TELOS *goes* **LoLa**

Welcome & Introduction

13.10.2025
16 00 – 18 00 CET

AMERICAN UNIVERSITY OF BEIRUT
UNIVERSITAT POLITÈCNICA DE VALÈNCIA
Hochschule für Wirtschaft und Umwelt Nürtingen-Geislingen
LE:NOTRE Institute
Linking Landscape Education, Research and Innovative Practice
ULB Faculté d'Architecture La Cambre Horta
SAPIENZA UNIVERSITÀ DI ROMA
POLITECHNIKA GDAŃSKA

Co-funded by the Erasmus+ Programme of the European Union

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Welcome! **Why?** **How?** **What to do** **Next steps** **Q&A**

LoLa stands for: Local Landscape System Labs

Our transnational partnership 2025-2028

W e l c o m e

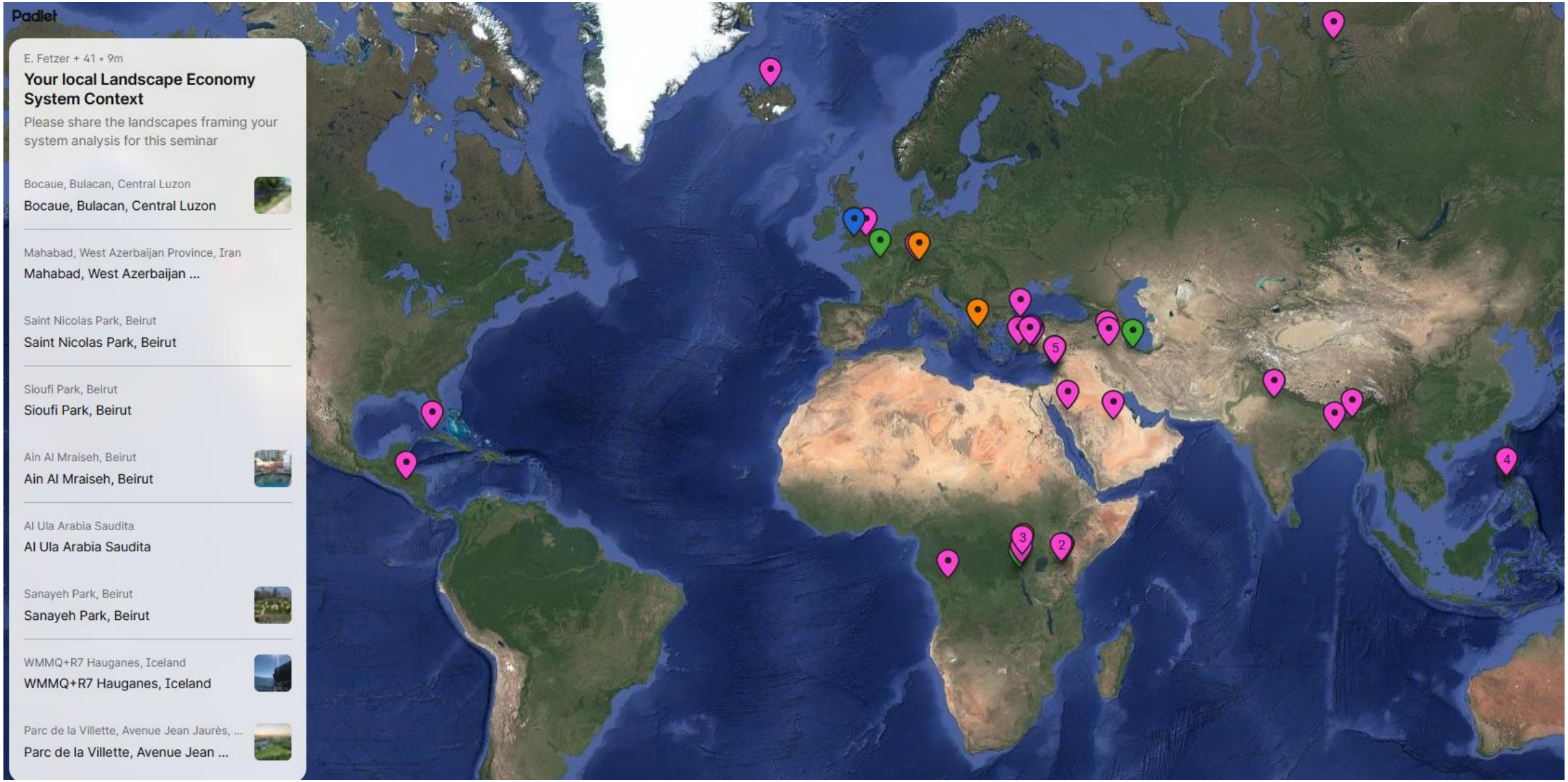
Guimarães Competition Site

https://forum.ln-institute.org/international-student-competition-2025-2026

Meet our team: https://telos.hfwu.de/index.php?title=TELOS_Team

Form Europe into the world: Let‘s take a look at our Padlet

https://padlet.com/ellenfetzer/your-local-landscape-economy-system-context-tmbqyeedlc6dyqe4



How about your individual landscape economy?

Why is it relevant?

econ·o·my | \ i-ˈkä-nə-mē , ə-, ē- \
plural economies

Definition of *economy*
1**:** the structure or conditions of economic life in a country, area, or period also**:** an economic system

2**: thrifty and efficient use of material resources**

3**:** the arrangement or mode of operation of something**:** organization

4: archaic**:** the management of household or private affairs and especially expenses

https://www.merriam-webster.com/dictionary/economy

From Ancient Greek οἰκονομία (oikonomía, “management of a household, administration”), from οἶκος (oîkos, “house”) + νέμω (némō, “distribute, allocate”)

https://en.wiktionary.org/wiki/economy

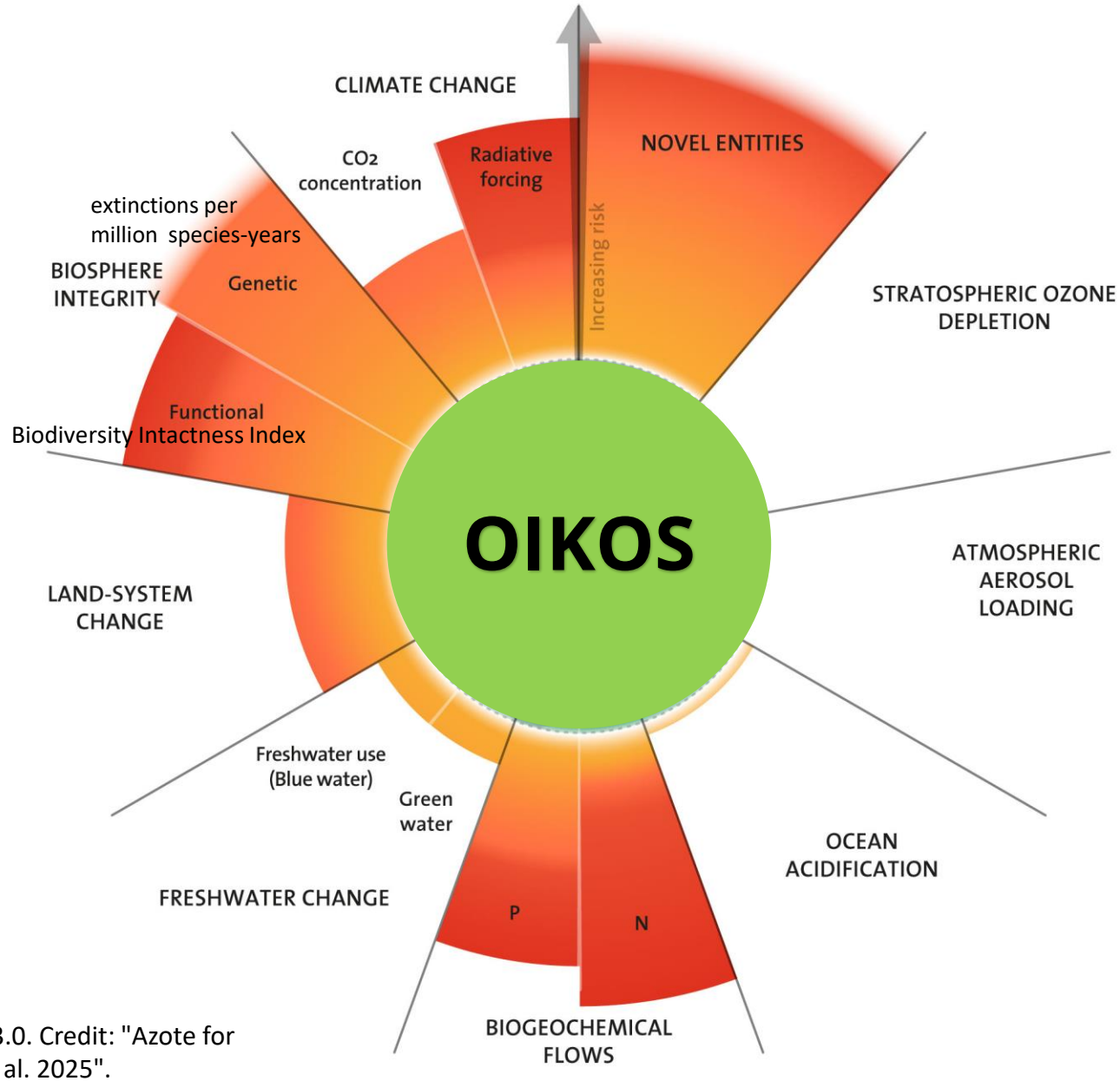
Thinking landscape through economy
Thinking economy through landscape

Why is it relevant?

Planetary Boundaries

As conceived by the Stockholm Resilience Centre

September 2025: 7 of 9 boundaries crossed



Economy is….
thrifty and efficient use of material resources

But for **how long** and at what **real prize**?

Richardson et al: Earth beyond six of nine planetary boundaries, 2023#https://www.science.org/doi/10.1126/sciadv.adh2458
The 2025 update to the Planetary boundaries. Licensed under CC BY-NC-ND 3.0. Credit: "Azote for Stockholm Resilience Centre, based on analysis in Sakschewski and Caesar et al. 2025".

Thinking landscape through economy
Thinking economy through landscape

Why is it relevant?

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We have this agenda, but….after all it is yet another ***growth*** agenda

https://sdgs.un.org/goals

Thinking landscape through economy
Thinking economy through landscape

Why is it relevant?

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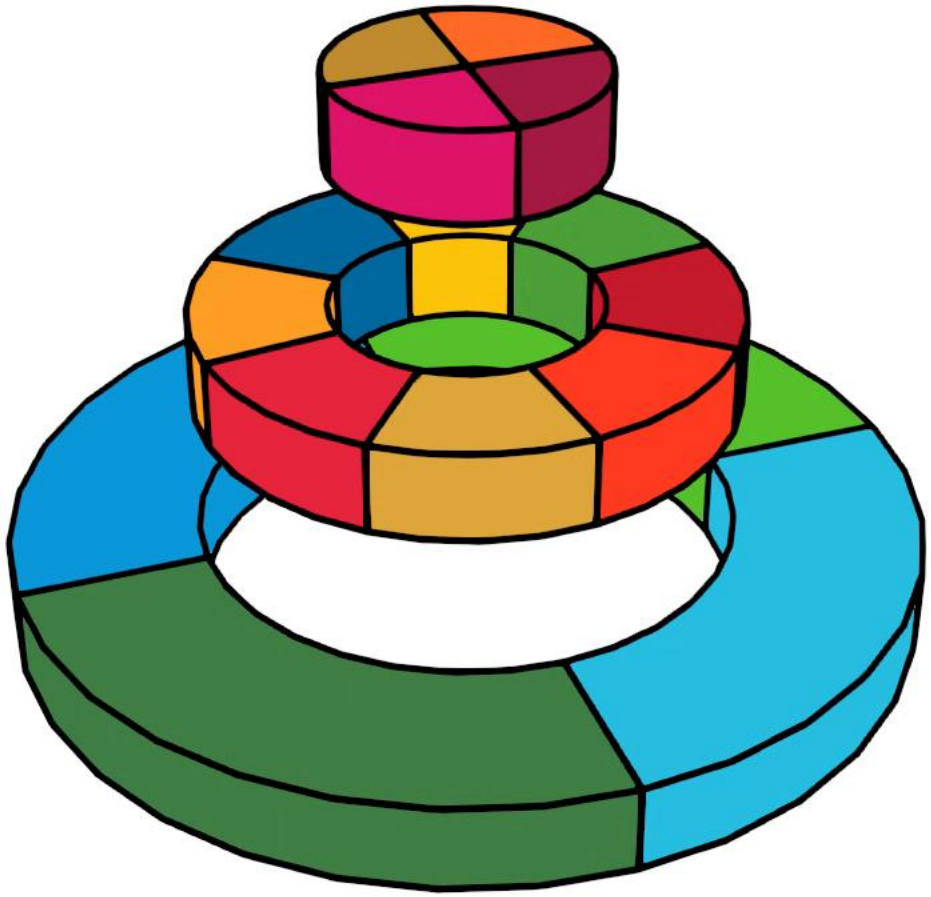
The Sustainable Development Goals

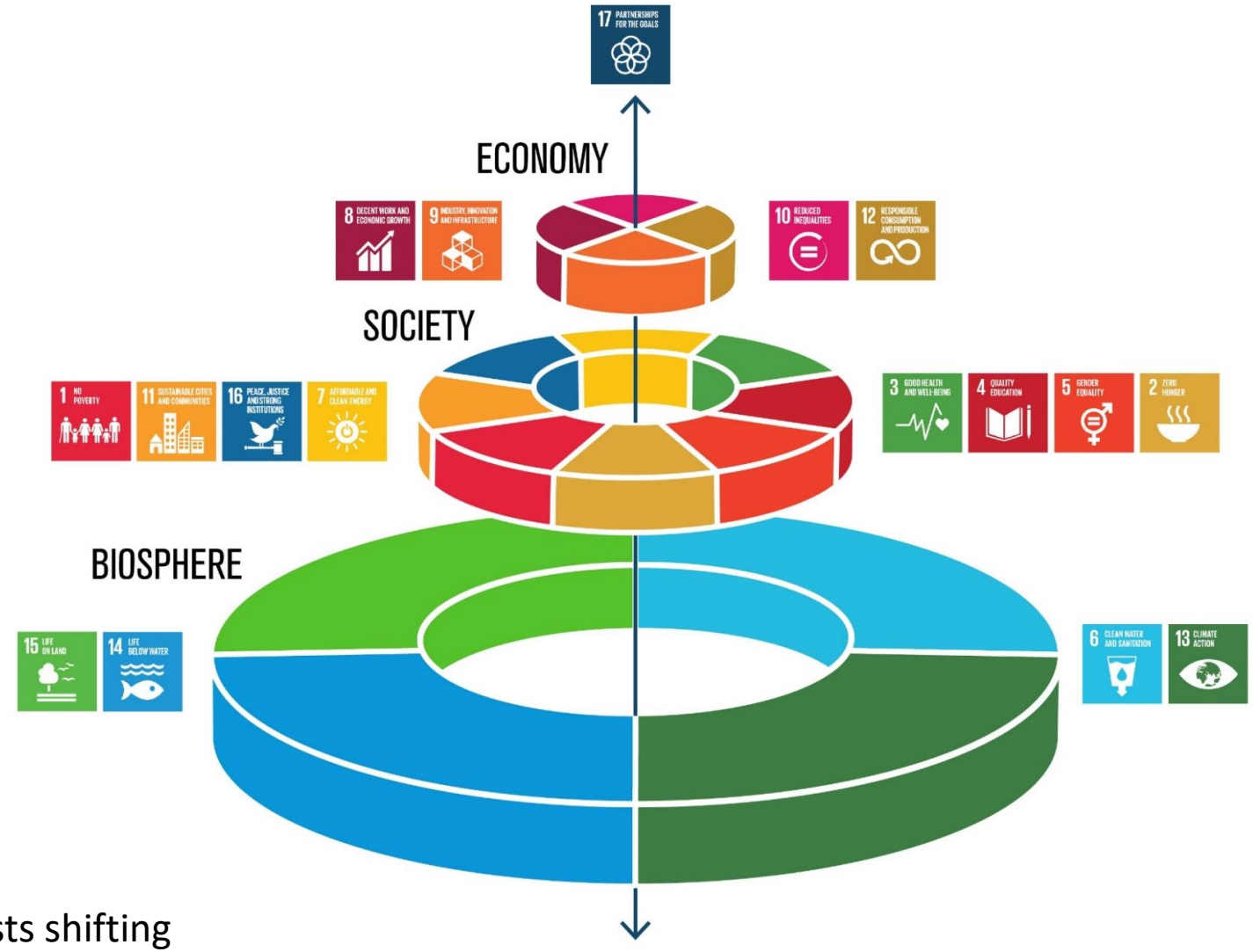


Stockholm Centre suggests shifting the priorisation of the SDGs in favour of our planetary boundaries

https://www.stockholmresilience.org/research/research-news/2016-06-14-the-sdgs-wedding-cake.html

Thinking landscape through economy
Thinking economy through landscape

Why is it relevant?



Stockholm Resilience Centre suggests shifting
the priorisation of our SDGs towards our planetary boundaries

https://www.stockholmresilience.org/research/research-news/2016-06-14-the-sdgs-wedding-cake.html

Thinking landscape through economy
Thinking economy through landscape

Why is it relevant? >>> Because we translate sustainability to concrete territorial contexts

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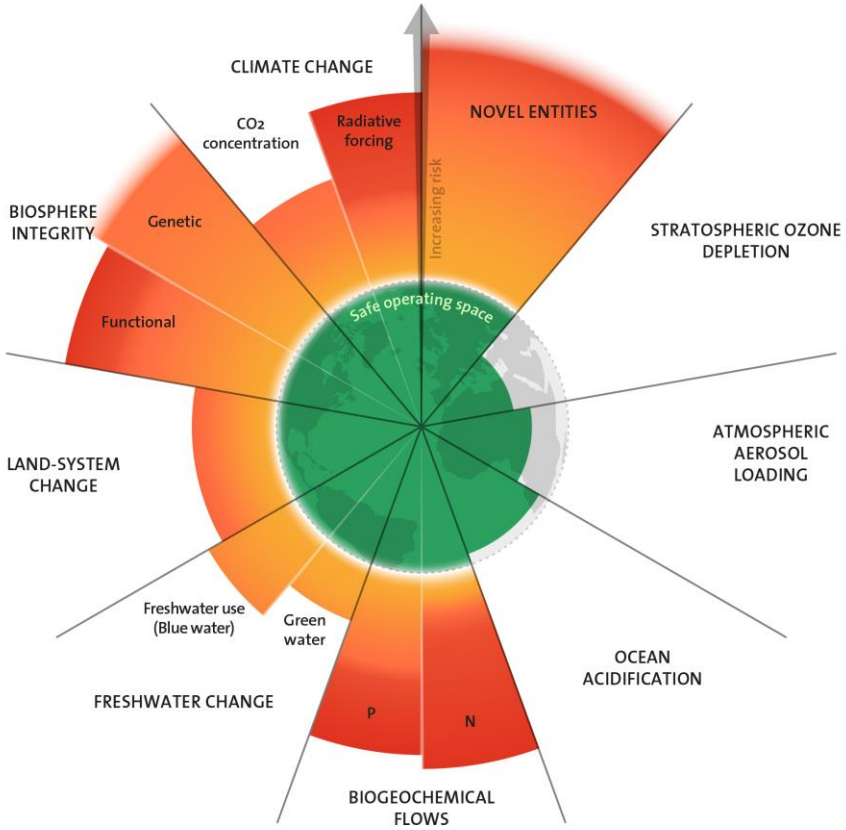
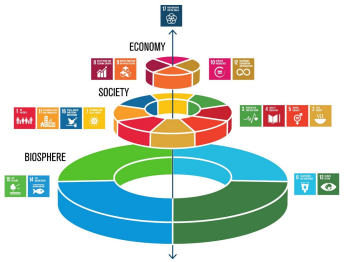


There is quite a long road ahead. Let's go…..

https://upload.wikimedia.org/wikipedia/commons/7/74/The_Long_Road_Ahead.jpg

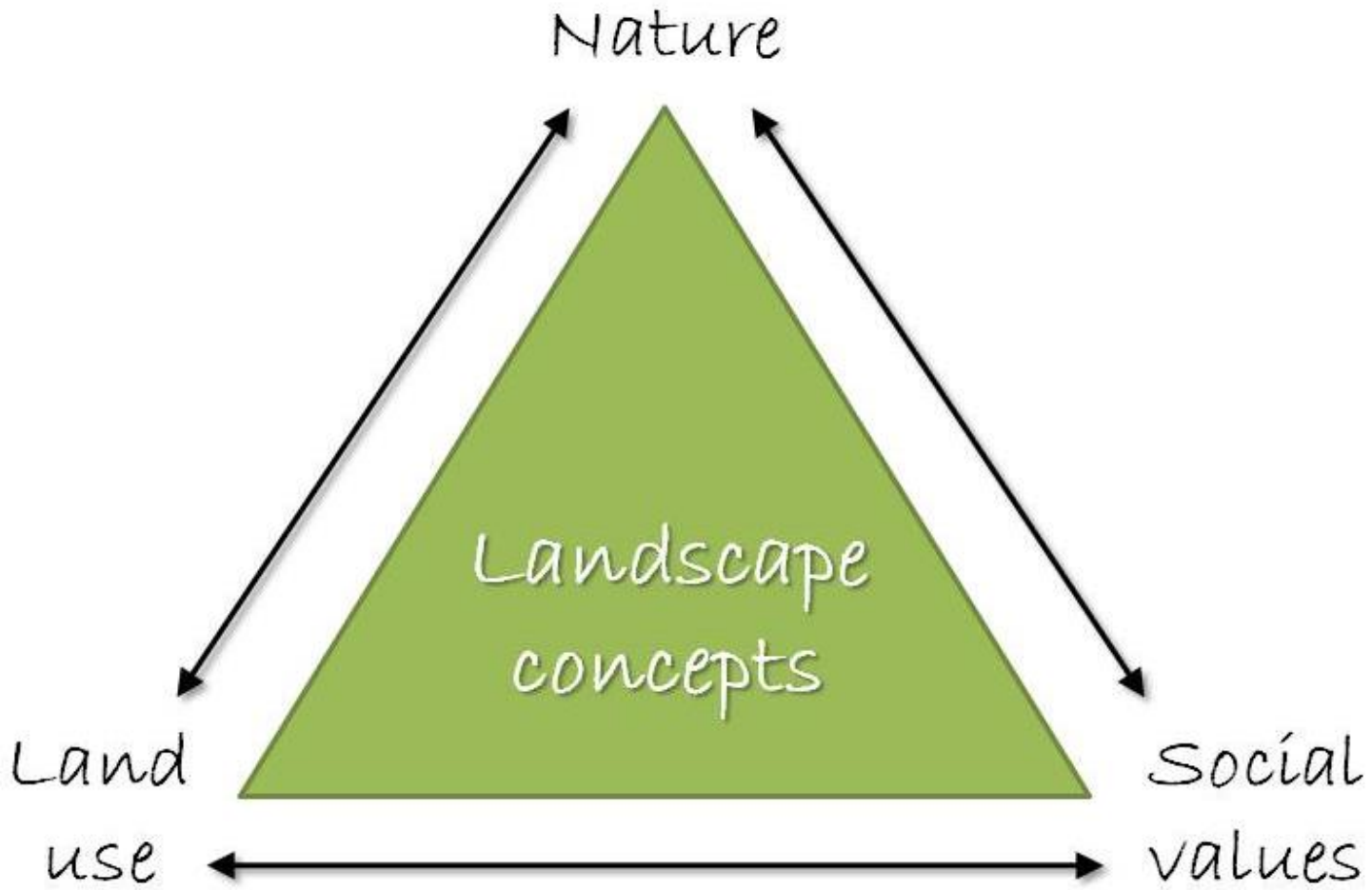
Exploring the concept of landscape

What does landscape mean to you?



Neckar Valley, Stuttgart, Obertürkheim, Germany

Landscape is a (pretty useful) meta-concept.
It allows us to study diverse system relationships in a given territory
THE landscape concept does not exist.
There are multiple conceptualisations coexisting and the determinants vary.



Visual follows Detlev Ipsen, Ort und Landschaft, 2006

Thinking landscape through economy
Thinking economy through landscape

Why is it relevant?

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Article 1 –Definitions

A "Landscape" means an area, **as perceived by people**, whose character is the result of the action and interaction of natural and/or human factors.

Article 2 –Scope

… this Convention applies to the entire territory of the Parties and covers **natural, rural, urban and peri-urban areas**. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as **everyday** or **degraded landscapes**.

Attention:
The Council of Europe is **NOT** the European Union

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What is economy?

Let’s use our Menti again:

Scan QR code or use this link:
https://www.menti.com/alkerg4sfvzf

Or use voting code

Menti.com >>> 4865 4756

Economy, Economics and Business (administration)

The „**economy**“ consists of institutions, machines and people that generate and regulate **supply and demand**. Institutions are all private households, all small and large companies and enterprises as well as institutions of a state. Simplified, one can say: All those who generate (produce), distribute and consume goods or services belong to the national economy.

More generally, one could say that economy is about **securing** and **generating values** of any kind.

How to deal scientifically with the economy.

- **Economics** is a branch of economic science that deals with macroeconomic issues. It considers the various interactions between all actors involved in the economic process. **> Focus on the system as a whole.**
- **Business administration** is a branch of economic science and describes the management, control and organization of an **economic operation or company** and is fundamentally based on the assumption that goods are scarce and therefore an economic approach to these very goods is required. The aim of business administration is to describe, explain and support decision-making processes in private, non-governmental or even governmental organizations. **> Focus on the individual institution.**

Ford Pinto – business or ethics?

At the end of the 1960s, Ford developed a new small car (Ford Pinto). It was supposed to be economic and cheap (price limit: US$ 2,000). During the test phase, it became apparent that the fuel tank had a serious defect. In collisions above 40 km/h, there was a great danger that the fuel tank would rupture and the vehicle would burst into flames. The passengers were therefore exposed to the risk of being burned alive without being informed of this. The following comparative calculation was then made:

	cost of fuel tank improvement	**cost of accidents**
costs	11 mio cars à 11 US$ 1,5 mio trucks à 11 US$	180 burned people à 200 th. US$ 180 injured people à 167 th. US$ 2.100 destroyed cars à 700 US$
sum	137 mio US$	49,5 mio US$

It was only after 60 people had died and over 120 had been seriously injured that the Pinto was finally withdrawn from the market.

Knoepffler, Angewandte Ethik, S. 179ff; Suchanek, Ökonomische Ethik, p. 129-131.

What do we learn from the case „Ford Pinto“?

Economics and business administration are first and foremost social sciences. The research and its recommendations are very much dependent on which image of humanity one uses as a basis.

Human motivation patterns:

1. **Homo economicus**: people maximize their individual, profit-driven material benefits.
2. **Homo laborans:** people strive not only for material rewards but also for self-fulfilment.
3. **Homo reciprocans**: people (also) have altruistic / cooperative motives.

Influences on (rational) behavior

1. **Bounded rationality**: people have limited cognitive abilities and limited access to information.
2. **Homo sociologicus**: people are influenced by social norms & ties & cultural values.

What does economic research teach us?

1. Economy is largely self-referential. Decisions are mostly **profit-oriented** and geared to **individual, material benefits**.
2. However, there is increasing **social pressure** on companies and consumers to take social and, more and more also environmental aspects into account when making consumption and investment decisions
3. A sustainable influence on economic actors can be achieved by changing the **legal framework** (e.g. setting a minimum wage) and by **economic incentives** (e.g. CO_2 certificates).

https://www.stockholmresilience.org/research/research-news/2016-06-14-the-sdgs-wedding-cake.html

Existing Economic systems

	Central administration economy	Socialist market economy	Social market economy	Capitalist market economy
targets	fulfillment of central plans	income principle partial profit principle	profit driven with social interventions	profit principal
countries	Cuba (formerly: USSR, GDR)	China	Germany most western countries	USA (not 100% ...)
price mechanism	fixed by state	state controlled partly market prices	market price partly state intervention	market price (supply and demand)
means of production	state owned	partly private owned	mostly private owned	private

- Most of the world's countries are on a continuum between social & capitalist market economy.
- There are hardly any countries that explicitly include ecological considerations in the design of their economic systems. This is most pronounced in Western/Northern Europe (Sweden, Norway, Denmark, the Netherlands, Germany, Austria). These countries are on a path toward an **eco-social market economy**.

Principles of social market economy

- **Freedom of Competition:**
  - Private ownership of means of production & profit motive as incentive to perform
  - The price arises from the relationship between supply and demand on the market

  > Social market economy is primarily based on the capitalist system!

However, this is limited, especially in its social effects, by further principles.

- **Social Principle**
  - Market economy should ensure that everyone can find work and provide for themselves
  - The state provides social security (pension, health, social insurance)
  - Social assistance for those who can no longer help themselves
- **Economic Policy Principle**
  - The state creates framework conditions for growth to ensure prosperity
  - Fluctuations in economic development are to be avoided
- **Market Conformity Principle**
  - The state establishes economic rules and controls them without interfering in the market.
  - e.g. freedom of contract, free price formation, independent central bank, autonomy of tariffs

GDP: How to measure the succecss of an economy?

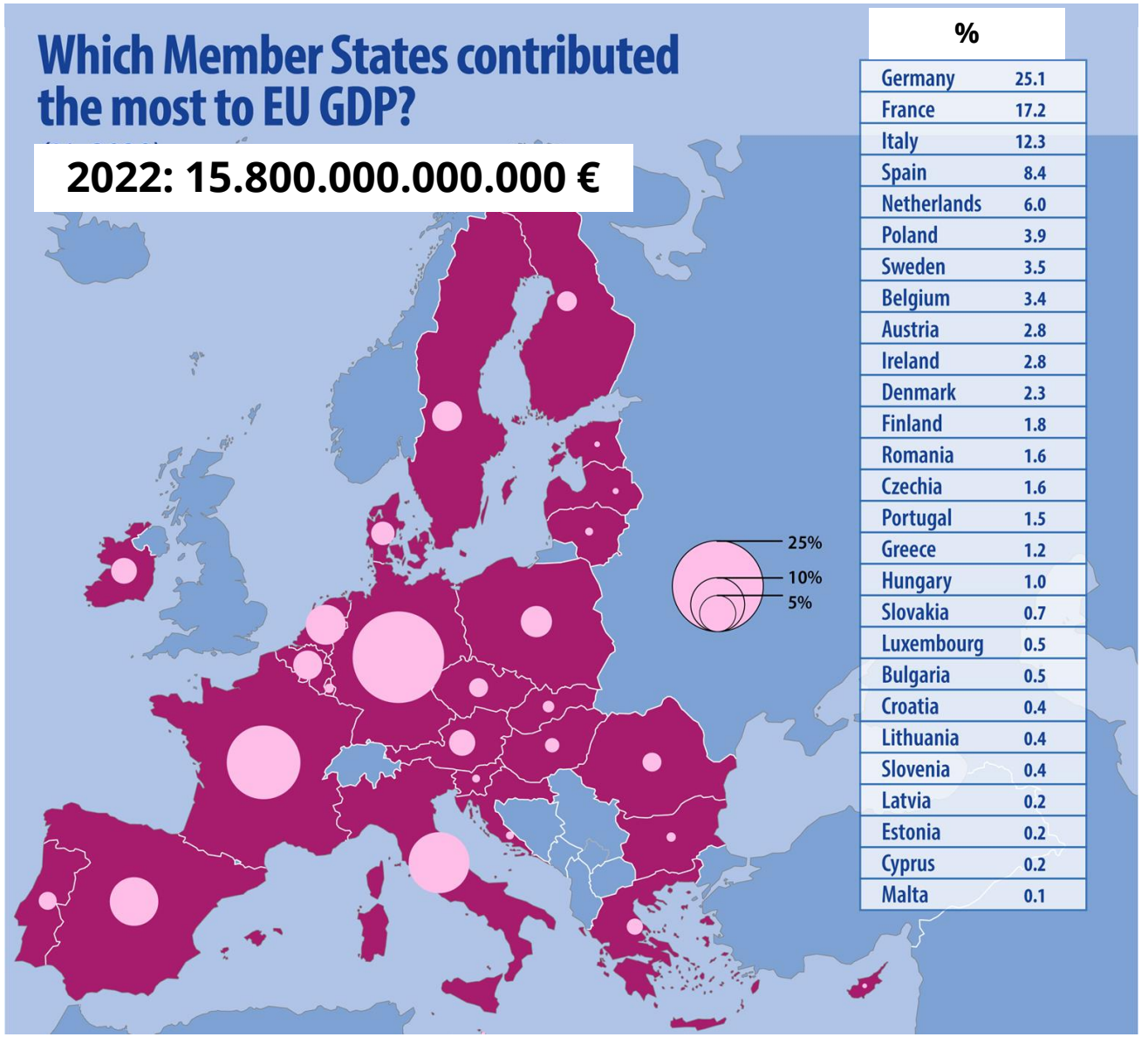
Gross domestic product (**GDP**) is a monetary measure of the value of all produced goods and services in a period.

GDP is used to measure the performance of an economy or the welfare of a country.

Europe GDP 2022: 15.8 trillion euros

There is relevant **criticism** of the GDP:

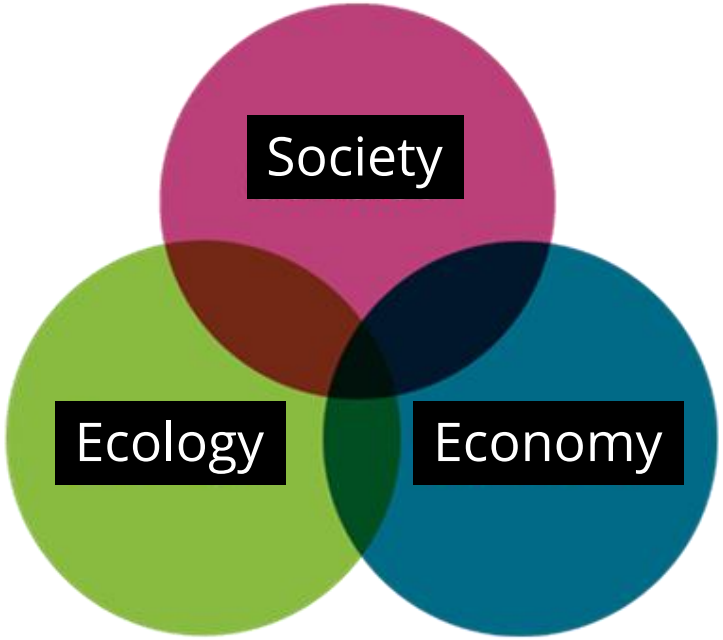
- important services of an economy are not reflected (e.g. services in private households like health care).
- GDP is also increased by unsustainable activities (e.g. drug use, militarisation or consequences of accidental disasters like floods etc.).
- It does not map distributive justice – in a country, across countries, and with future generations in mind
- It is a material measure. Whether people are personally well off (happy?) is not considered.

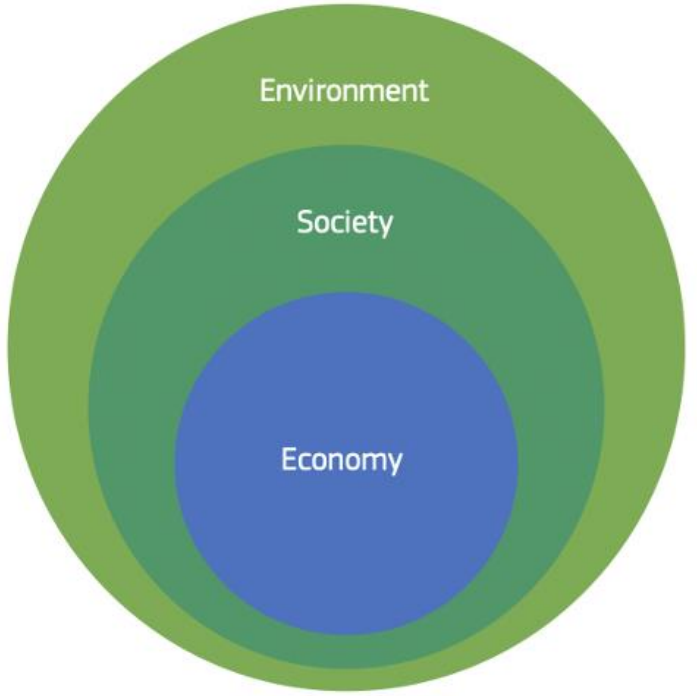


	%
Germany	25.1
France	17.2
Italy	12.3
Spain	8.4
Netherlands	6.0
Poland	3.9
Sweden	3.5
Belgium	3.4
Austria	2.8
Ireland	2.8
Denmark	2.3
Finland	1.8
Romania	1.6
Czechia	1.6
Portugal	1.5
Greece	1.2
Hungary	1.0
Slovakia	0.7
Luxembourg	0.5
Bulgaria	0.5
Croatia	0.4
Lithuania	0.4
Slovenia	0.4
Latvia	0.2
Estonia	0.2
Cyprus	0.2
Malta	0.1

https://ec.europa.eu/eurostat/de/web/products-eurostat-news/-/ddn-20211220-1

In which world do we (want to) live?

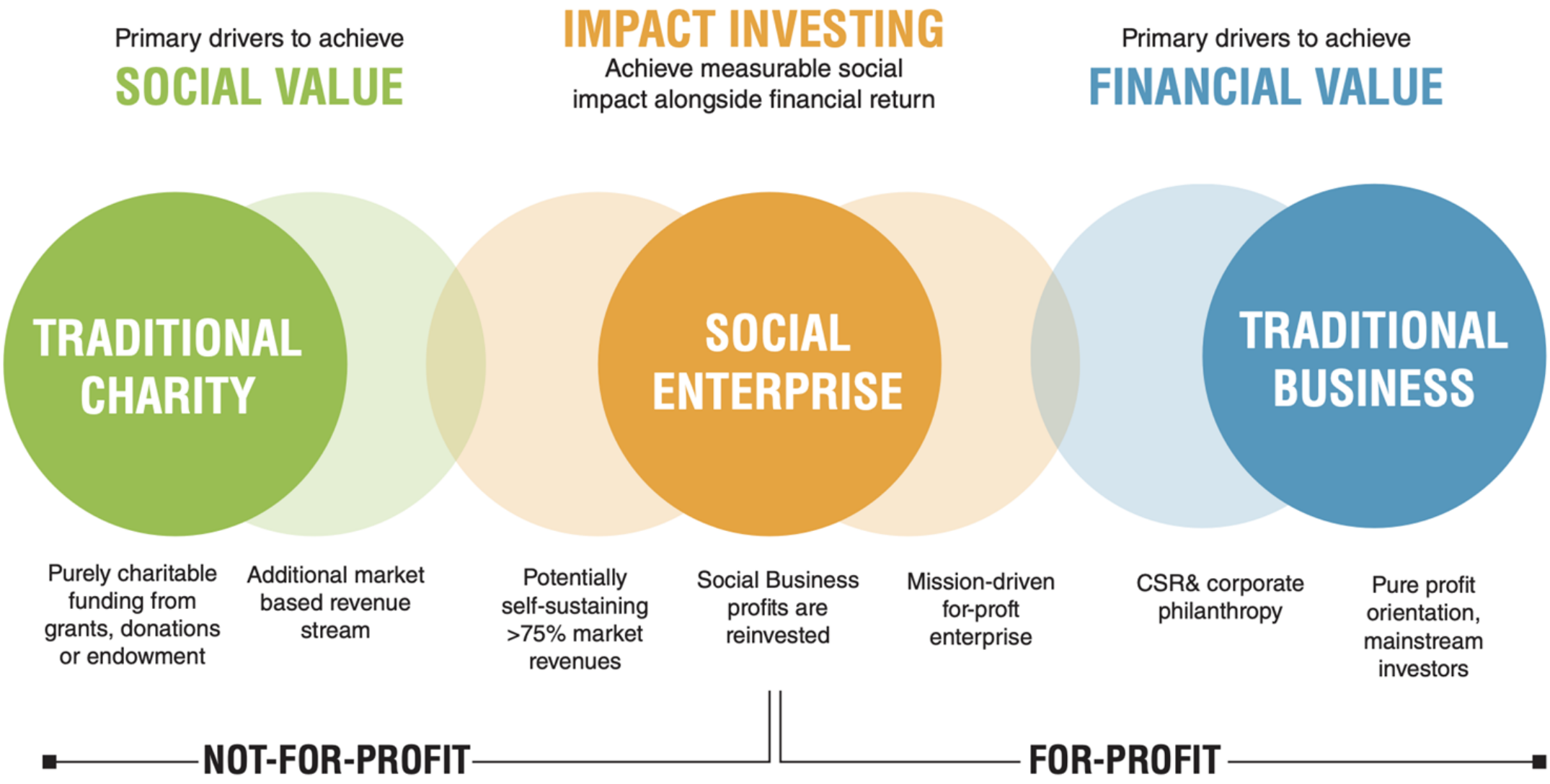




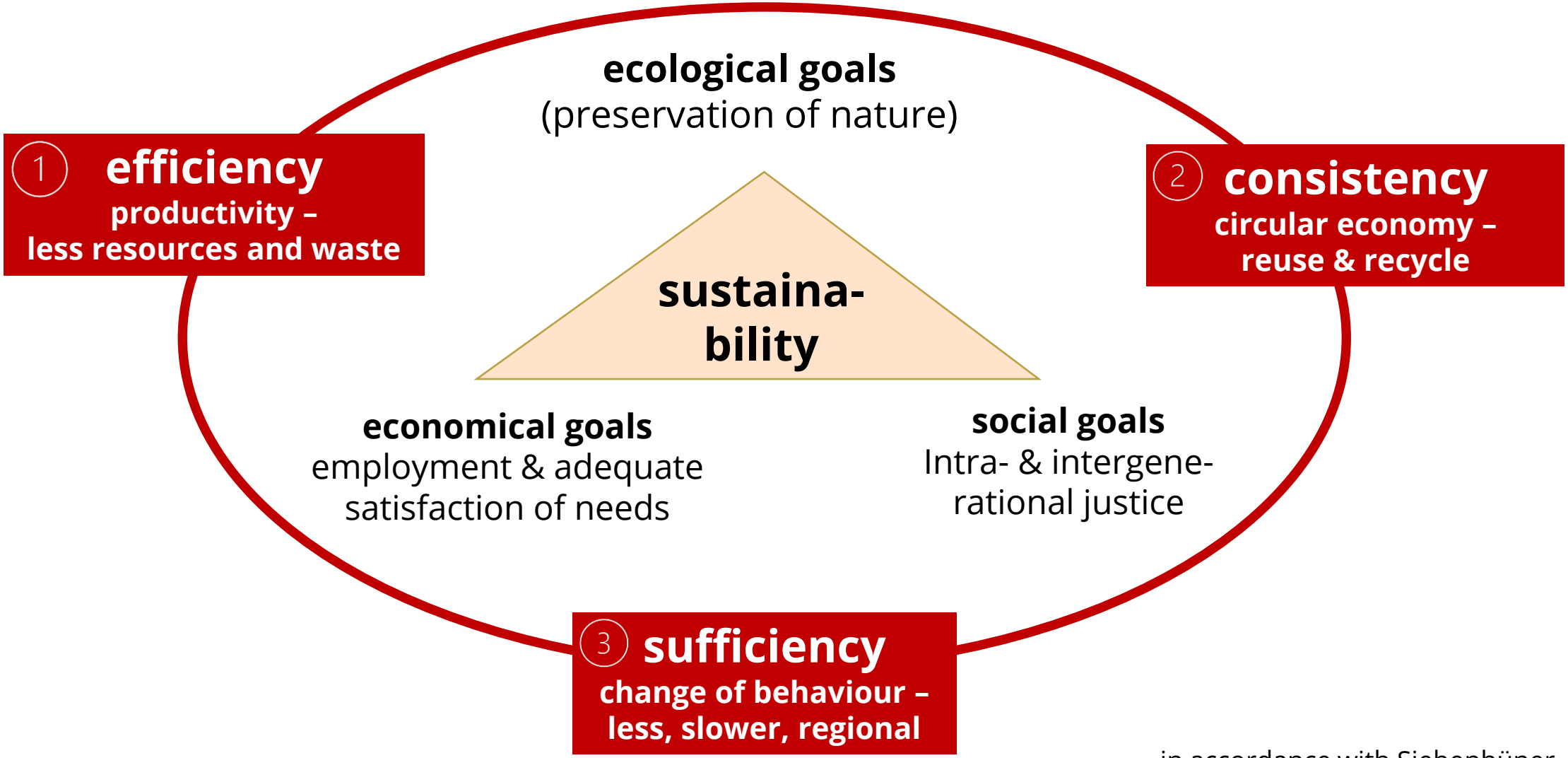
„My shareholders expect the highest possible return on investment. I cannot prioritise social and environmental issues.“

„Natural resources are limited. Growth and profit can only take place within the natural limits of the earth.“

Business for profit or not?



Sustainability goals and (economic) strategies



in accordance with Siebenhüner, B. (2001): homo sustines, Marburg, S. 78.

free market economy and sustainable development?

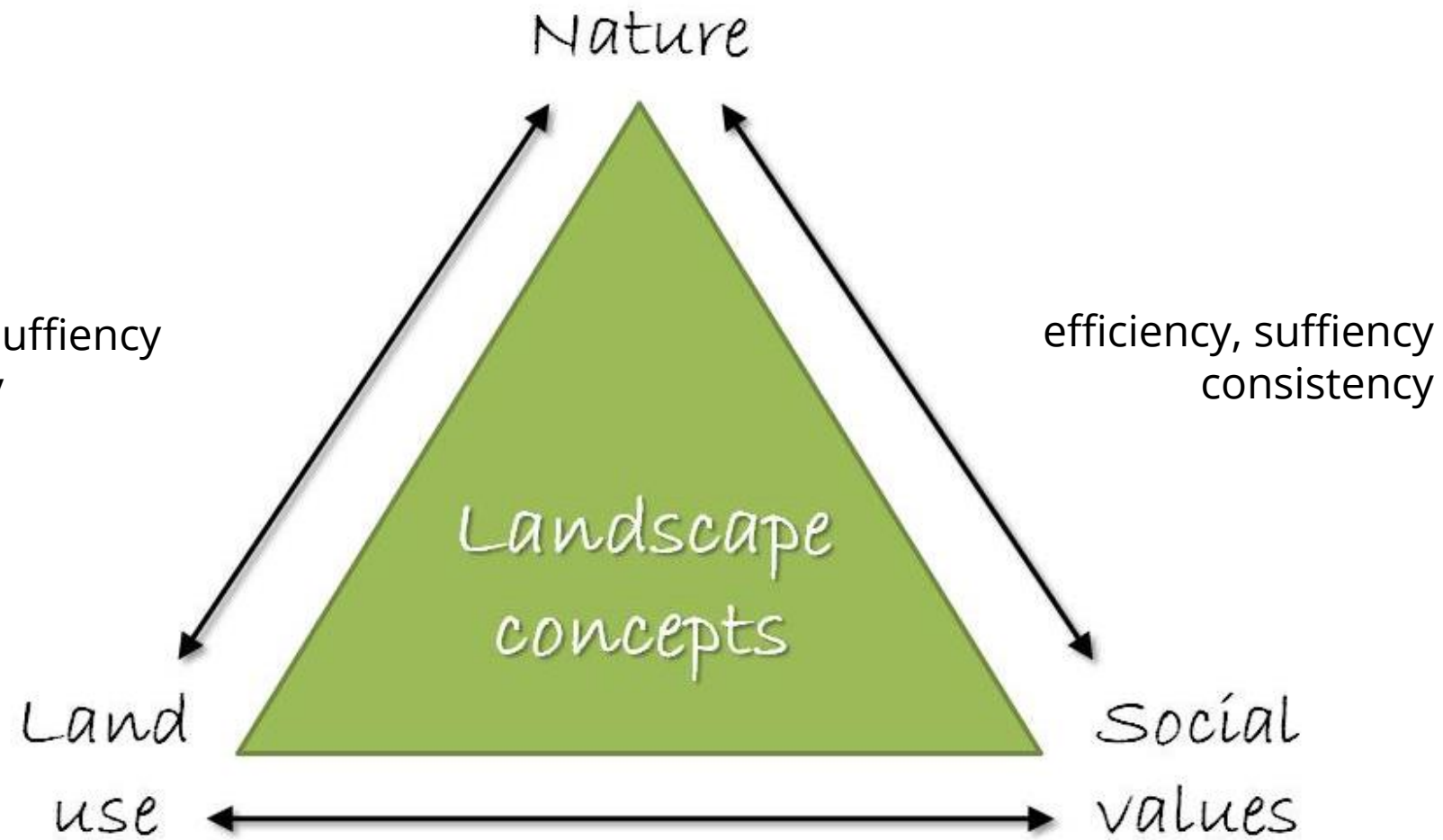
- private property
- freedom of choice
- motivation of self interest
- competition
- growth and consume
- limited regulation
- GDP as a measure of welfare

principles of free market economy

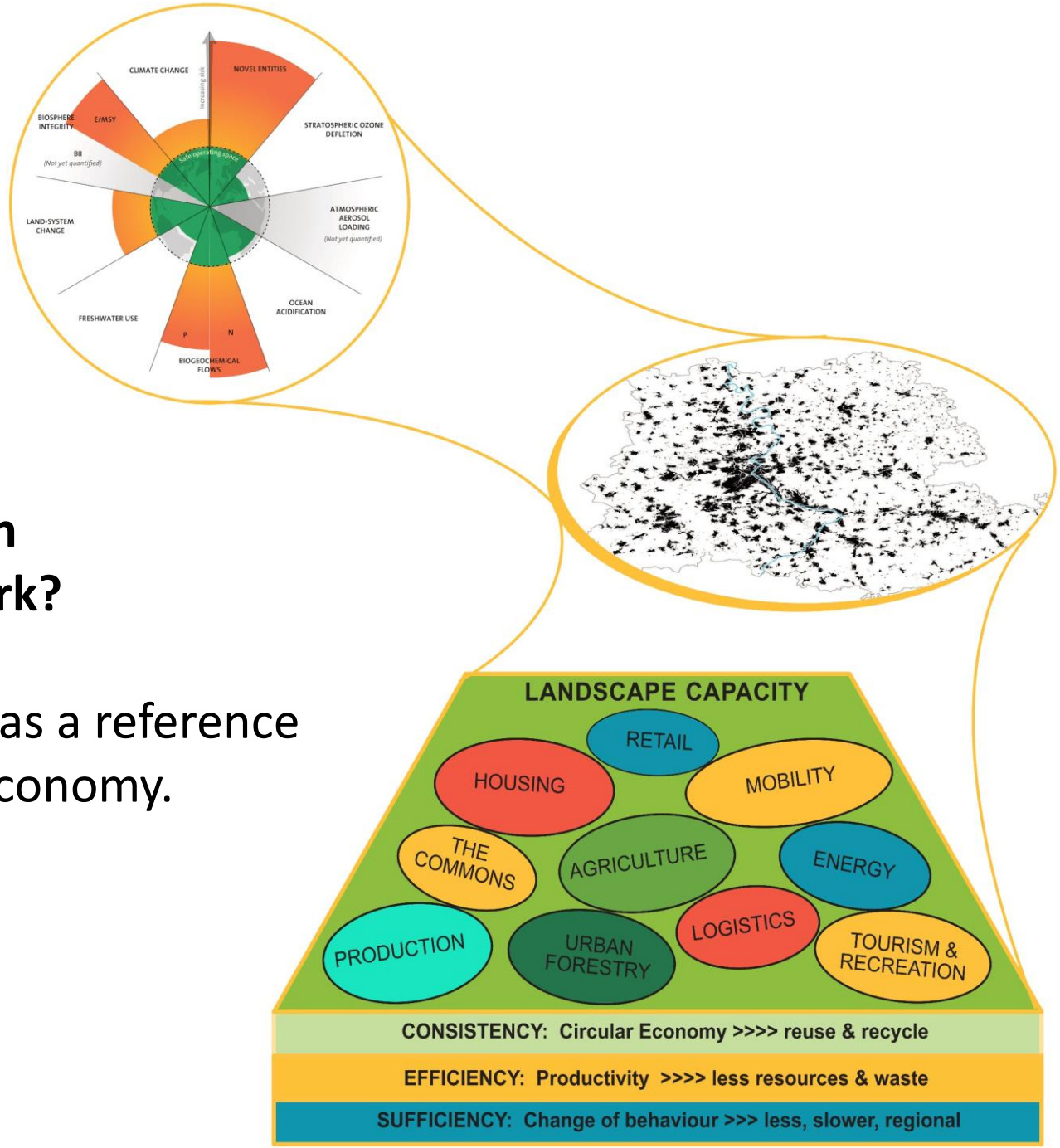
- more common goods
- more responsible consumption
- motivation of public welfare
- more co-operation
- circular economy & sufficiency
- more (worldwide) agreements
- ecological & social perspective

needs of sustainable economy

Coming back to landscape…and economy. What needs to change?



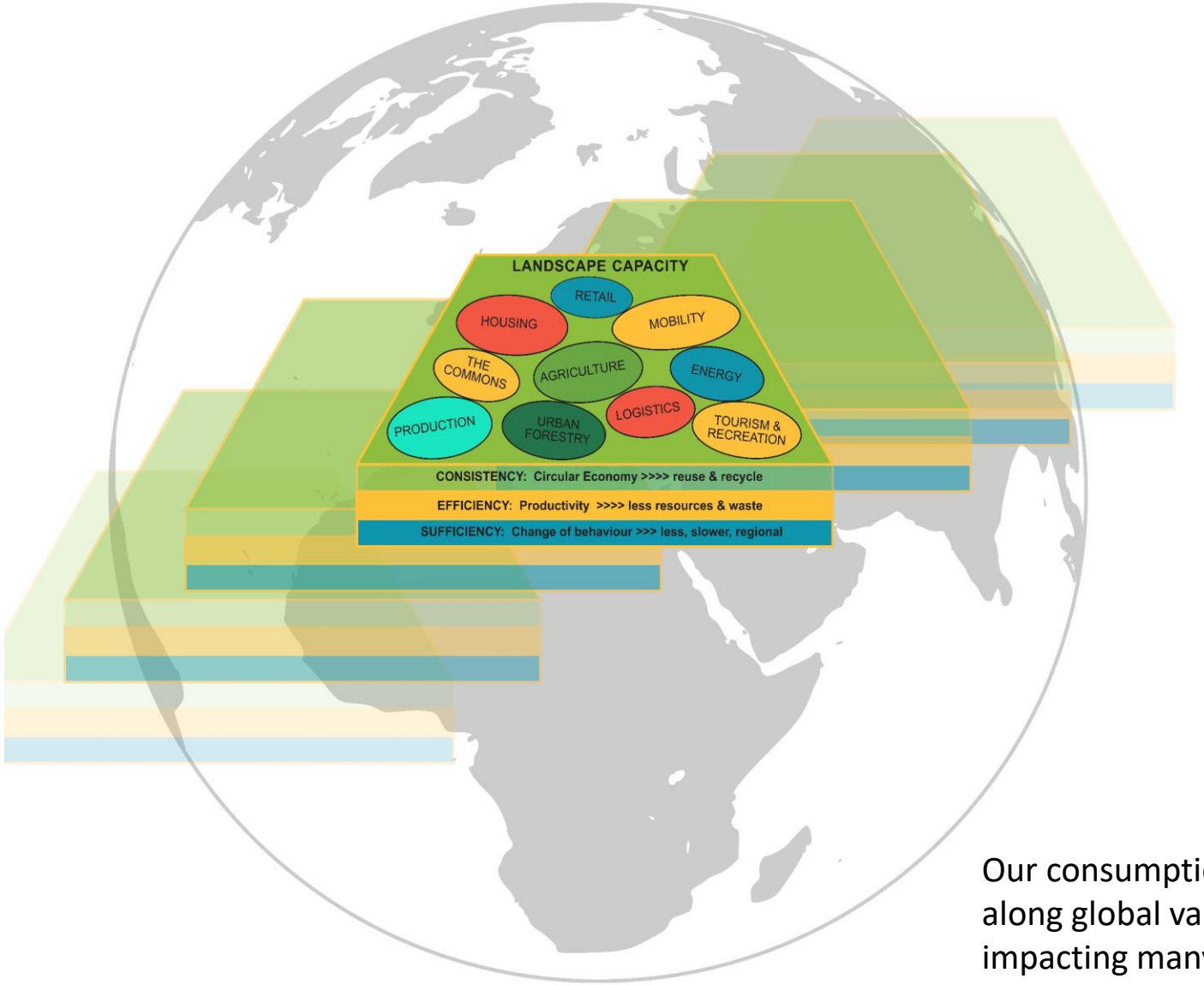
Visual follows Detlev Ipsen, Ort und Landschaft, 2006



Why is landscape an economic framework?

Landscape capacity as a reference for a regenerative economy.

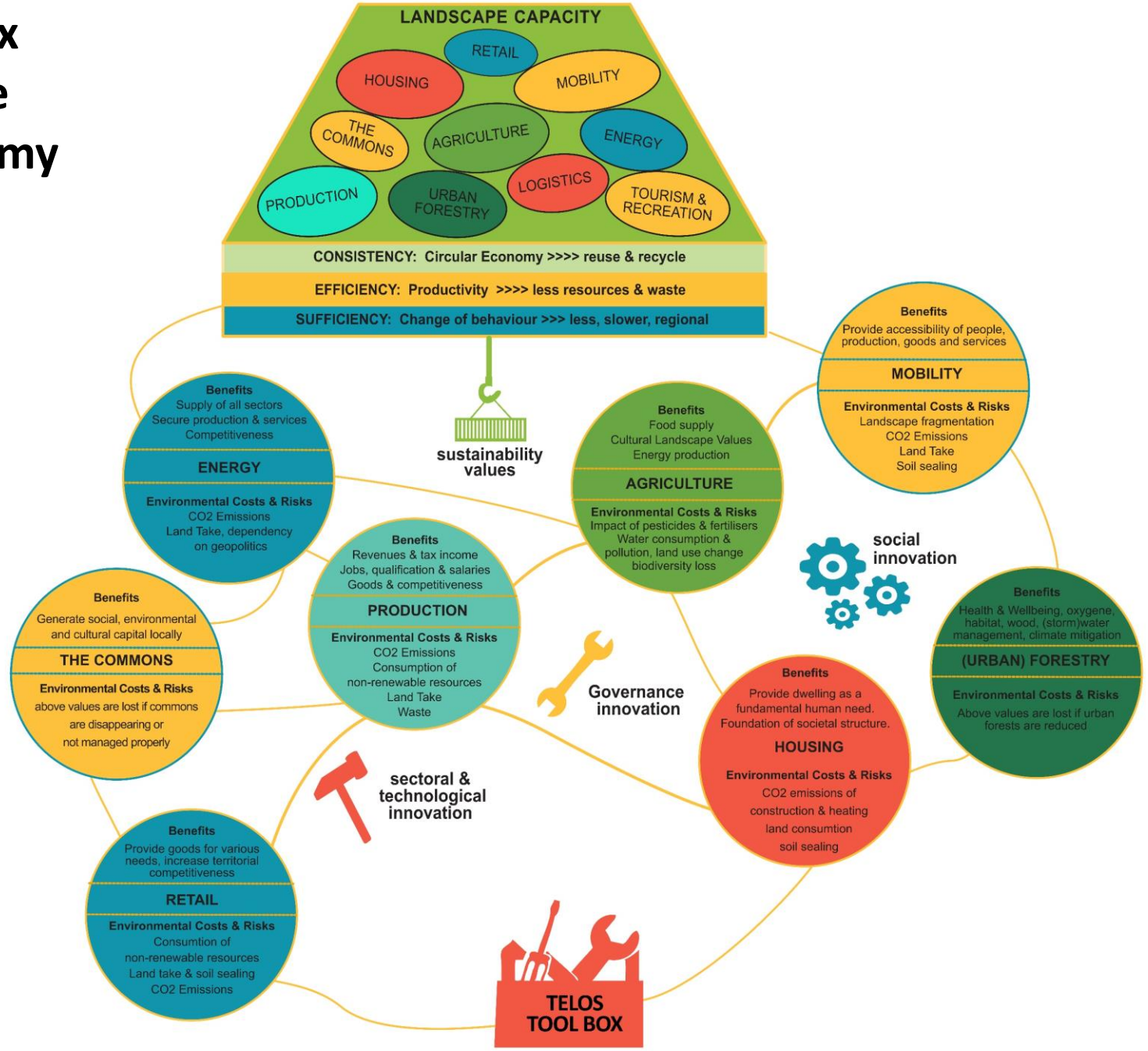
It is not only about the landscape that you see around you.



Our consumption patterns and dependencies along global value chains mean that we are impacting many landscapes worldwide.

Not only the one we see around us.

Towards a toolbox for a regenerative Landscape economy



How will we move now?

https://upload.wikimedia.org/wikipedia/commons/7/74/The_Long_Road_Ahead.jpg

Green Competences as a motor of the transition

GreenComp The European sustainability competence framework (2022)
https://publications.jrc.ec.europa.eu/repository/handle/JRC128040

TOOLS OF A SYSTEM THINKER

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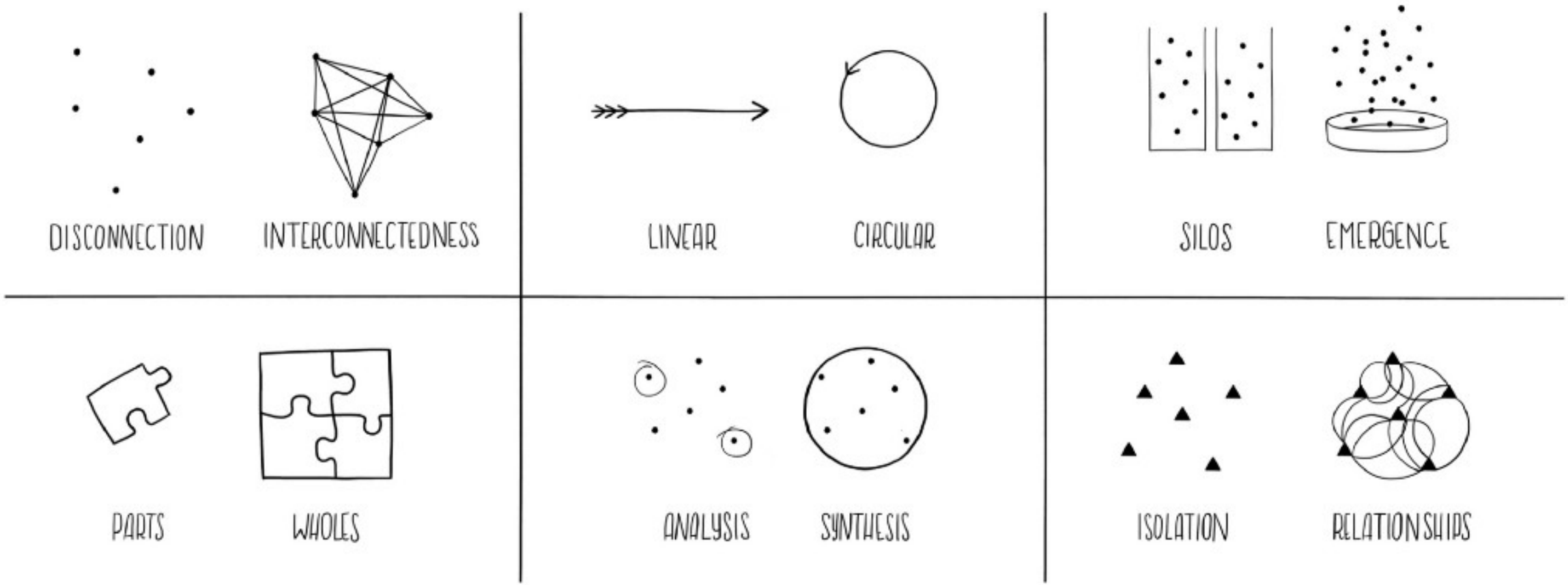
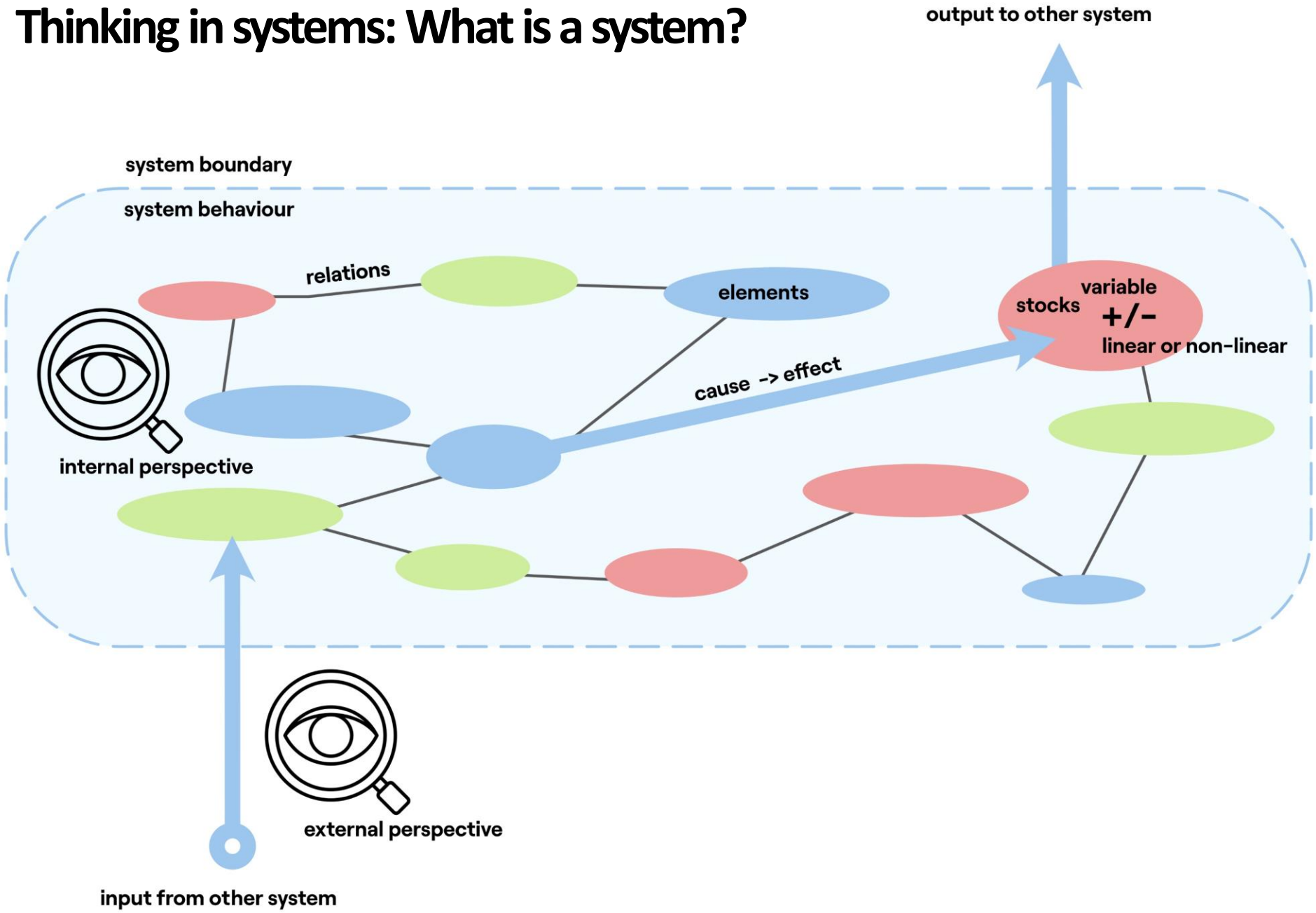


https://medium.com/disruptive-design/tools-for-systems-thinkers-the-6-fundamental-concepts-of-systems-thinking-379cdac3dc6a

DISRUPT DESIGN

Thinking in systems: What is a system?



What is a Landscape System Analysis?

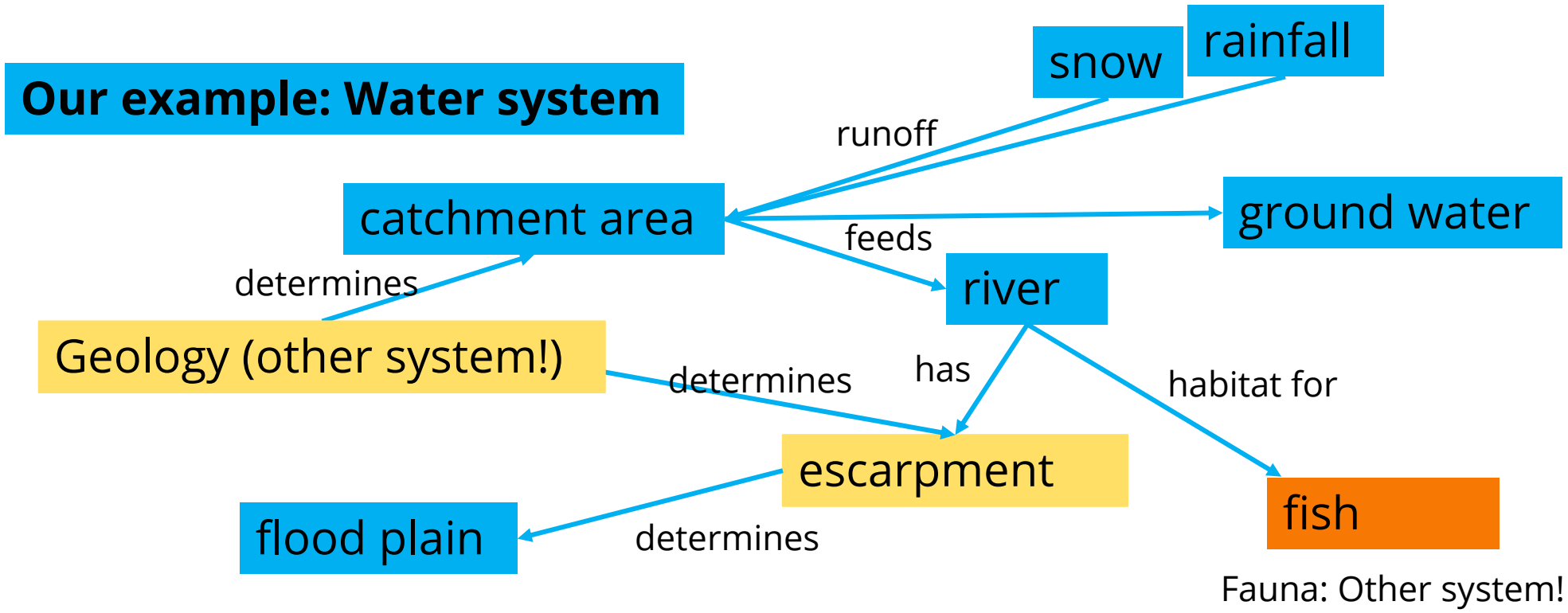
We run you now though through a systems thinking approach.

We do this here **on the example of the water system,** just to exemplify the elements of system analysis.

This is just **one** of **many** systems that are constantly interoperating in a landscape.

What are the elements of a Landscape System Analysis? (1/8)

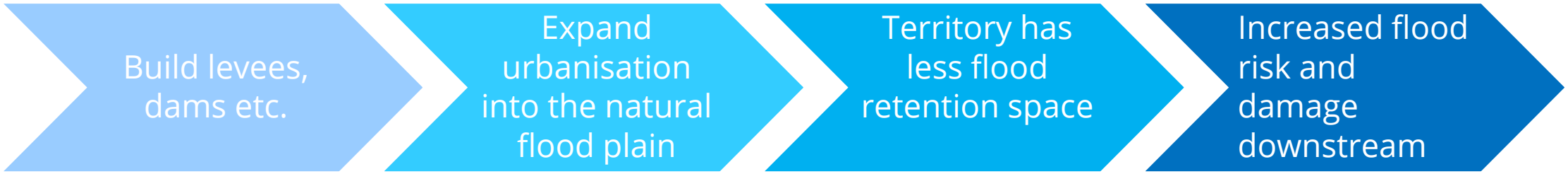
Recognizing the **parts of the system** and their **interconnections**



What are the elements of a Landscape System Analysis? (2/8)

Identifying and understanding feedback (**cause-effect loops**) within the landscape system by taking natural, social, cultural and economic systems and their impact on land use and land form into account.

Our example: Water system and urbanisation



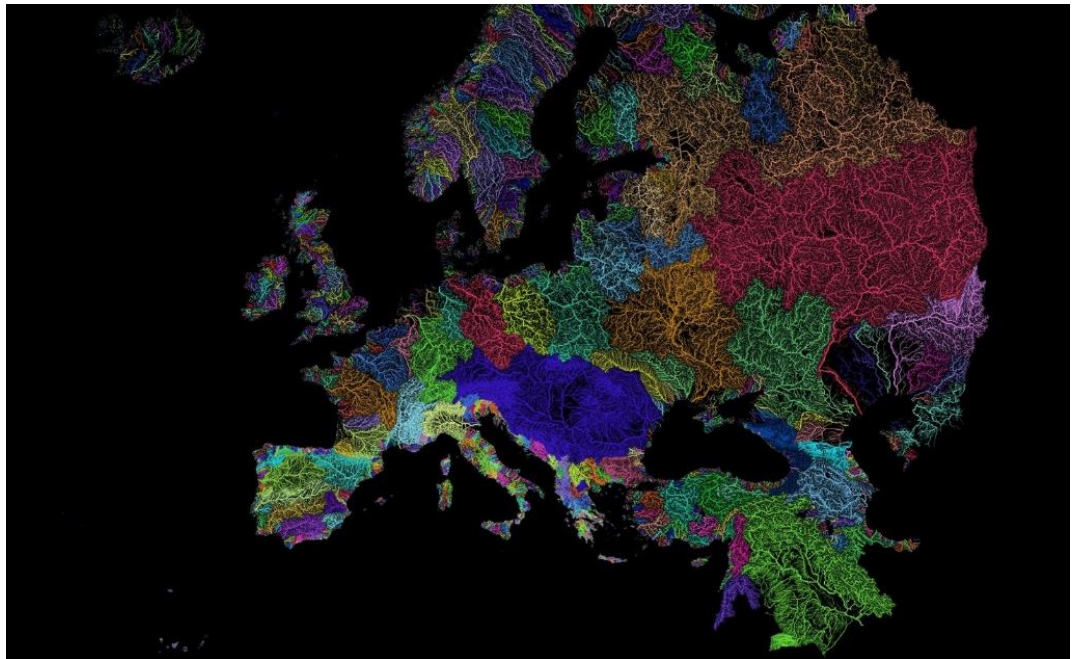
What are the elements of a Landscape System Analysis? (3/8)

Understanding **system structure and system boundary**

Our example: Water system

The system boundary of a water system can be...

- the drainage area (local)
- the catchment area (local-regional)
- the river basin area (regional-national)



River basins in Europe

Micro catchment areas in Nürtingen
https://udo.lubw.baden-wuerttemberg.de

What are the elements of a Landscape System Analysis? (4/8)

Differentiating types of **flows** and **variables**.
These are partially also the **resources** in the system.

Our example: Water system

Variable 1: Amount of rain and stormwater (average and extremes)

Variable 2: Dimension of urbanisation in the floodplain over time

Variable 3: Capacity of soil to absorb water depending on lenght of rainfall periods

Variable 4: Dimension of flood protection infrastructure

Variable 5: Types of agricultural production

Variable 6:.....

What are the elements of a Landscape System Analysis? (5/8)

Identifying and understanding **non-linear relationships**
For example: small changes in one variable may result in large changes in another variable.

Our example: Water system

Saturated soils

Sealed surface

Limited retention space

Strong rain events

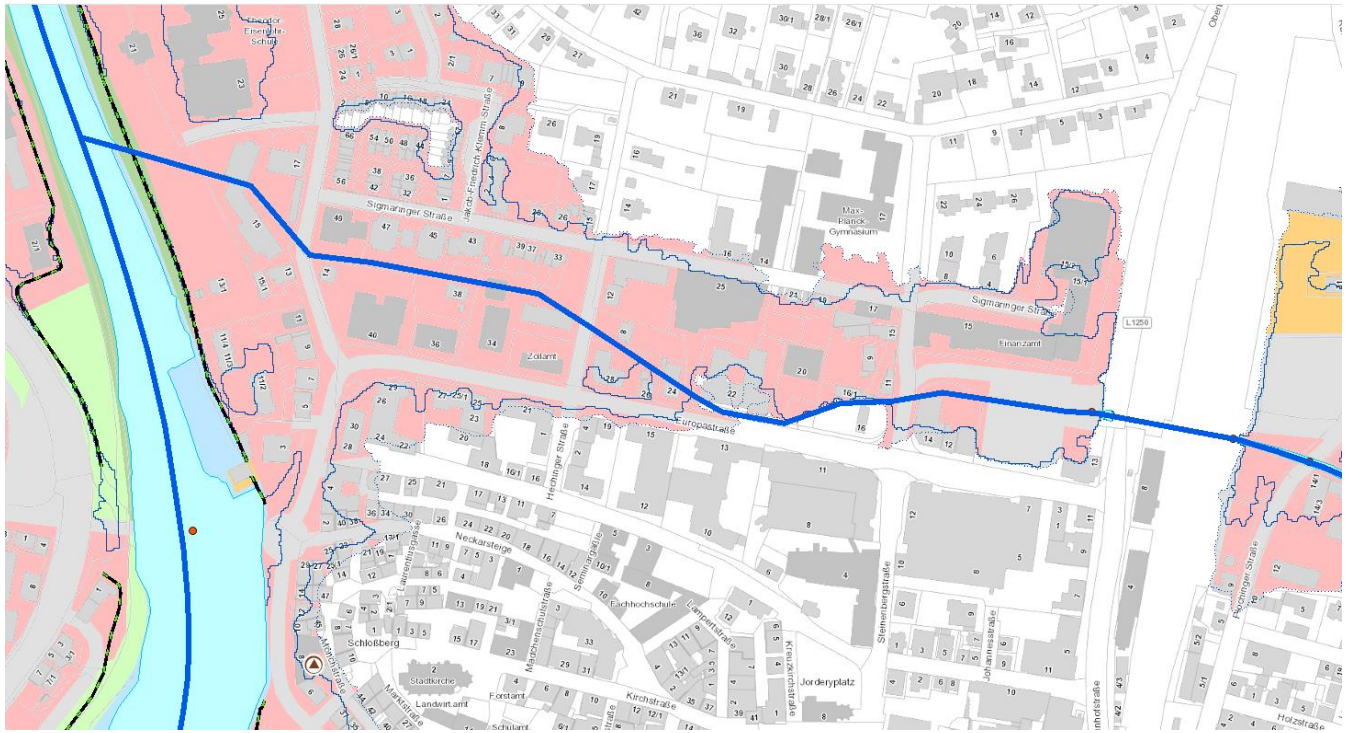
.....

What are the elements of a Landscape System Analysis? (6/8)

Understanding dynamic system behaviour

Our example: Water system

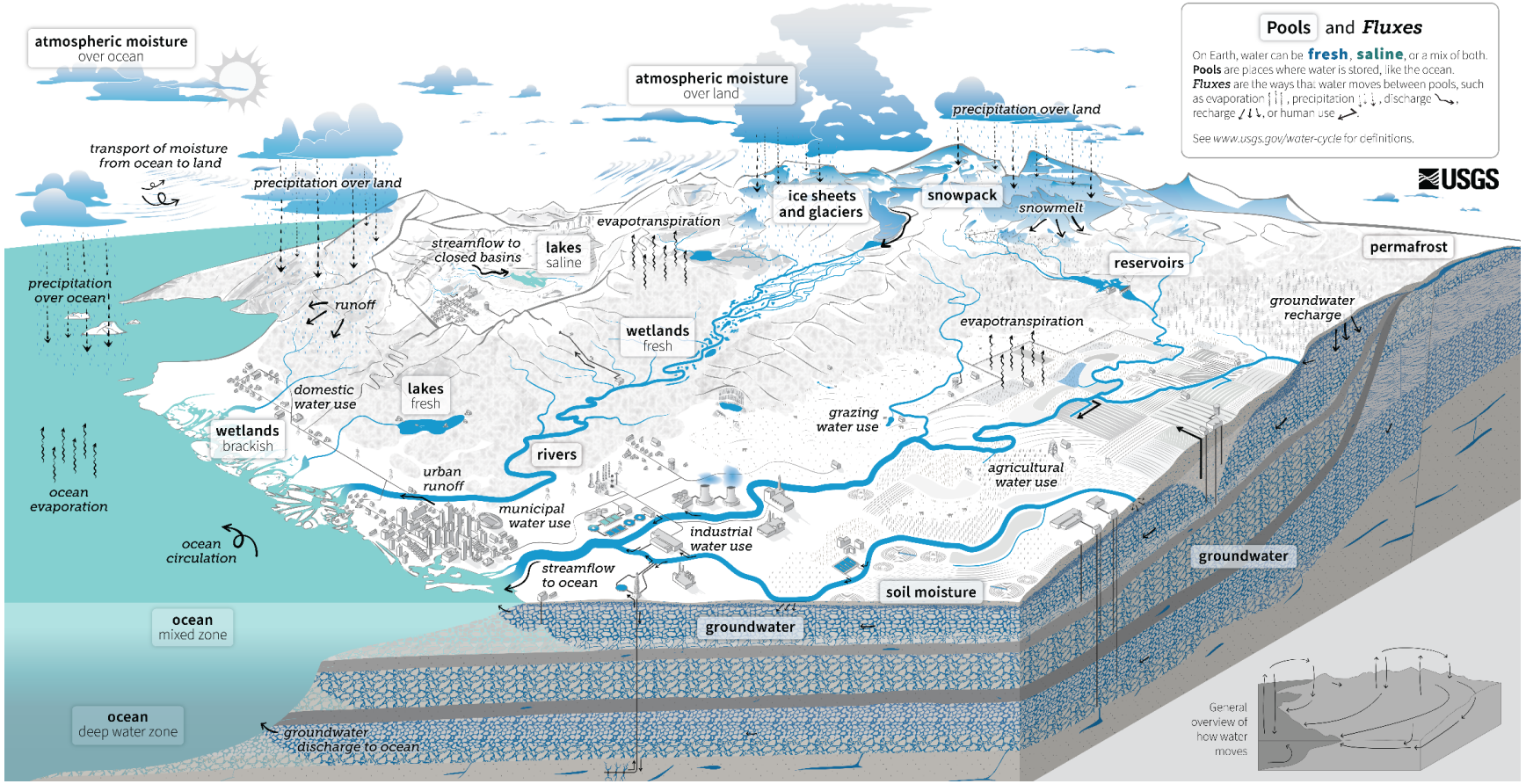
Which dimension would the flood take?
What risk will we have?



100-years flood risk map Nürtingen
https://udo.lubw.baden-wuerttemberg.de

What are the elements of a Landscape System Analysis? (7/8)

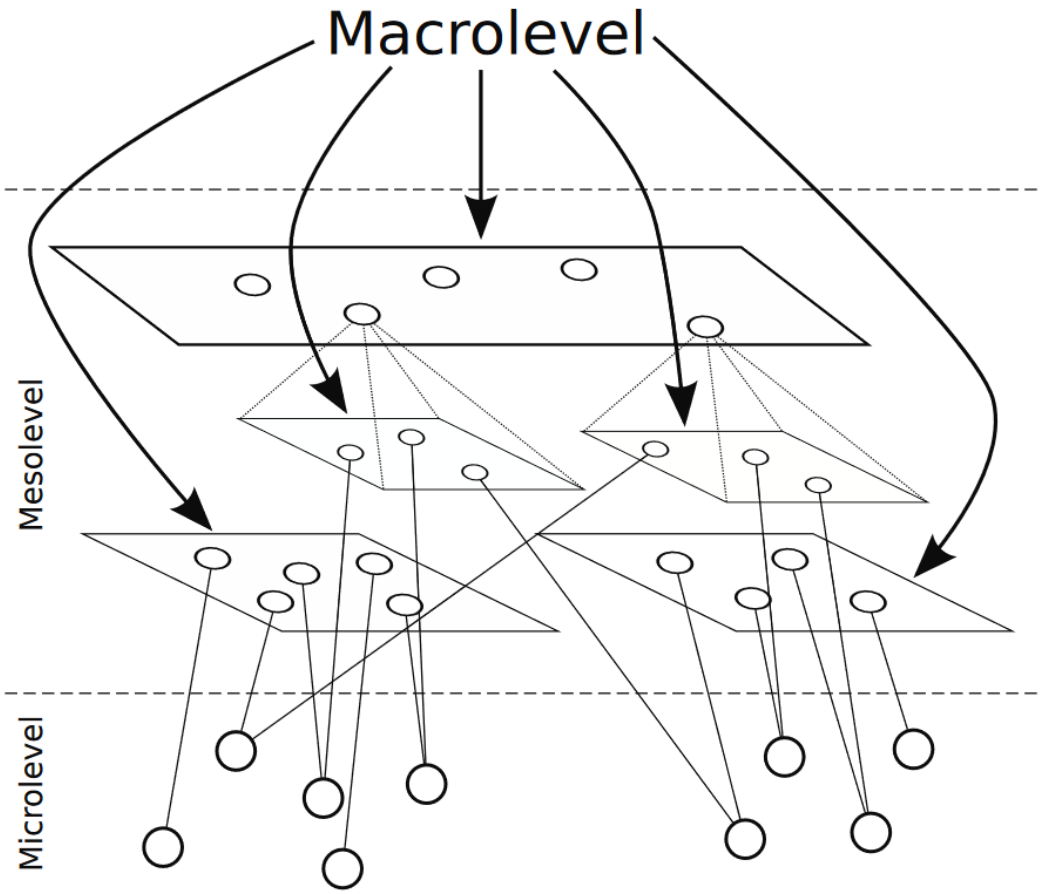
Use conceptual models, reducing complexity by **modeling systems conceptually**, intuitive simplification is allowed, as long as you know that you are simplifying.



Source: Wikipedia public domain: https://upload.wikimedia.org/wikipedia/commons/6/60/USGS_WaterCycle_English_ONLINE_20221013.png

What are the elements of a Landscape System Analysis? (8/8)

Always try to understanding systems at **different scales**



Sanderson et al, 2012: A Micro-Meso-Macro Approach to Intelligent Transportation Systems

General systems thinking references:

Arnold, D. Ross and Wade, Jon P. (2015): A Definition of Systems Thinking: A Systems Approach, Procedia Computer Science 44 (2015), 669-678

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Law, John (1992): Notes on the Theory of the Actor Network: Ordering, Strategy and Heterogeneity

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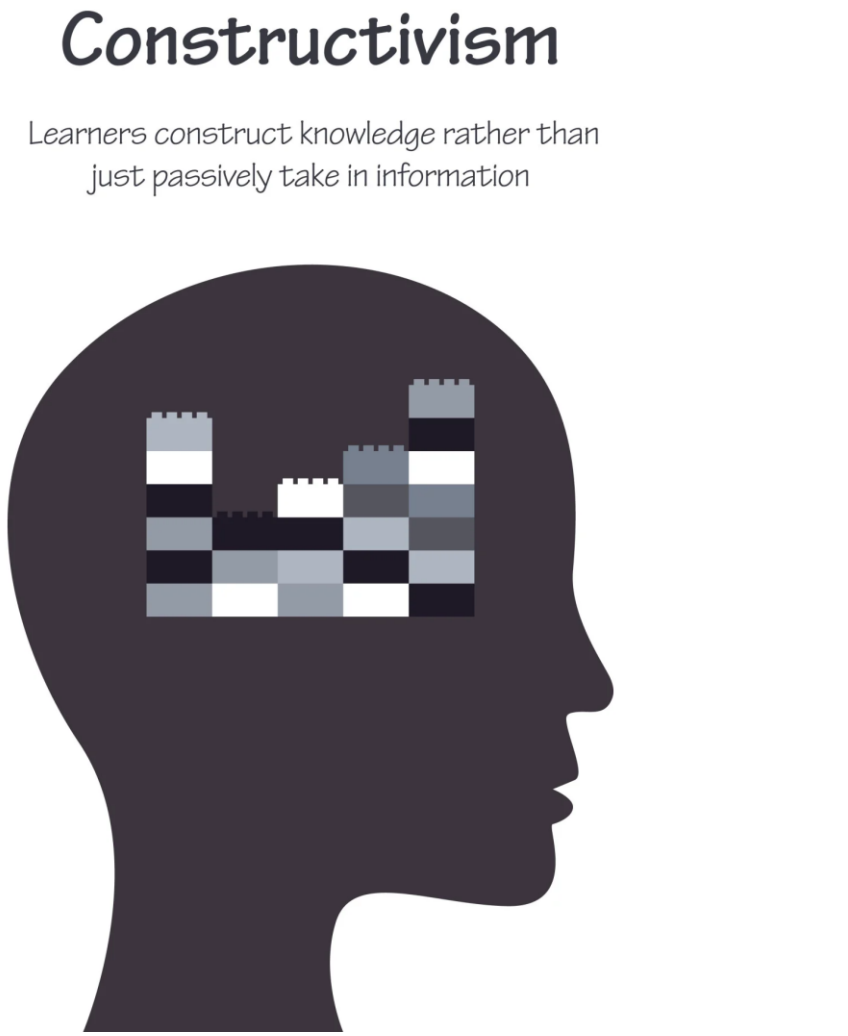
The Seminar Principle:



https://www.simplypsychology.org/constructivism.html

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The **online plenary** meets always on **Mondays** from **16 00 - 17 30 CET**

The seminar process model

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Now

Your landscape economy context
(i.e. your point on the Padlet Map)

Reading
Analysis
Synthesis
Representation
Discussion
Revision

Weekly now – Dec 5

- Water & Soil
- Agriculture & Food
- Dwelling
- Mobility
- The Commons
- Energy
- Value-Added Chains
- Tourism & Health

Identify the key challenge within the system

Dec 15

Ideation

Prototyping
Transition
Pathways

Jan 12 - 26

All details: https://telos.hfwu.de/index.php?title=Assignments_2025-2026

Requirements for credits and assignment:

Your activities

- Constant and consistent work on your case following the template on the MIRO board
- Regular active participation in review session
- Active feedback to your peers
- Contribution to the final presentation

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h
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Criteria:

- Systemic dimension has been identified for each landscape system dimension under consideration
- Cause-effect relationships have been made explicit
- Interrelationship of systems has been analysed and discussed
- Key challenges have been identified
- Ideation process led to a theory of change
- Transition pathway has been elaborated and presented

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This leads to:

- A 5 ECTS certificate on behalf of the LoLa ERASMUS consortium

All details: https://telos.hfwu.de/index.php?title=Assignments_2025-2026

Landscape system to explore for the next session:

WATER AND SOIL

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Activities:

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- Explore seminar readings

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- Develop a representation of how water and soil operate in your landscape
- Add your representation to the shared MIRO board

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- Particiate in interactive thematic poll and group discussion

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- Update your map with the knowledge gained during peer discussion

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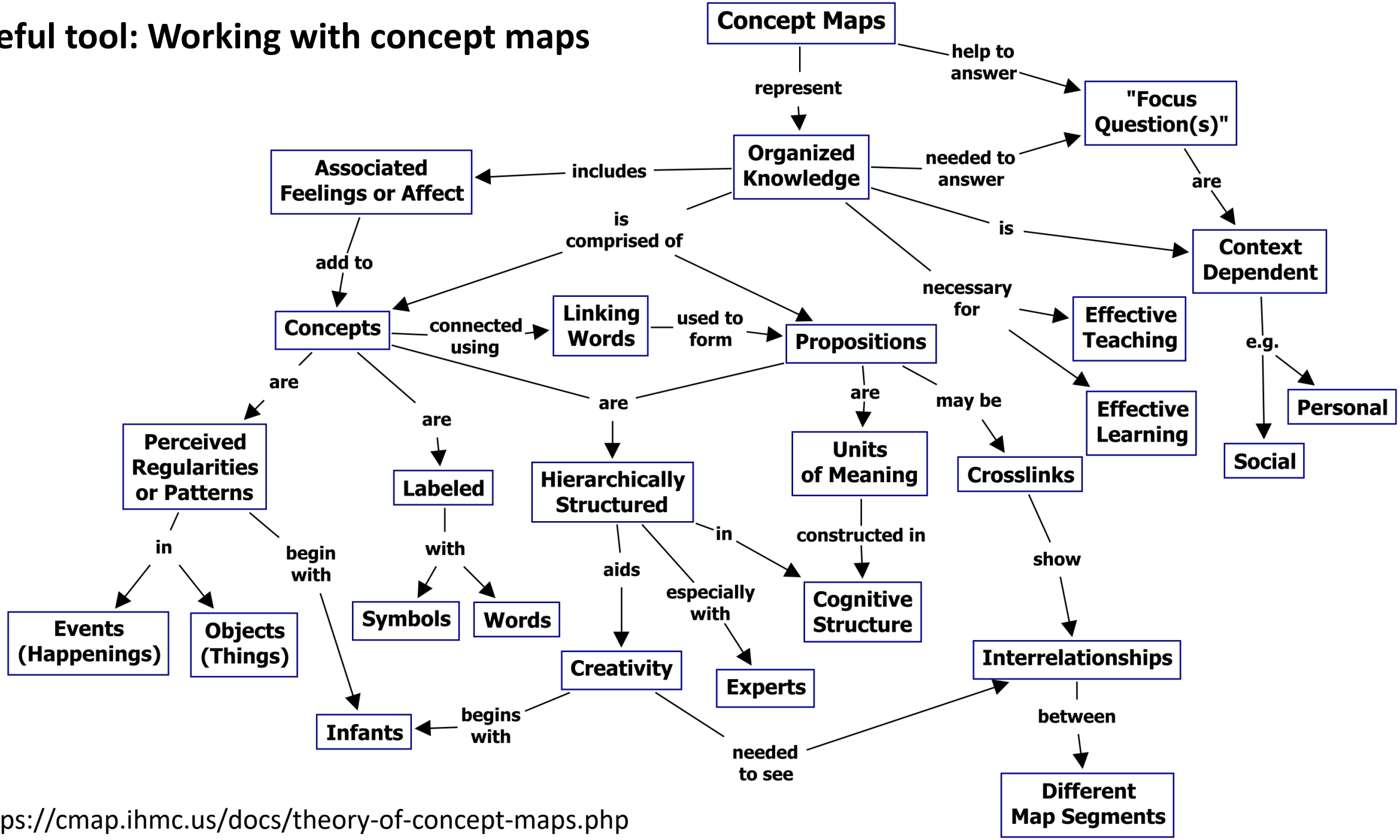
>>> This will be your **weekly structure** until the end of the year

All details: https://telos.hfwu.de/index.php?title=Assignments_2025-2026

Useful tool: Working with concept maps



https://cmap.ihmc.us/docs/theory-of-concept-maps.php

Some guiding questions for your system analysis:

When translating the system knowledge of one dimension to your territory, these questions might be helpful for guiding your thinking:

- How has this landscape developed over the past **to its present state**?
- Which **cause-effect relationships** have driven this development? Which value schemes were dominating?
- Which values has this landscape generated by this past transformation? Which values got lost?
- What are the main **circular** relationships in your landscape?
- Which resources **come in** from elsewhere (workforce, energy, food, materials..) and where do they end up?
- Which resources **flow out** from your landscape to other places (such as products, knowledge…)?
- Show these **circular relationships.**
- Combine the different land use layers: Which **conflicts** exist? Who/what **wins** and who/what **loses**?

Seminar Media Landscape

Seminar WIKI
https://telos.hfwu.de


TELOS Online Seminar 2024-2025

TELOS stands for: **T**owards a **E**uropean **L**andscape Ec**o**nomy for a **S**ustainable Urban Development

We invite you to our Landscape Economy learning experience.

This seminar will start on **October 7, 2024** and finish on **January 27, 2025**

>>> **Register now**

Still looking for a study case for this seminar? >>> You can join the international student competition

Contents [hide]
1 For whom is this course?
2 TELOS Online Course October 2024 - January 2025
3 Participation modes and distribution of credits
4 Seminar topics and schedule October 2024 - January 2025
5 Seminar objectives and learning goals

For whom is this course? [edit]
- Are you worried about our **planetary boundaries**?
- Are you an architect who cares about **sustainable development**?
- Are you an urban or landscape planner who wants to make planning and design more **inclusive, sy**
- Are you an economist who wants to work with other disciplines on **transformative processes**?
- Are you **curious** about other people and their knowledge?

- Assignment Outlines
- References

Mentimeter

Mural

Direct links

Direct emails
coordinator
-> participants

ILIAS
http://ilias.hfwu.de


Landscape Economy Online Seminar October 2022 - January 2023

Inhalt | Info | Einstellungen | Lokale Benutzerverwaltung | Export | Rechte

Zeigen | Verwalten | Sortieren

Neues Objekt hinzufügen | Seite gestalten

Weblinks

TELOS Seminar Assignments (link to seminar wiki)

Übungen

Online submission of TELOS semiar assignments
Nächste Abgabefrist: 7 Tage, 13 Stunden, 52 Minuten

- Recordings
- Lecture slides
- References
- Digital submissions

Transnational discussion groups
on Slack (see invitations)

Next steps

- Deal with the **guiding questions** for next week:
  - How does **water** work in your landscape?
  - How does **soil** work in your landscape?
- Go through the seminar **readings** on water and soil systems.
- Feel free to explore this by any means beyond those readings
- Translate this into a **representation** that has both:
  - A **territoria**l dimension
  - A **systems** dimension (water & soil)
- It is recommended to start with two distinct representations for each system
- At your representation to the MIRO by October 20, 12 am CET
- Participate actively in the peer review on October 20

Everyone who does not bring a map to the session on October 20, is considered a **passive participant** in the further (participation in the session always possible, but no credits)

N e x t s t e p s

Questions?

Next steps

References for the upcoming session:

Water:

Avanzi H (2024). Hydrological Cycle: An Overview of Water Dynamics on Earth. J Geol Geophys. 13:1197, https://www.longdom.org/open-access/hydrological-cycle-an-overview-of-water-dynamics-on-earth.pdf

Dawen Yang et al (2021): Hydrological cycle and water resources in a changing world: A review, Geography and Sustainability, Volume 2, Issue 2, Pages 115-122, ISSN 2666-6839, https://doi.org/10.1016/j.geosus.2021.05.003

https://www.usgs.gov/media/images/water-cycle-png
https://water.usgs.gov/edu/gallery/watercyclekids/earth-water-distribution.html

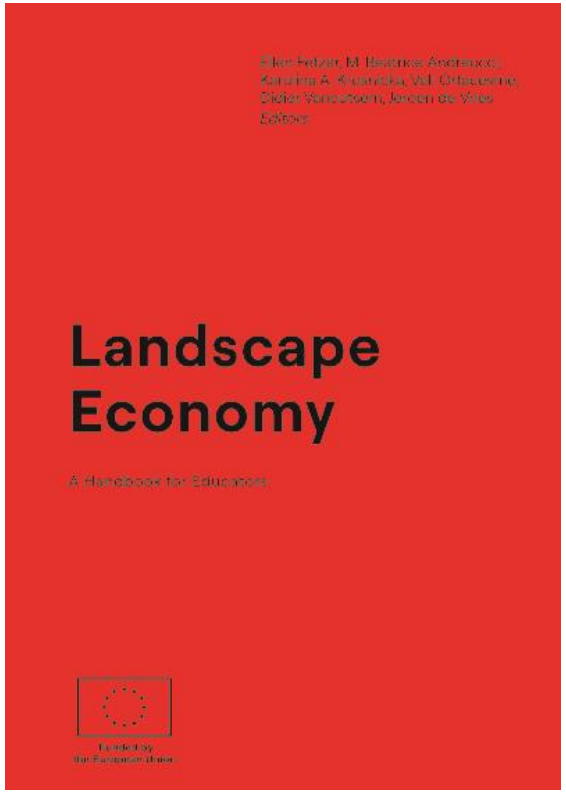
Water and Soil: C.M. Stephens et al (2021): Landscape changes and their hydrologic effects: Interactions and feedbacks across scales, Earth-Science Reviews, Volume 212, https://doi.org/10.1016/j.earscirev.2020.103466

Soil: Banwart et al. (2019): Soil Functions: Connecting Earth's Critical Zone, published in the Annual Review of Earth and Planetary Sciences: https://doi.org/10.1146/annurev-earth-063016-020544

General Resources

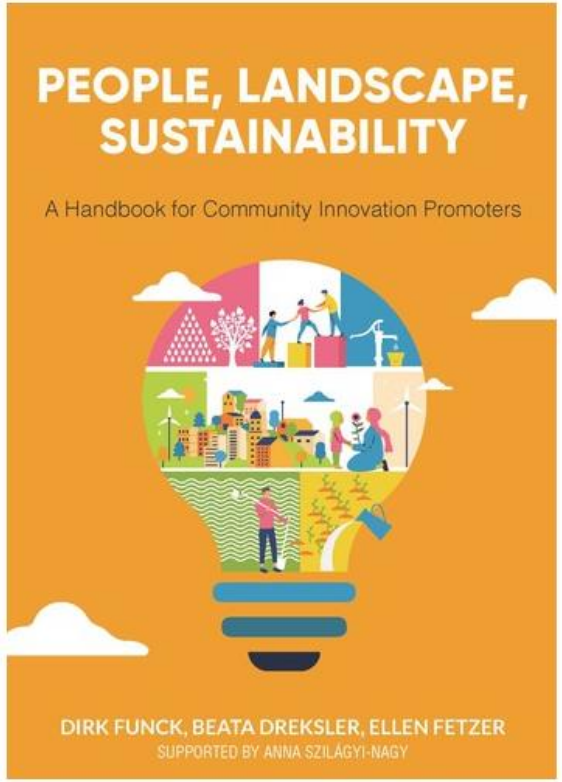
Next steps

Theories & concepts



Open Access:
https://cuvillier.de/en/shop/publications/9181-landscape-economy

Methods



Open Access:
https://cuvillier.de/en/shop/publications/8827-people-landscape-sustainability

Cases and examples

Open Access:
https://cuvillier.de/en/shop/publications/9281-regenerative-landscapes

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Linking Landscape Education, Research and Innovative Practice

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American University of Beirut

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THANK YOU