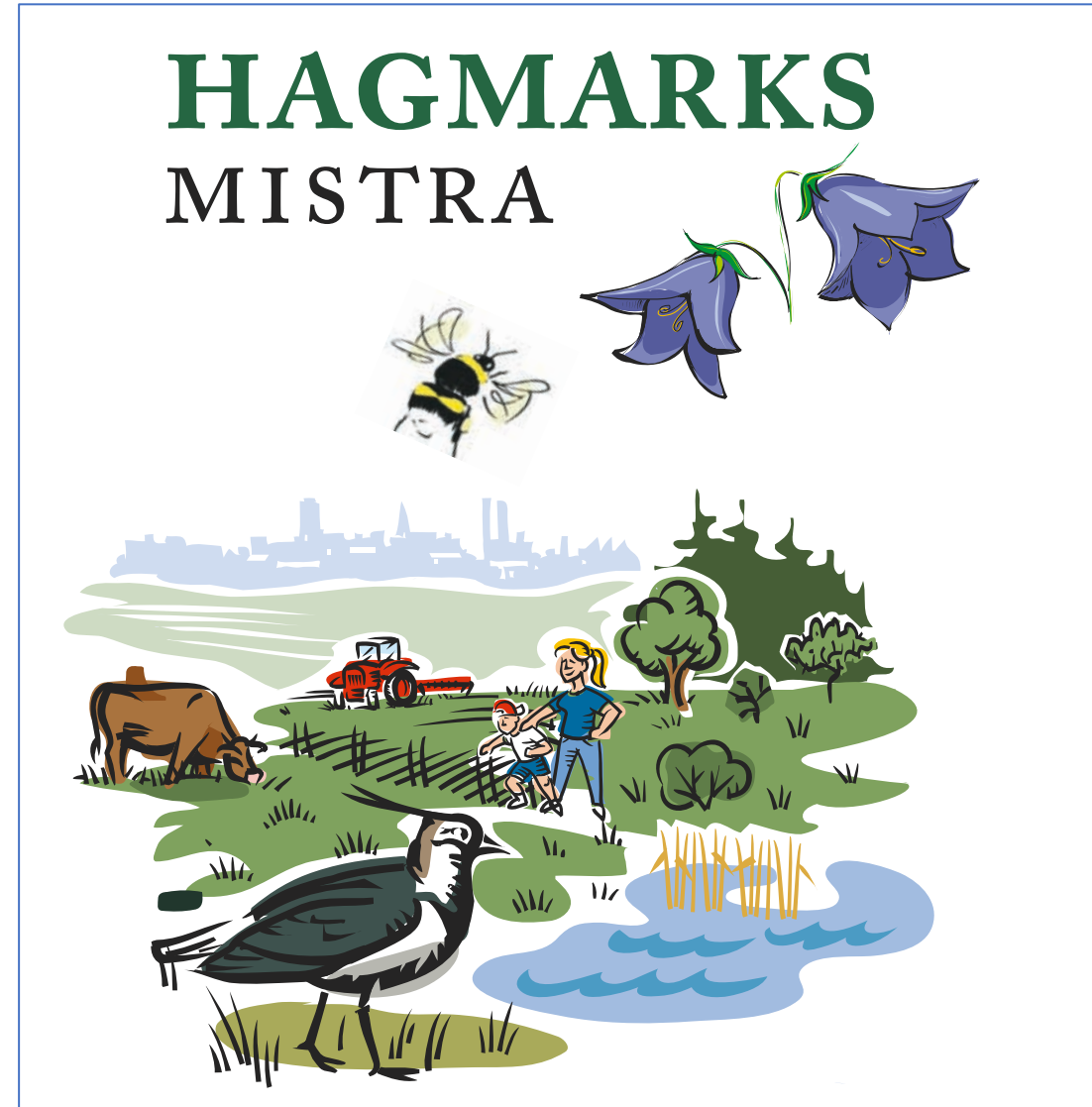
Director, Interdisciplinary Academy at SLU (IDA)



Die wissenschaftlichen Gesichtspunkte

Attractions of interdisciplinary research

- Intellectually stimulating in a broad sense
- Producing applicable knowledge with a potential to make change
- Contributes to a broader network inside and outside academia
- Enhances interesting career options



Challenges in interdisciplinary research

- Cultural divide
- Language divide
- Qualitative/quantitative divide
- What is science?
- What is knowledge?
- What is data?
- Etc



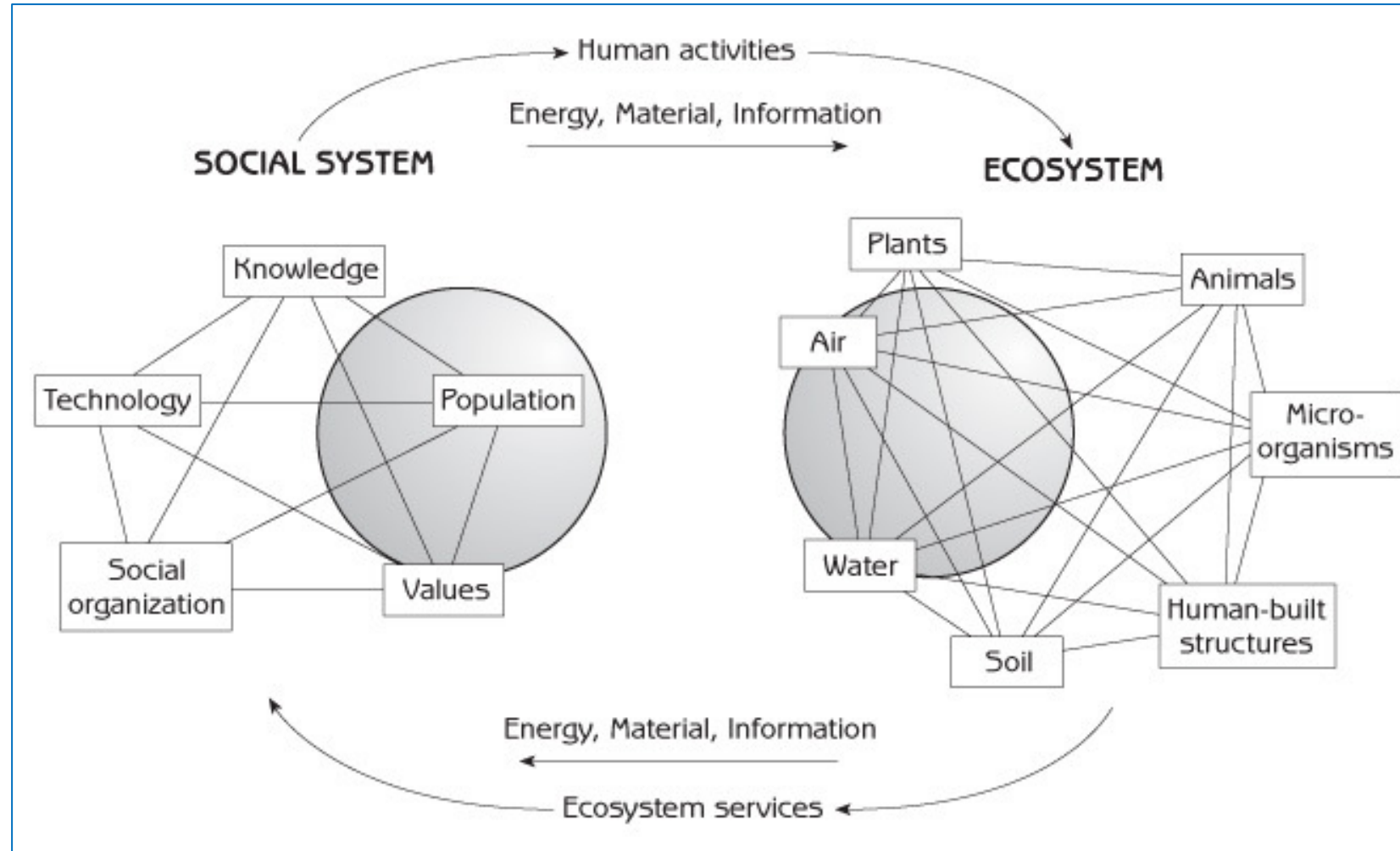
Multidisciplinarity (Mångvetenskap) research from different disciplines are done in parallell on a joint topic

Interdisciplinarity (Tvärvetenskap) combining research from different disciplines into one activity

Transdisciplinarity (Transvetenskap) integrating scientific research with knowledge domains outside academia

*Human influence on the Earth and its processes increases **but** most of our intellectual weapons in the environmental area have maintained a separation of humans and nature*

Lesley Head



*Human influence on the Earth and its processes increases **but** most of our intellectual weapons in the environmental area have maintained a separation of humans and nature*

Lesley Head



Natural science attitudes to social science/humanities in biodiversity research that concerns humans and the human society

Oblivious that the issue concerns humans

Oblivious that there is SSH research addressing the issue

Recognizing the need for SSH research and carrying out SSH studies, without engaging SSH competence

inviting SSH to pre-defined roles and having a definite approach

Involving SSH, but keeping an implicit hierarchy of perspectives and power

Jointly address societal challenges with mutual respect

Interdisciplinarity!

Three core aspects of interdisciplinary work

- **People** – group composition and personality
- **Process** and organizing structure
- **Perspectives** – concepts and frameworks

People

The group

- Thoughtful team selection
- Some with previous experiences of interdisciplinary work
- Trust
- It helps if one likes each other
- Consider the role of young scholars!



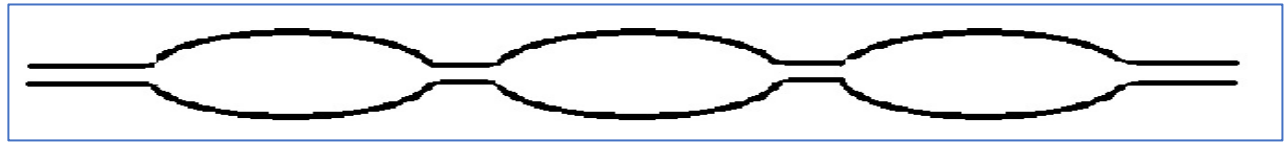
Personality

- **Listening skills** – willingness to learn and to be challenged
- **Attitude to cooperate** –not seeing differences as a problem
- **Curiosity** – desire to understand the reasons, motivations and hidden meanings behind what people say or how and why they conduct research the way they do
- **Flexibility** in approaches
- **Patience**, including developing insights in what might need to be explained to collaborators about one's own field
- **Interest in real world problems** and making an impact



Process

- Communication
- Time
- Plan for interactions
- Allow enough time early on for understanding differences
- Invest in team building and bonding
- Handle diverse ways of doing empirical work
- Handle different publication processes and authorship
- Skilled leadership
- Build on previous experiences
- Facilitators might be useful



Perspectives

Handle your differences



Perspectives

- Recognize different scientific cultures
- Respect each others disciplines and acknowledge disciplinary limitations
- A core challenge: the quant/qual divide

List of core indicators selected for use in IPBES

Aichi Target	Specific Indicator	DPSIR
4	Ecological Footprint	P
4	Water Footprint (Human appropriation of fresh water)	P
4	Percentage of Category 1 nations in CITES	R
5	Biodiversity Habitat Index	S
5, 12	Species Habitat Index	P,S
5	Forest area as a percentage of total land area	S
5	Trends in forest extent (tree cover)	S
5, 7, 14	Total wood removals	S,I
6	Trends in fisheries certified by the Marine Stewardship Council	R
6	Estimated fisheries catch and fishing effort	P
6	Proportion of fish stocks within biologically sustainable levels	S
6,14	Inland fishery production	S, I
6	Marine Trophic Index	S
7	Proportion of area of forest production under FSC and PEFC certification	R
7	Nitrogen Use Efficiency	P
7	Nitrogen + Phosphate Fertilizers (N+P205 total nutrients)	P
8	Trends in pesticide use	P
8	Trends in nitrogen deposition	P

A core challenge: the quant/qual divide

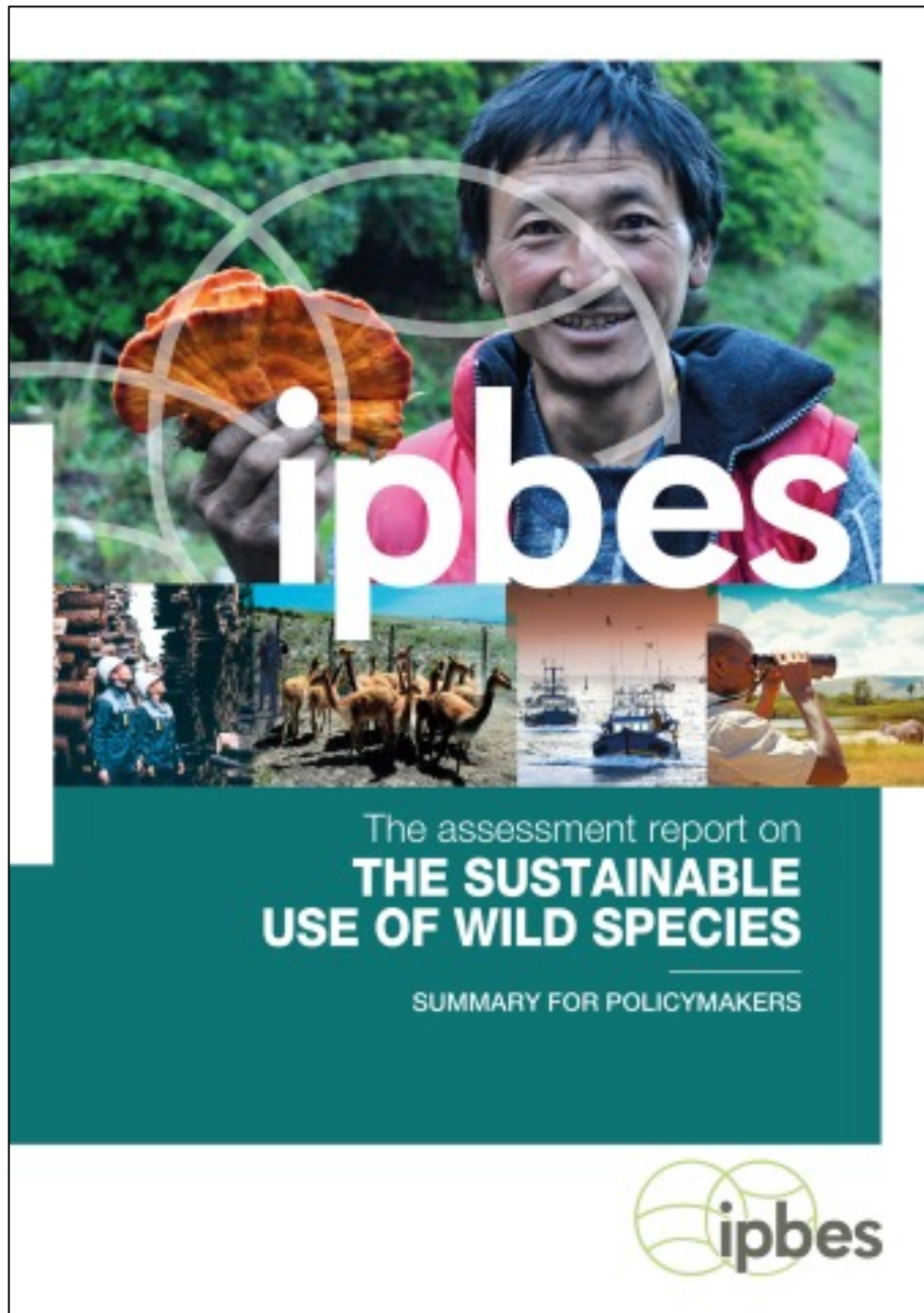


- *What's the answer to this question?*
- *Why is that the question you are asking?*

(after Campbell 2005)

Perspectives

- Recognize different scientific cultures
- Respect each others disciplines and acknowledge disciplinary limitations
- A core challenge: the quant/qual divide
- Take care of differences in terminologies



The assessment report on
**THE SUSTAINABLE
USE OF WILD SPECIES**

SUMMARY FOR POLICYMAKERS



What is 'wild'?

What is 'use'?

What is 'sustainable use'?

Perspectives

- Recognize different scientific cultures
- Respect each others disciplines and acknowledge disciplinary limitations
- A core challenge: the quant/qual divide
- Take care of differences in terminologies
- Be open for creativity and plural ways forward
- Strive for a framework where you meet

On concepts and frameworks

- Find out where you can meet intellectually on equal terms
- Possible 'arenas': Future, scale, time/temporality, practice, landscape,
- Risky concepts: drivers, modelling, system
- Do not get stuck – aim for **Boundary objects/ bridging concepts**

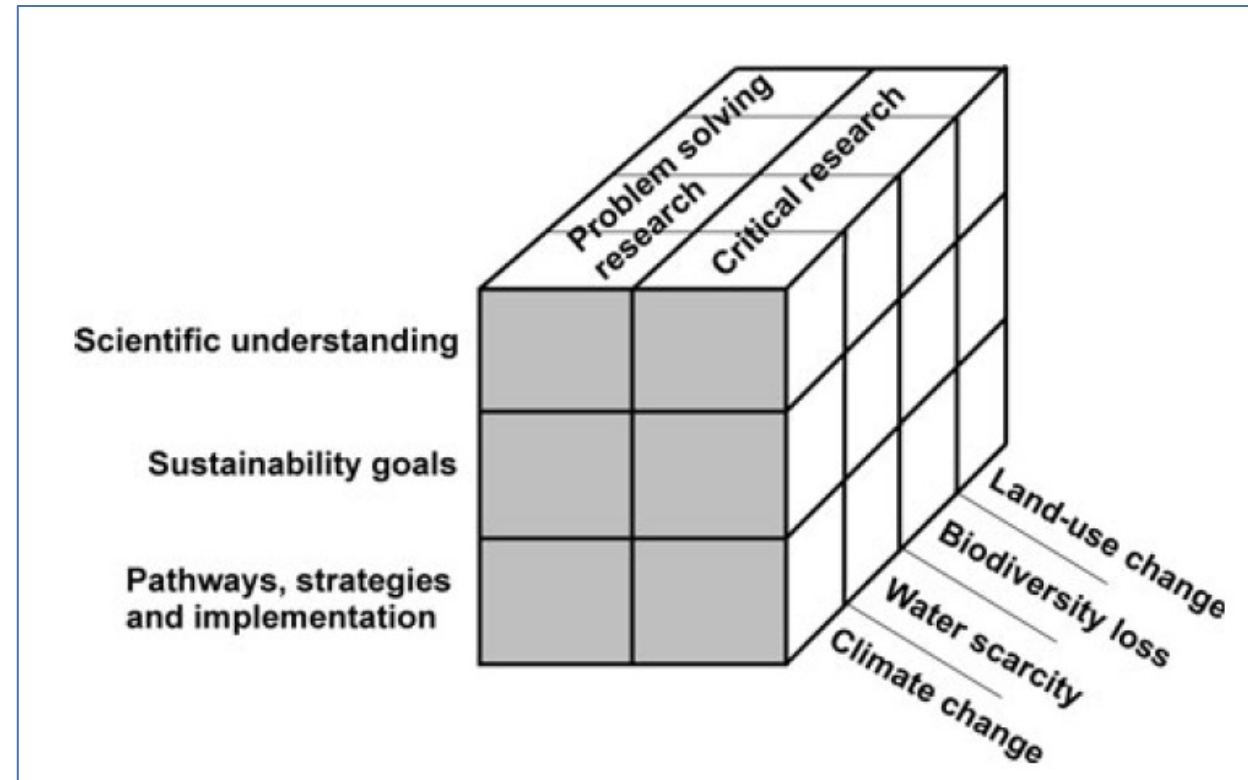
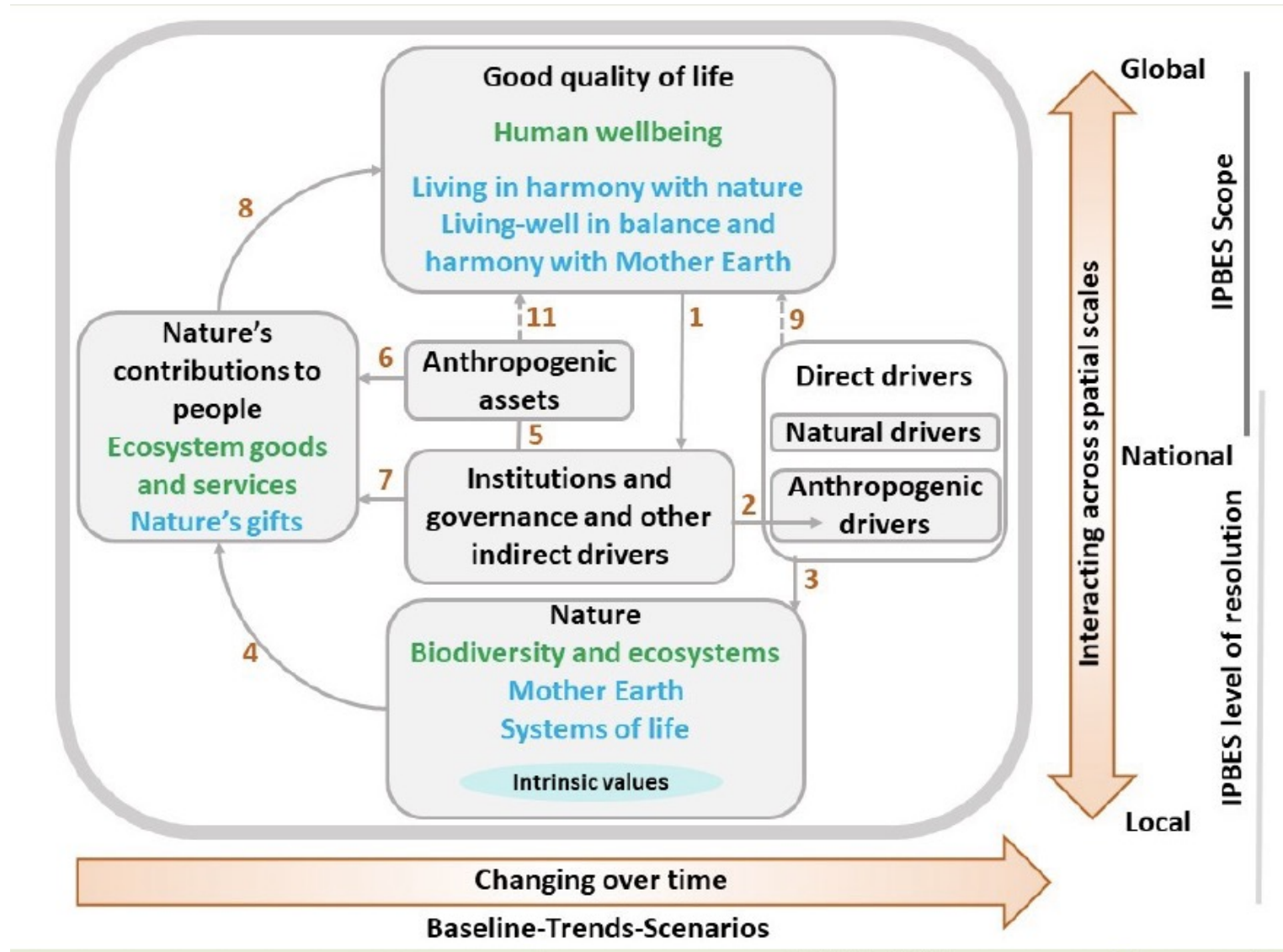


Figure from
LUCSUS

IPBES conceptual framework



More on interdisciplinarity:

<https://www.slu.se/en/research/future-platforms/interdisciplinarity/fordjupning/>



FUTURE
FOOD

The Interdisciplinary Academy at SLU –
an opportunity for digging into complex
challenges



FUTURE
FOOD

The Interdisciplinary Academy at SLU

- A forum for researchers from all faculties at SLU to collaborate across subject boundaries on current and complex issues
- The aim is to increase knowledge of and interest in interdisciplinary research among researchers at SLU, strengthen their ability to address research issues from an interdisciplinary and multidisciplinary perspective and facilitate collaborations between different departments.
- Thematic Groups (5-8 SLU researchers) get 20% time for 8 months, start 1 Nov.
- Webinars
- More activities to come

Webinar series on interdisciplinarity

2023-03-22: Lunch webinar "How interdisciplinarity has affected academic careers", Jessica Abbott, Senior Lecturer at Evolutionary Ecology, Lund

2023-03-29: Inspiration webinar, including matchmaking

2023-04-19: Inspiration webinar, including matchmaking

2023-04-26: Introduction to IDA, Marie Stenseke + IDA researchers

2023-05-03: Inspiration webinar, including matchmaking

2023-05-10: Inspiration webinar, including matchmaking

The lunch webinar series will continue 2023–2024