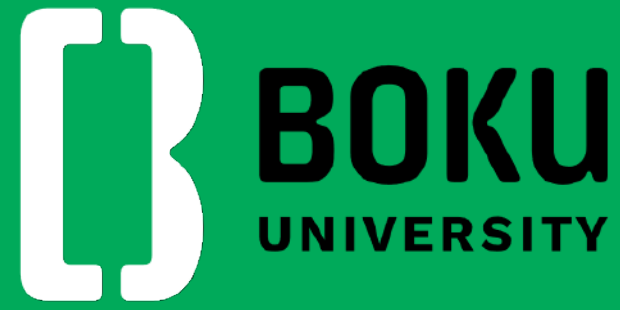




Social Ecology and Stakeholder Engagement in Socioecological Risk Analysis

IRISCC Training
24-26 June 2026, Vienna

Veronika Gaube, Nikolaos Nikolaidis, Thomas Thaler



WELCOME AT BOKU University, Institute of Social Ecology

...about BOKU & the Institute...

...about IRISCC....

...about this TRAINING...

...ORGANISATIONAL ISSUES...

...about the LECTURERES...

...about YOU...

Programme for the next 2,5 days

Wednesday, June 24th

9.00 - 13.00 Social Ecology and Stakeholder analysis

14.00 - 17.30 Risk assessment

Thursday, June 25th

9.00 - 13.00 Designing a co-creation process

14.00 - 17.30 Empirical examples of WEFEE

Friday, June 26th

9.00 - 13.00 Evaluation & Action Planning

Wednesday, June 24th

9.00-10.00 Setting the scene, getting to know each other(s projects)

10.00-10.45 Social Ecology & Inter- and Transdisciplinarity

10.45-11.00 BREAK

11.00-12.30 Exercise I – Stakeholder mapping

12.30-13.00 Plenary

13.00-14.00 LUNCH

14:00-15:00 Theoretical introduction: what is risk assessment

15:00-15:30 BREAK

15:30-16:00 Practical overview – how & which data can we collect

16:00-17:30 Exercise II – Risk assessment

Thursday, June 25th

9.00-10.30 Co-creation principles & tools

10.30-11.00 BREAK

11.00-12.30 Exercise III – Design your case study specific co-creation process

12.30-13.00 Plenary

13.00-14.00 LUNCH

14.00 – 15.00 A socio-ecological approach to combat desertification in Jordan valley – Strategic Planning for Jordan and Palestine

15.00 – 15.30 Group exercise on Community Capacity Assessment

15.30 – 16.00 *BREAK*

16.00 – 17.00 An integrated socio-techno-ecological framework to address desertification in Crete

17.00 – 17.30 Group exercise on Cognitive Dissonance

Friday, June 26th

9.00-09.45 Evaluation & action planning

09.45-11.30 Exercise IV – Role playing preparation (incl. break)

11.30-12.30 Role games

12.30-13.00 Feedback and Round-up

First exercise of this training: Stakeholder Persona Map

Pair in 4-5 groups

Each person interviews the partner:

- **The "What":** What is your core research area in simple, jargon-free terms?
- **The "Why":** Why does the public or an outside stakeholder care about your work?
- **The "Barrier":** What is the biggest challenge you face when explaining your research to non-academics?
- Is there a **project** that you would like to use as a case study for these exercises?

Map the grid...

Introduce your interview partner

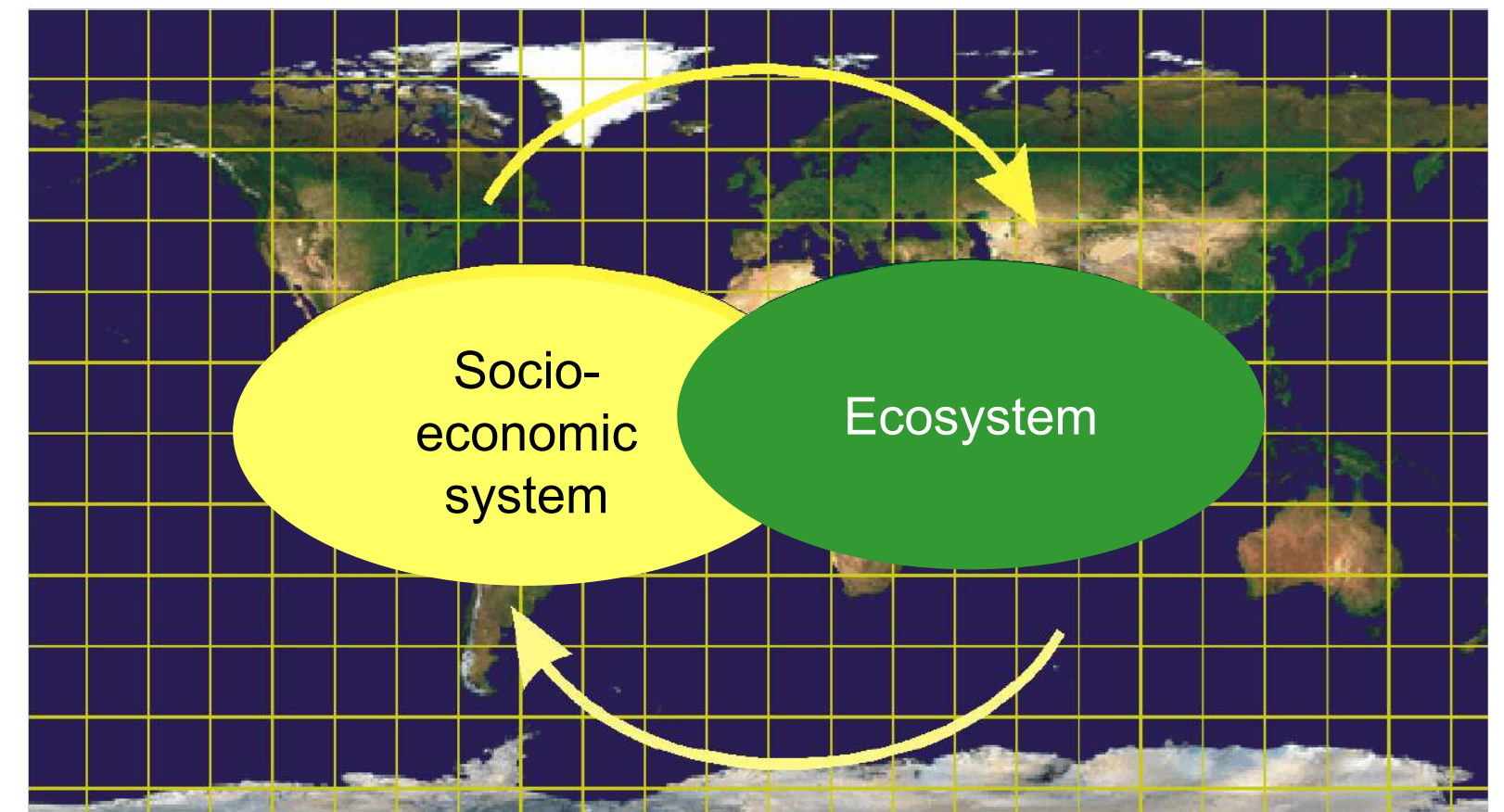
WHY: Motivation

Inter- and transdisciplinary sustainability science: emerging new fields

New interdisciplinary scientific fields concerned with human-nature interrelations seek to understand the interactions between nature and society and to encourage those interactions along more sustainable trajectories -> address real world problems

e.g. journals on: Human Ecology (1972), Environmental History (1975), Ecological Economics (1989), Political Ecology (1994), Industrial Ecology (2001):

- **Interdisciplinary across the *Great Divide*** (providing entry points for both natural and social scientists)
- How to conceptualize and understand society-nature relations?
- How to analyze and monitor them?
- Systems thinking (complex socio-ecological systems)
- Transformation research, analyzing actors and power relations
- **Transdisciplinary/participatory: working with stakeholders**
- They question prevailing paradigms



Sustainability research and transdisciplinarity

- Problems are not oriented along disciplinary boundaries → Interdisciplinary research
- Sustainability studies is oriented towards problems of everyday life → transdisciplinary research
- complex scientific results → problem solutions which can be communicated and implemented
- Involving actors in problem formulation and solution → Enables social action, makes knowledge effective

(Brand 2000)

Socio-ecological research

- **analyses** the **interaction** between social and natural systems
- **develops** conceptually and practically **information systems** on the environmental consequences of human activity
- Research on ecological and socio-economic aspects of sustainable development at local, national and global levels and **socio-ecological transformation**

<https://boku.ac.at/en/wiso/isec/research>

WHAT: principles of ID/TD cooperation and processes

Type of cooperation

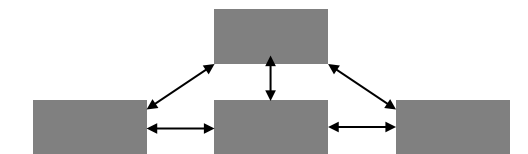
- **multidisciplinary**

Some questions can easily be broken down into sub-questions that can be worked on independently in the respective disciplines and whose combination requires only one discipline for synthesis.



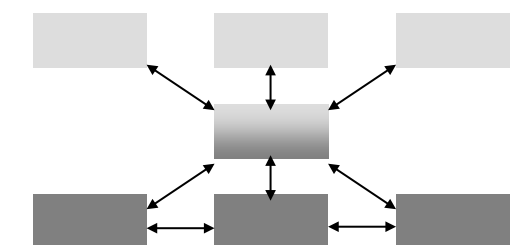
- **interdisciplinary**

Different disciplines influence each other mutually in the research process in order to develop a common result.



- **transdisciplinary**

Transdisciplinary research goes beyond the context of the science system and involves systems that follow a different logic: This can be "the art" as well as the social system of a village. What is important here is that the scientists do not simply show or sell "results", but that these results are based on a common process of understanding.





Scientific disciplines

Economics
Sociology
Political
Sciences
Biology/Ecology
Health sciences
.....

Problem fields

Poverty
Food security
Diseases
Land
degradation
Climate change
Sustainability

Actors in life-world

Public agencies
Private sector
Consumers
Civil society
Media
.....

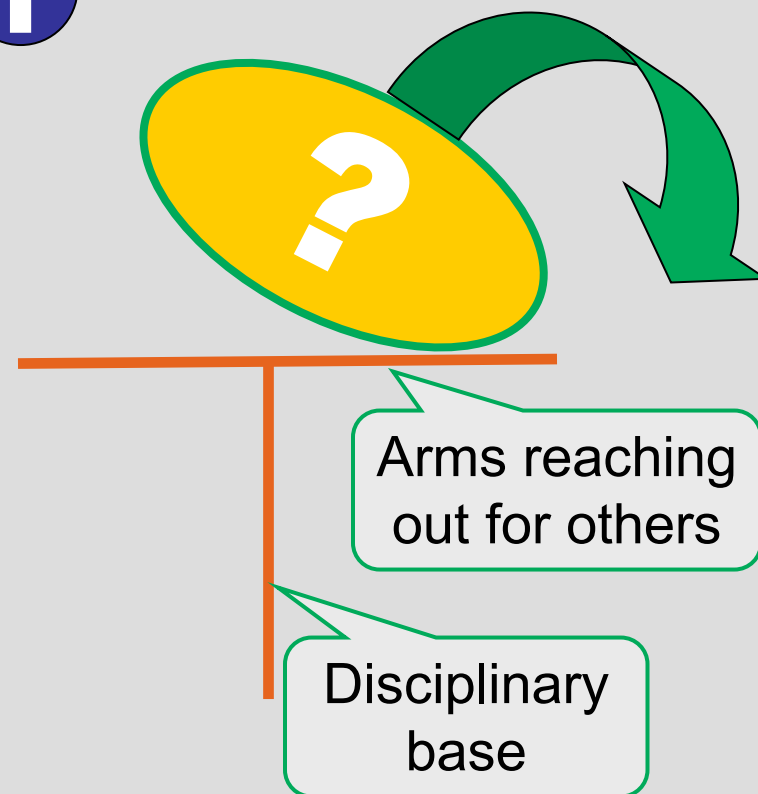
**Problem fields do not obey boundaries
neither of scientific disciplines nor of actors in the life-world**

S



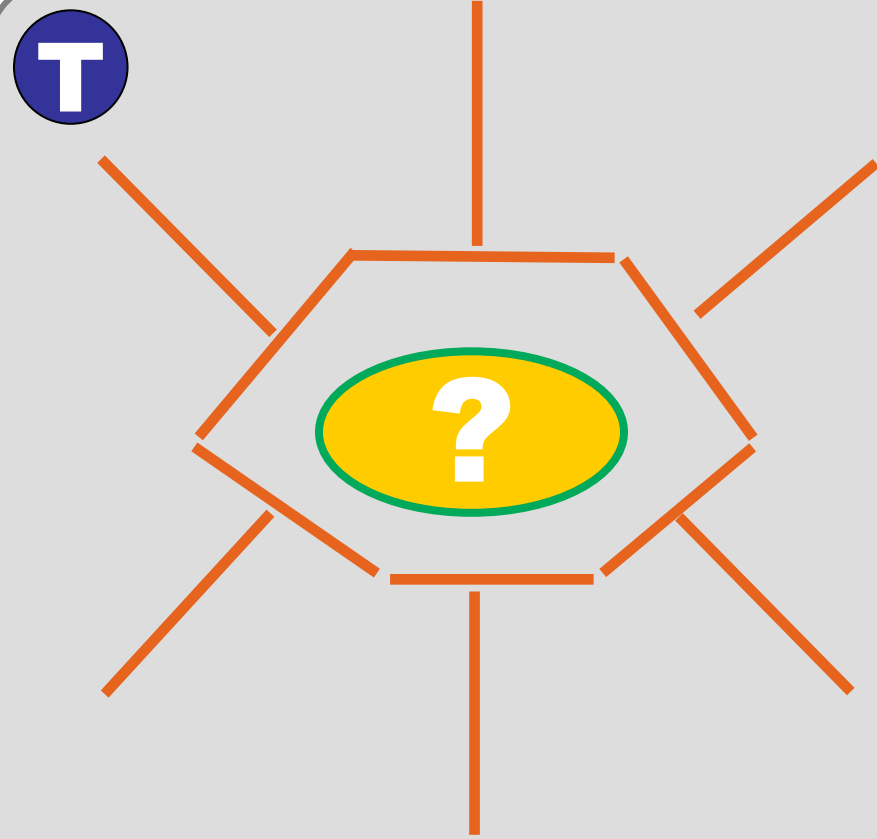
A scientist from a **single discipline** lacking interdisciplinary competencies **might spear the problem**

T

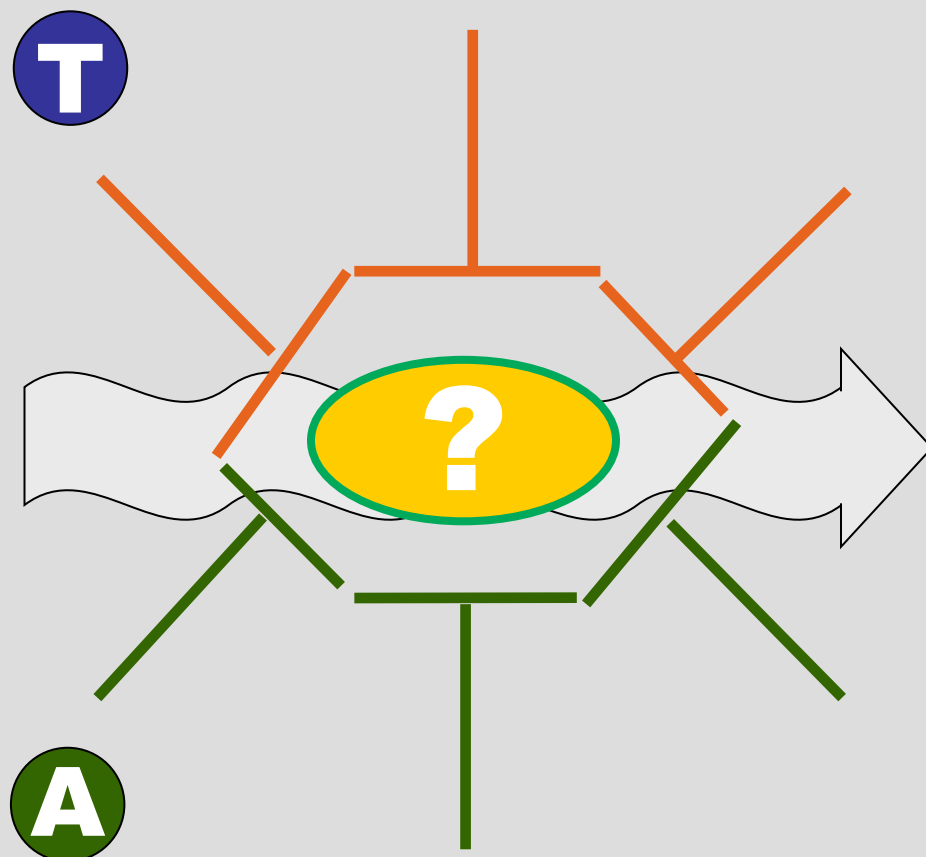


A scientist with interdisciplinary **T-competencies** can develop a wider problem understanding, but the **problem might fall off**

Source: iff-tradition (see Dressel 2014)



An **interdisciplinary team** can approach the problem from different sides, but **problem understanding stays within science**



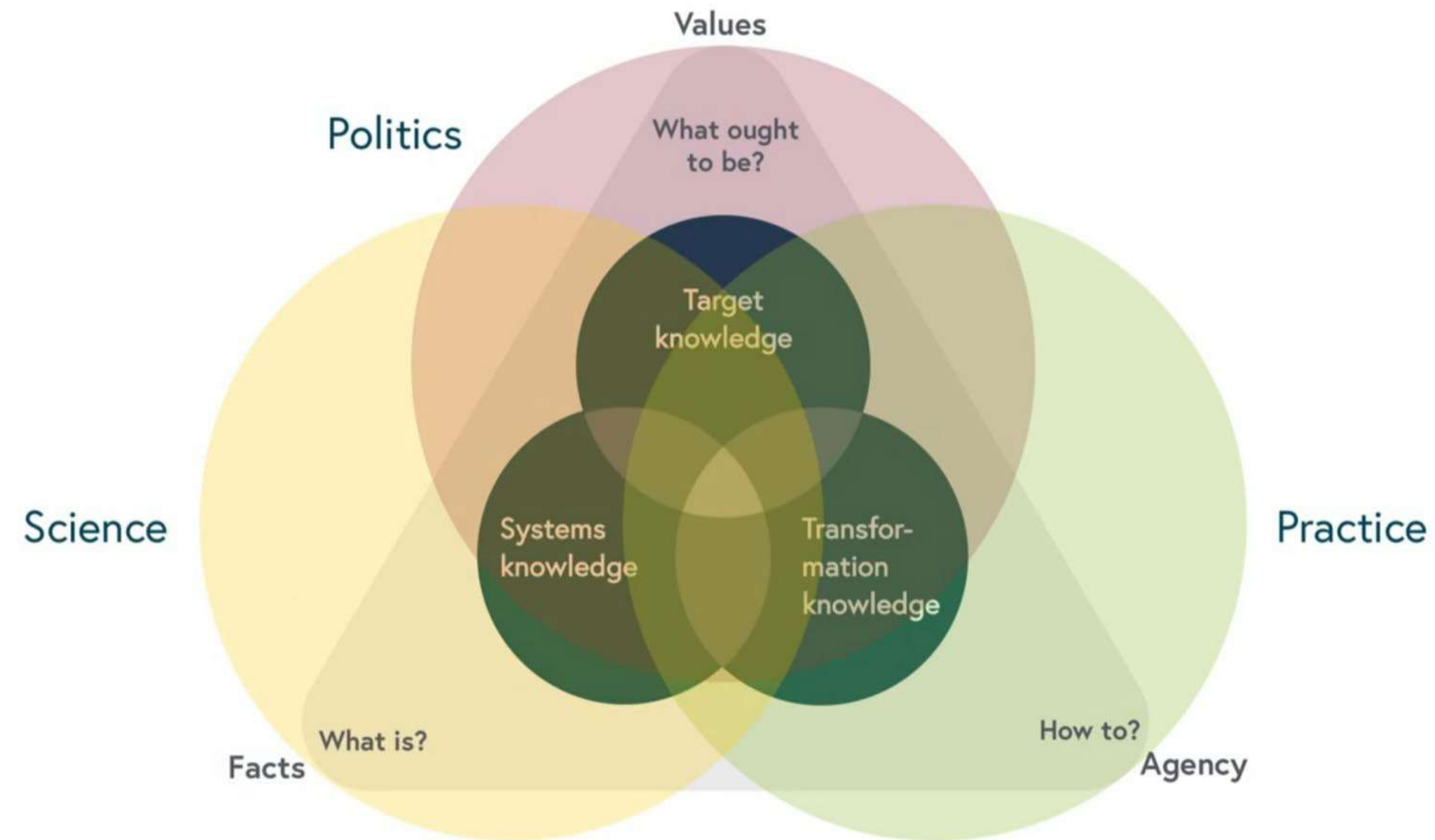
Probability that knowlegde will become effective in life-world increases if problem understanding is generated in a **smart and interactive process** between interdisciplinary teams and various actors from the life-world

Sustainability research and transdisciplinarity

Transdisciplinary research focuses on societal problems aiming at producing **three types of knowledge**:

- (1) **System knowledge**: analytical and descriptive knowledge about the actual state of a system
- (2) **Target knowledge**: describes knowledge about desired future developments of the system
- (3) **Transformation knowledge**: knowledge about how we can move from the actual to the more desirable state

(Jahn, 2012, Td-net website, Leuphana)

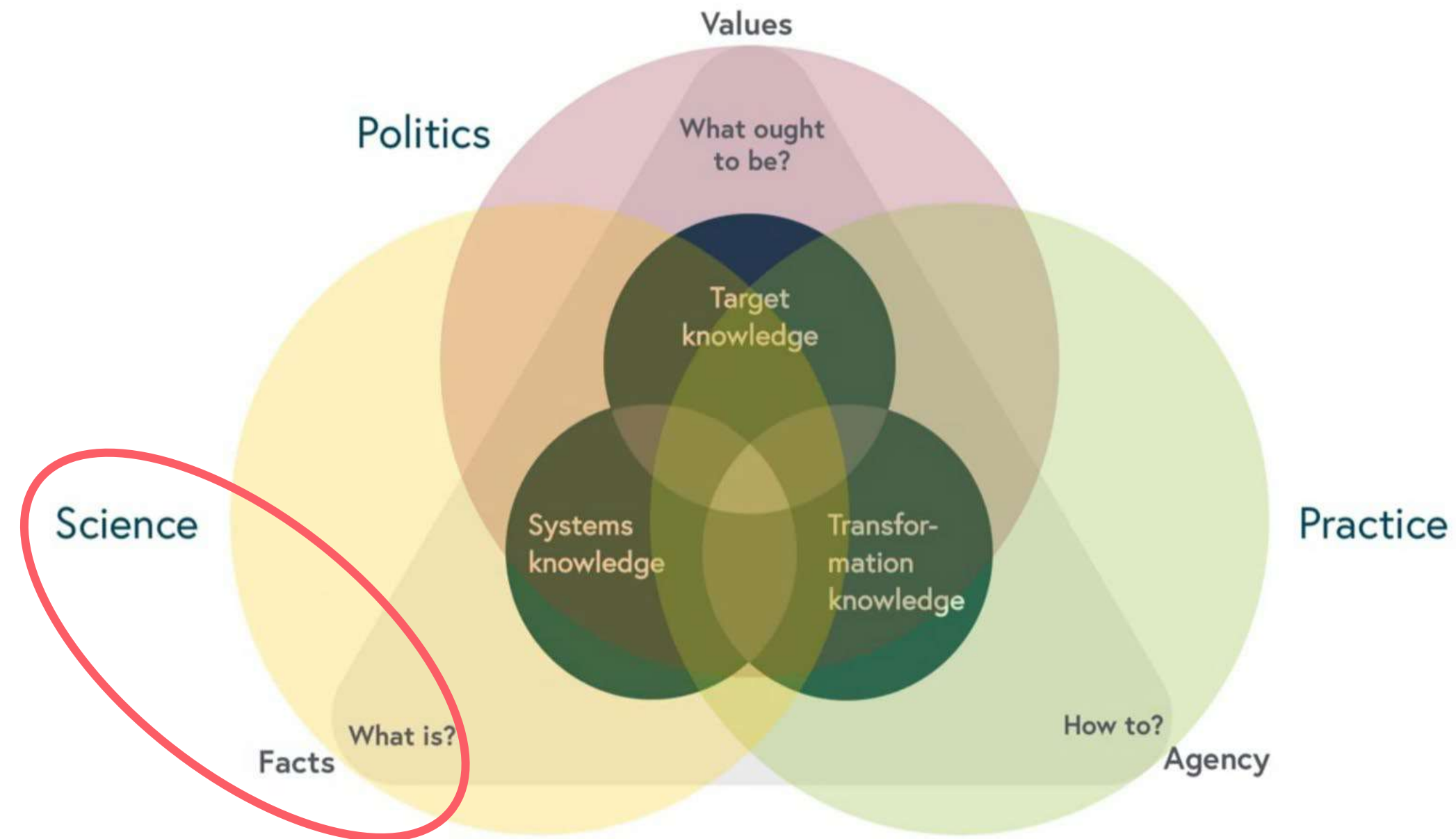


Sustainability research and transdisciplinarity

Transdisciplinary research focuses on societal problems aiming at producing **three types of knowledge**:

- (1) **System knowledge**: analytical and descriptive knowledge about the actual state of a system
- (2) **Target knowledge**: describes knowledge about desired future developments of the system
- (3) **Transformation knowledge**: knowledge about how we can move from the actual to the more desirable state

(Jahn, 2012, Td-net website, Leuphana)

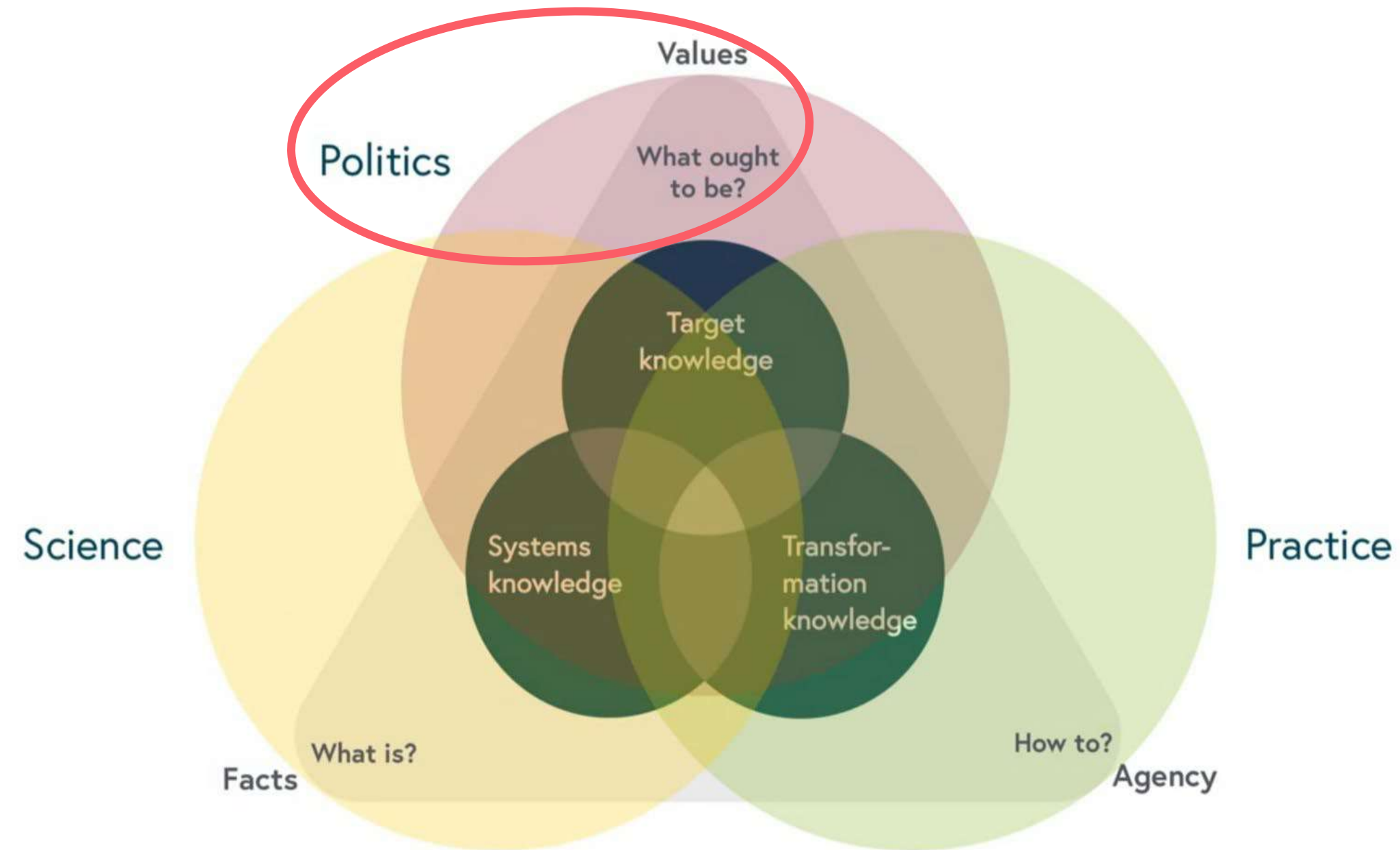


Sustainability research and transdisciplinarity

Transdisciplinary research focuses on societal problems aiming at producing **three types of knowledge**:

- (1) **System knowledge**: analytical and descriptive knowledge about the actual state of a system
- (2) **Target knowledge**: describes knowledge about desired future developments of the system
- (3) **Transformation knowledge**: knowledge about how we can move from the actual to the more desirable state

(Jahn, 2012, Td-net website, Leuphana)

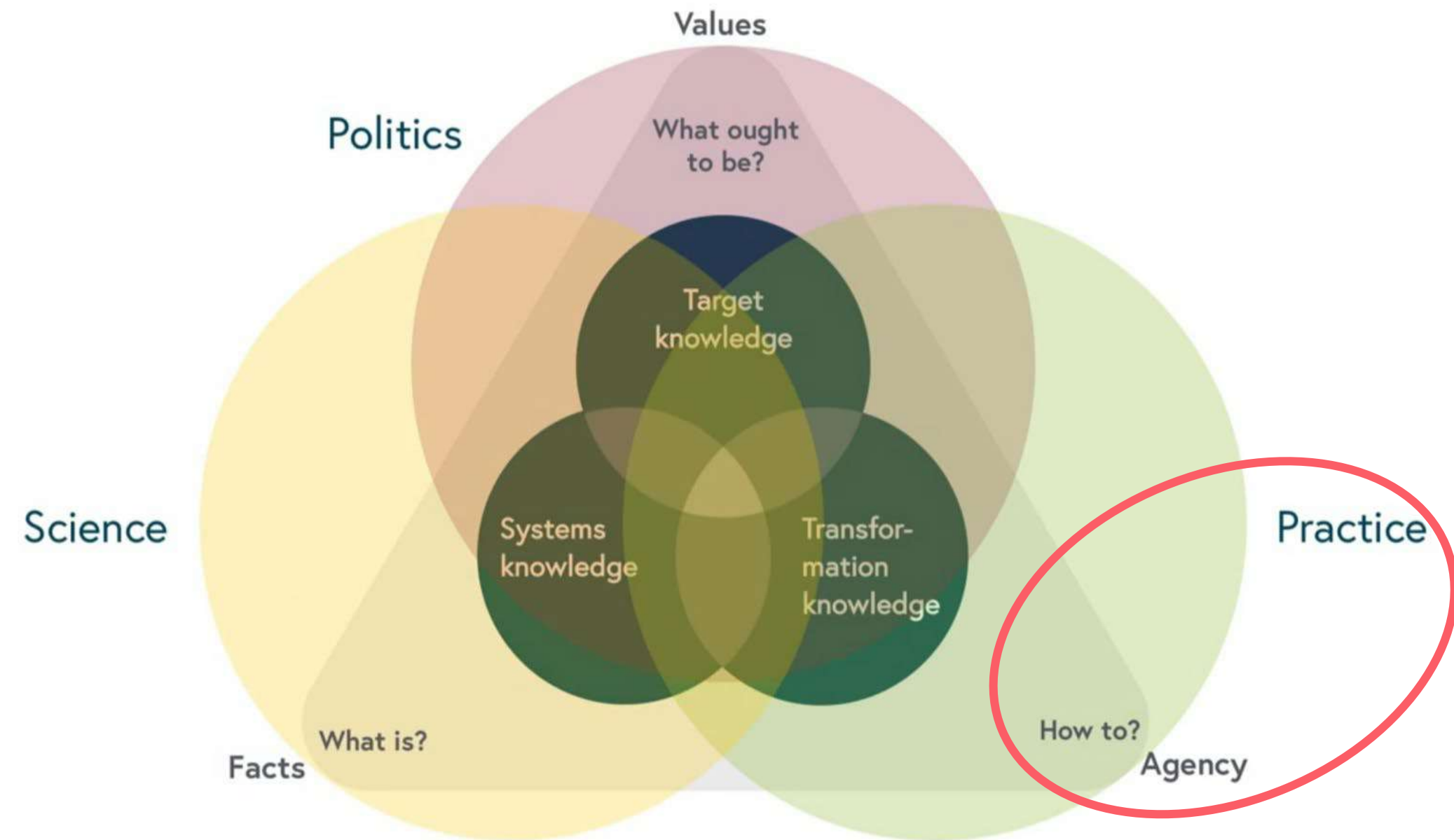


Sustainability research and transdisciplinarity

Transdisciplinary research focuses on societal problems aiming at producing **three types of knowledge**:

- (1) **System knowledge**: analytical and descriptive knowledge about the actual state of a system
- (2) **Target knowledge**: describes knowledge about desired future developments of the system
- (3) **Transformation knowledge**: knowledge about how we can move from the actual to the more desirable state

(Jahn, 2012, Td-net website, Leuphana)

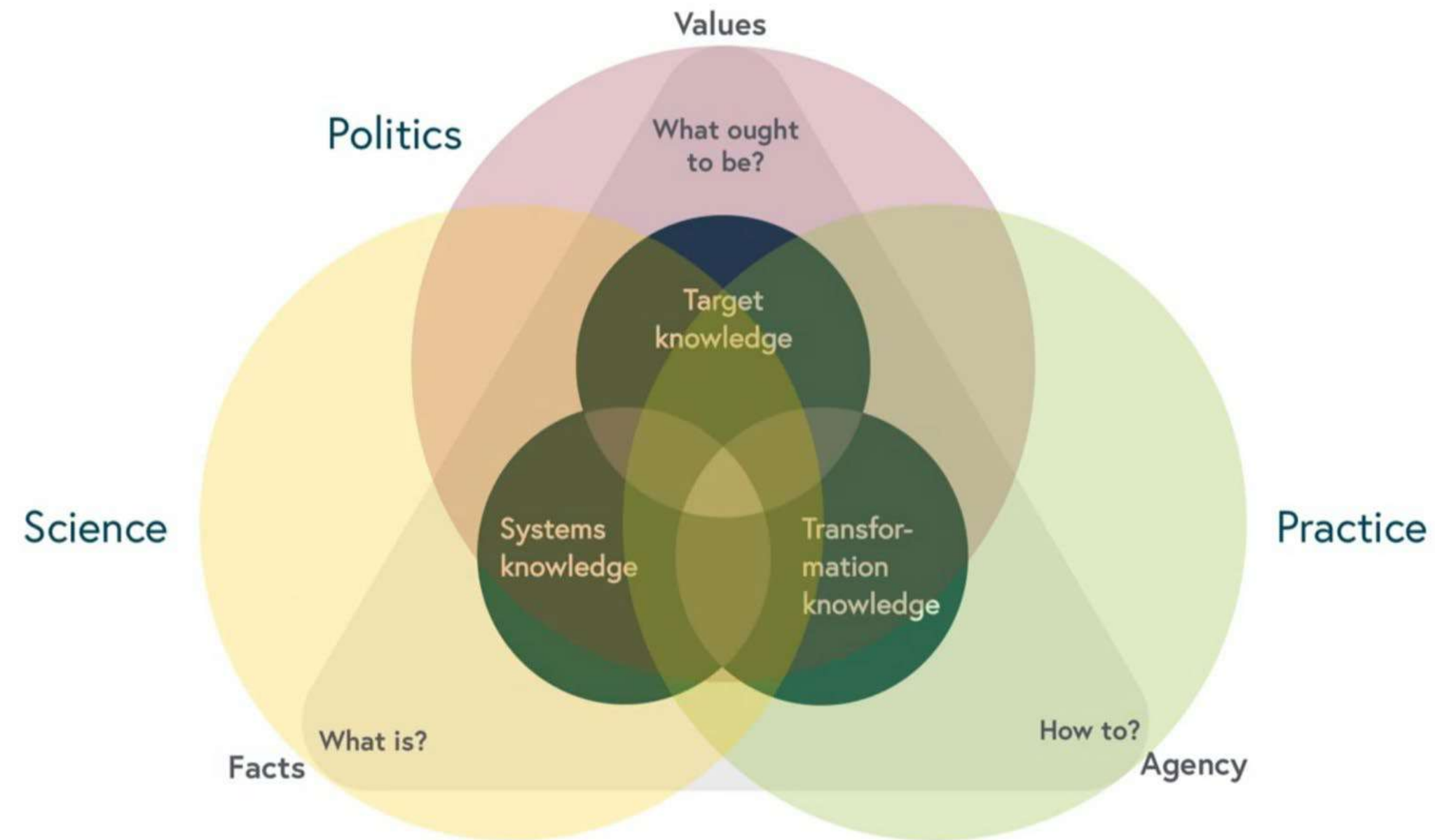


Sustainability research and transdisciplinarity

Transdisciplinary research focuses on societal problems aiming at producing **three types of knowledge**:

- (1) **System knowledge**: analytical and descriptive knowledge about the actual state of a system
- (2) **Target knowledge**: describes knowledge about desired future developments of the system
- (3) **Transformation knowledge**: knowledge about how we can move from the actual to the more desirable state

(Jahn, 2012, Td-net website, Leuphana)



Transformative Research

- wants to actively support and shape social change
- succeeds when it opens up to the wider society.
- The research process is understood as an active cooperation between science and society (transdisciplinarity).

Goals:

- To challenge society through courageous and sometimes uncomfortable questions
- Active cooperation with pioneers of change (change agents)
- Positive role models through climate-friendly research
- Promoting free exchange of knowledge and ideas in society

(WBGU 2012)

HOW: methods and tools

Steps of Stakeholder Engagement

Stakeholder engagement is the systematic process of identifying, analyzing and collaborating with individuals or groups affected by or able to influence a project

Goals:

- build trust,
- align objectives,
- reduce project risks through continuous, meaningful two-way communication

Steps of Stakeholder Engagement

Core steps:

- Identify and assess stakeholders
- Map and classify Stakeholders
- Develop an Engagement Plan
- Execute and Communicate
- Monitor, evaluate and adapt

What is a stakeholder?

- Any party who may have an interest in an activity or could be affected by its outcomes
- They play important roles in projects and organizations, but they are not equally involved or affected

What is a stakeholder analysis?

- Process of identifying and analyzing the stakeholders that are likely to affect or be affected by a particular project

Exercise I - Stakeholder mapping

First step

Identify all stakeholders involved in the project by brainstorming

Write down every person, group, or institution related to your project.

Group them into logical categories