



Principles of regenerative urban and landscape planning

Eight principles about regenerative urban and landscape planning based on resent literature and practice related projects.

You can start step-by-step by implementing just one or two principles and increase the level on regenerativeness from project to project.



Raymond J. Cole (2012) **Transitioning from green to regenerative design**,
Building Research 26; Information, 40:1, 39-53
Biggs R. de Vos A. Preiser R. Clements H. Maciejewski, K. & Schlüter, M. 2021. **The Routledge**

Biggs, R., de Vos, A., Preiser, R., Clements, H., Maciejewski, K. & Schlüter, M. 2021. The Routledge Handbook of Research Methods for Social-Ecological Systems, Taylor & Francis Group

Regenerative design involves a holistic approach to urban and landscape planning. It should consider the relationships between people, nature, and the built environment as interdependent systems.

This means taking a systemsthinking approach, considering the interconnections and feedback loops between different components (social, ecological and technical) of the urban system.



ICEBERG MODEL SYSTEM THINKING

EVENTS

•----- WHAT HAPPENED?

PATTERN TRENDS

WHAT TRENDS ARE NOTICEABLE OVER TIME?

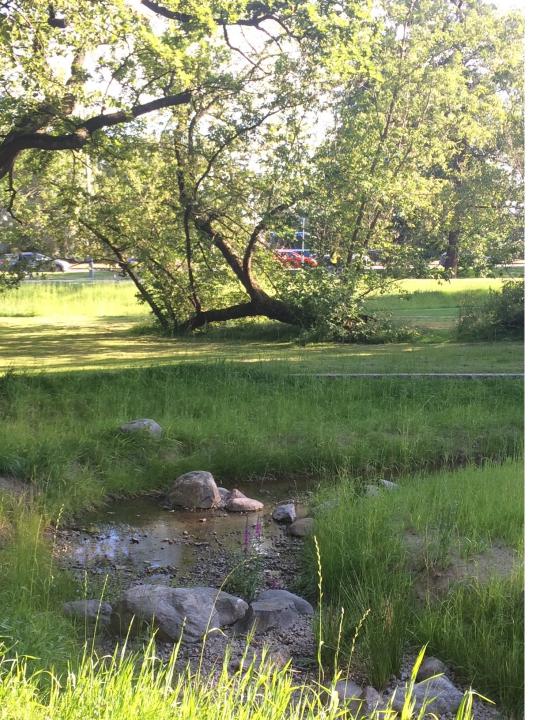
STRUCTURES

WHAT HAS INFLUENCED THIS TRENDS

MENTAL MODELS

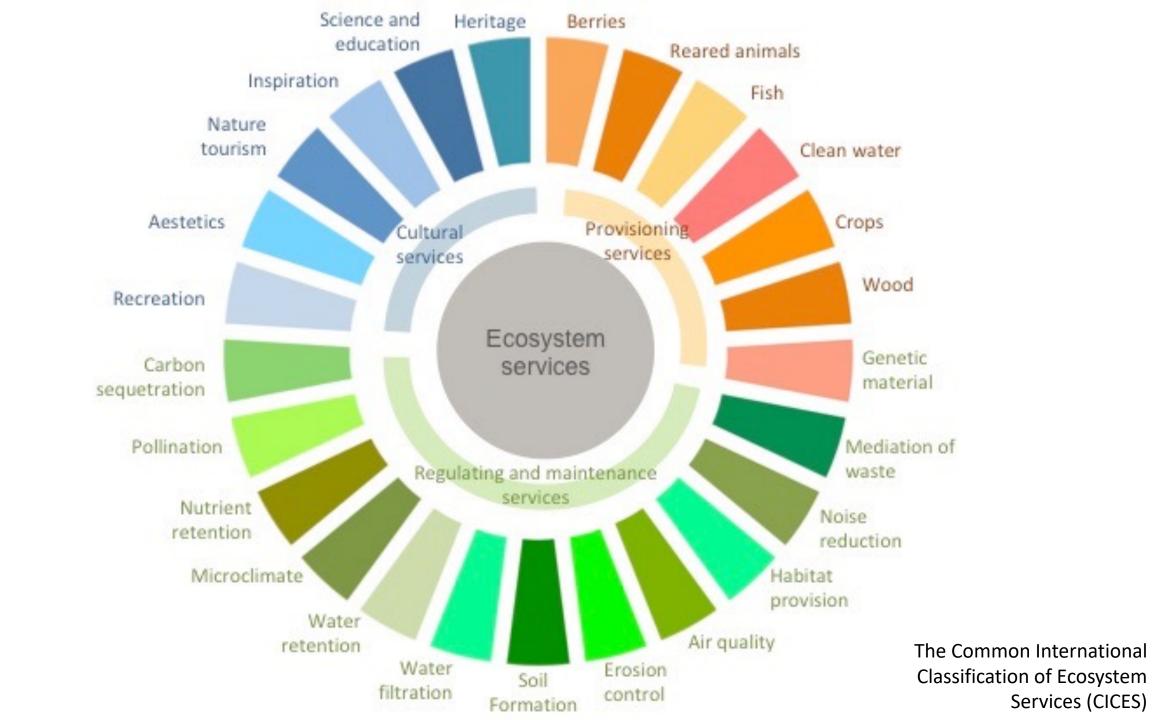
WHAT ARE PIOPLE ASSUMPTIONS ABOUT THE SYSTEM?





II Ecoliteracy

Regenerative design requires a deep understanding of ecological principles and processes. Ecoliteracy is an essential component of regenerative urban and landscape planning, enabling designers to create ecologically resilient and adaptable urban landscapes.

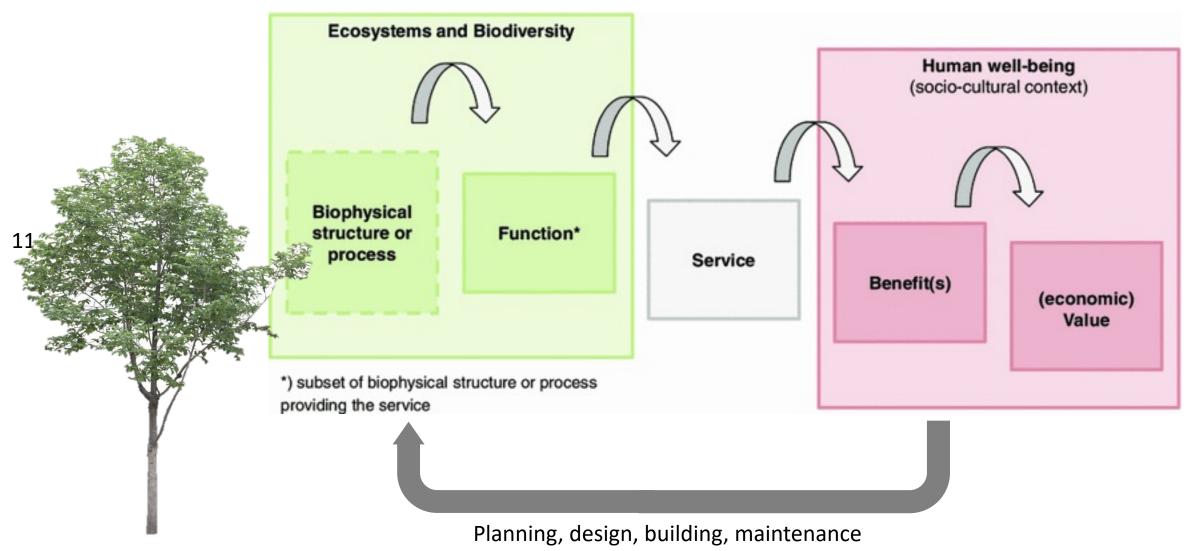






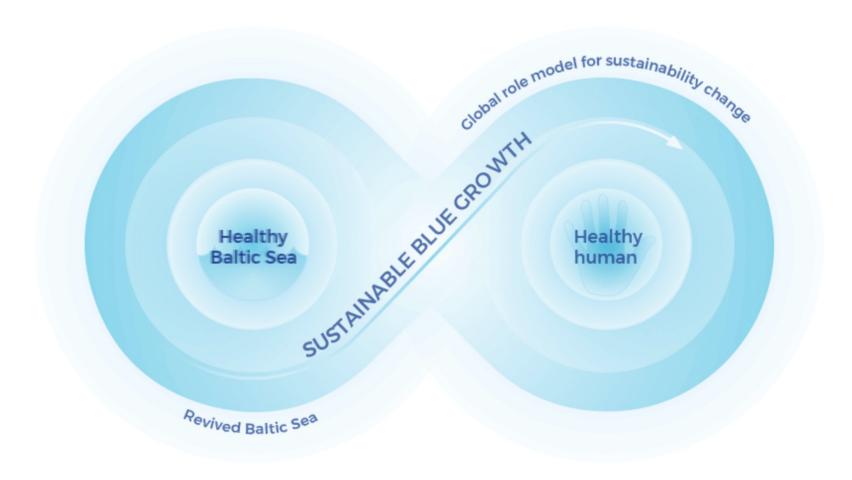


Cascade model of ecosystem services



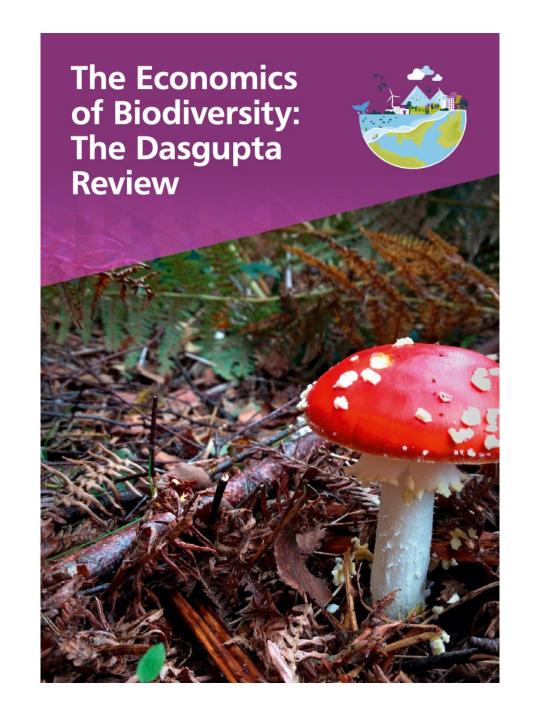
and management

Sustainable wellbeing from the sea



Independent report <u>Final Report</u> - The Economics of Biodiversity: The Dasgupta Review (2021)

Sitra: <u>Uraauurtava talousraportti julki</u> – tässä 10+1 asiaa, jotka siitä on hyvä tietää



III Partnership with nature

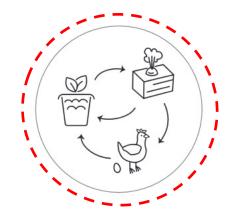
Regenerative urban and landscape planning aims to create a mutually beneficial relationship between humans and nature. This partnership involves designing cities that work with, rather than against, natural systems.

It also involves designing urban landscapes that co-evolve with natural systems over time. This means designing for adaptability, flexibility, and resilience, and supporting natural processes of succession and regeneration.

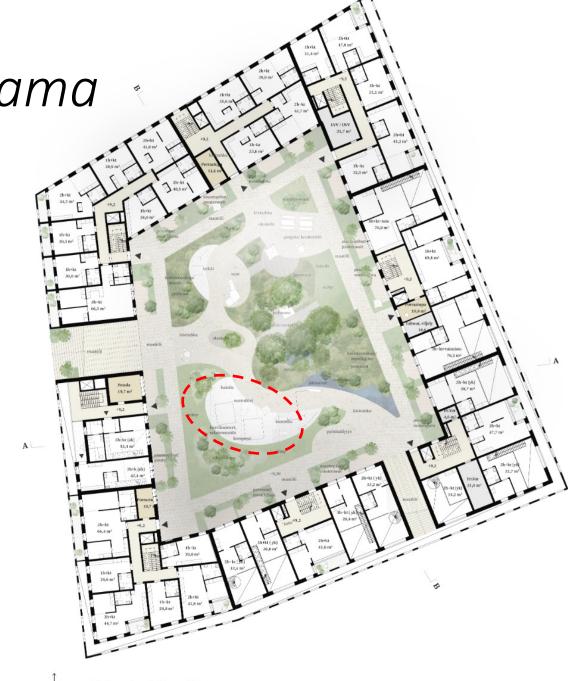
With this principle there is a strong connection to circular economy. It also emphasizes management and nurturing.



A housing block in Kalasatama

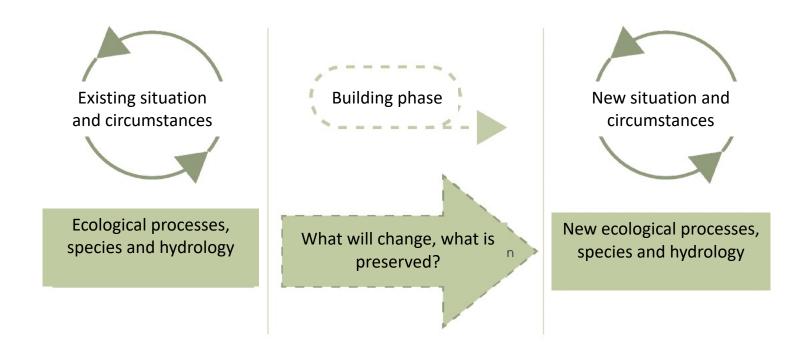


- food production and nutrient cycles e.g. the block green compost
- water circulation inside the block
- sequestering carbon in soil and vegetation
- -> Space requirements for creating and maintaining processes



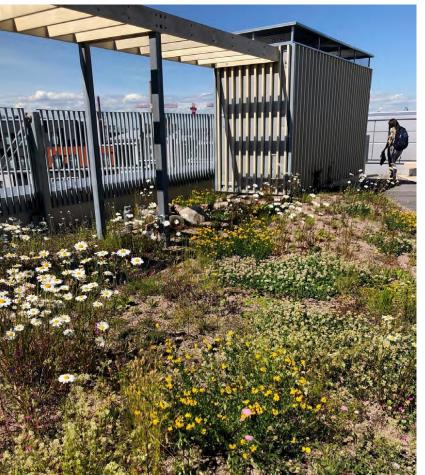
IV Understanding processes

Regenerative urban and landscape planning involves a continuous process of renewal, revival, and restoration. It requires ongoing monitoring, evaluation, and adaptation to ensure that urban landscapes remain ecologically healthy and socially just over the long term. Planning solutions should support natural development processes and adaptive capacities.



Local hydrology integrated into buildings







Local hydrology on the ground



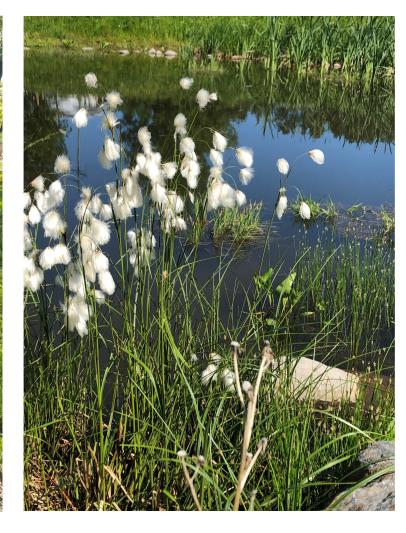




Local hydrology including a wetland





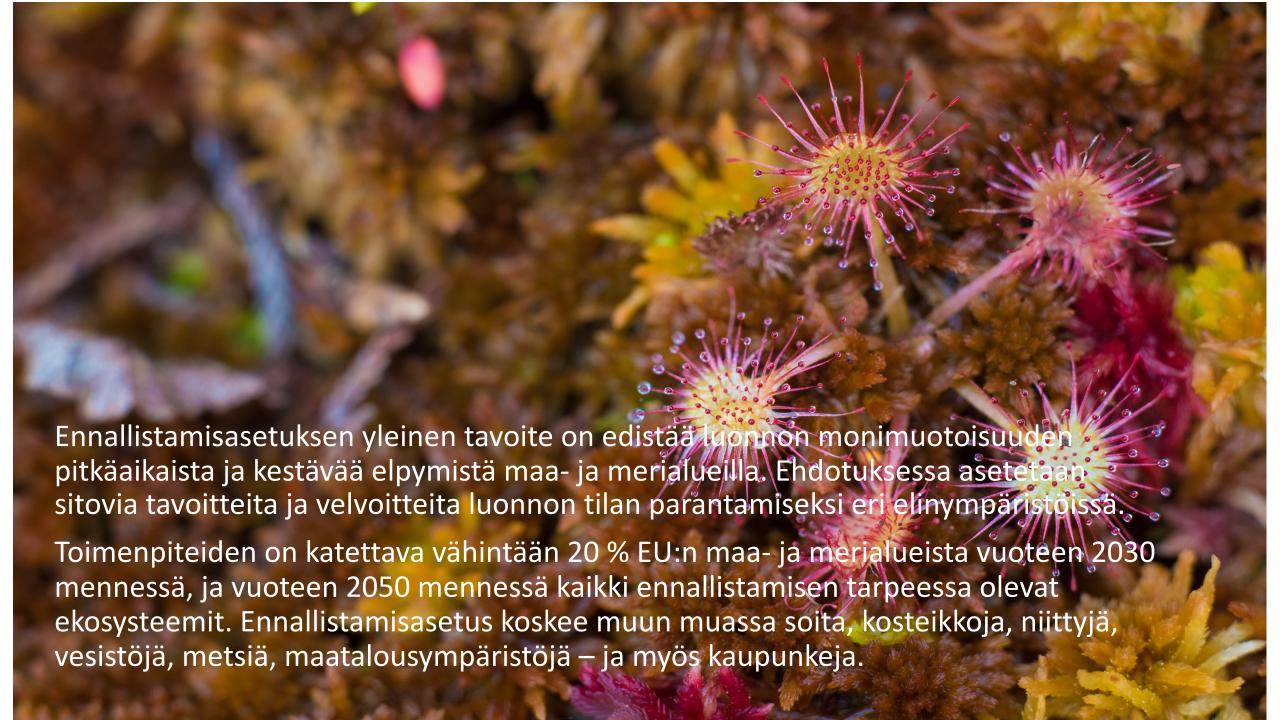


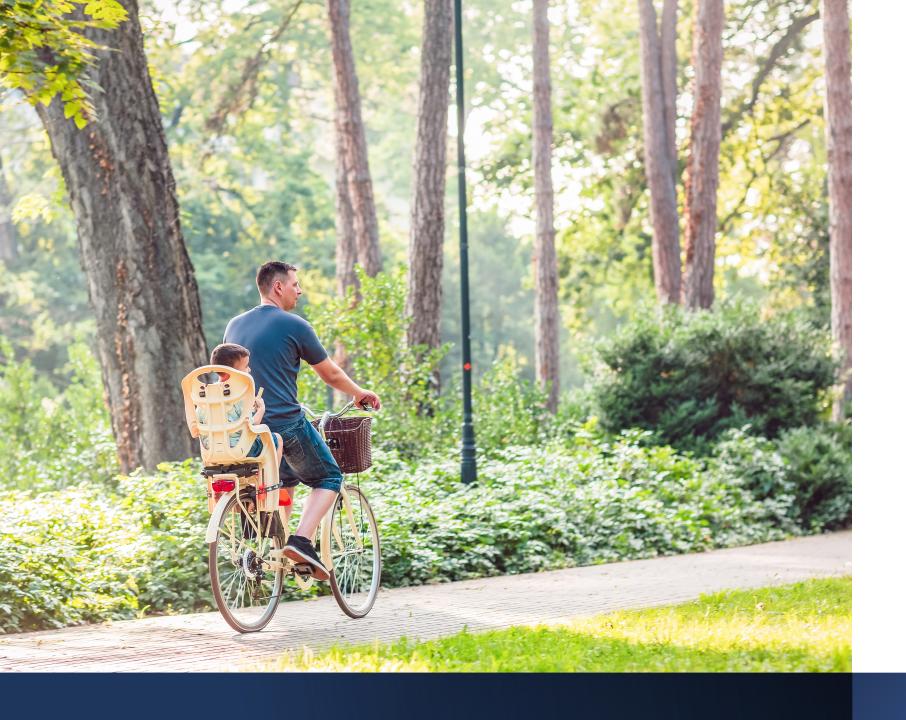
V Place-based design

Regenerative urban and landscape planning should consider the unique characteristics of each place, including its natural systems, cultural heritage, and social dynamics. Place-based thinking supports the development of locally adapted and context-

sensitive solutions. Säilyvä metsäalue Piha-alueet Alueen läpi kulkeva puistoakseli Säilyvä metsäalue Piha-alueet Liito-oravan puustoinen kulkuvhtevs Niittyalueet, jotka yhdistyvät toisiinsa puiston ja tienvarsien kautta 'pölyttäjäbaanoilla" **4** Rehevä puutarhamainen piha, joka jatkuu luontevasti Puustoiset alueet, yhdistyvät puiston kautta toisiinsa ja metsään Kosteikkoverkostot







IV Positive health and wellbeing

Regenerative landscapes should promote positive health and wellbeing for all inhabitants too. This includes providing access to green spaces, clean air and water, and promoting active transportation and physical activity.

Biodiversity hypothesis

The Biodiversity hypothesis states that contact with natural environments enriches the human microbiome, promotes immune balance and protects from allergy and inflammatory disorders.



VII Co-creation and raising awareness

Raising the awareness of all project stakeholders about regenerative planning process is one of the keys.

This promotes participatory and democratic processes that allows diverse perspectives and information to be included in the planning process.

It also promotes community building, local agency, ownership and locally run maintenance of urban space.



Nature management involving urban residents

- Osallistava luonnonhoito-opas
- The effects of nature management involving urban residents on well-being have been studied to a limited extent so far.
- However, in the case of individual projects, the impacts of nature management and related community engagement have been observed, for example, on social wellbeing.

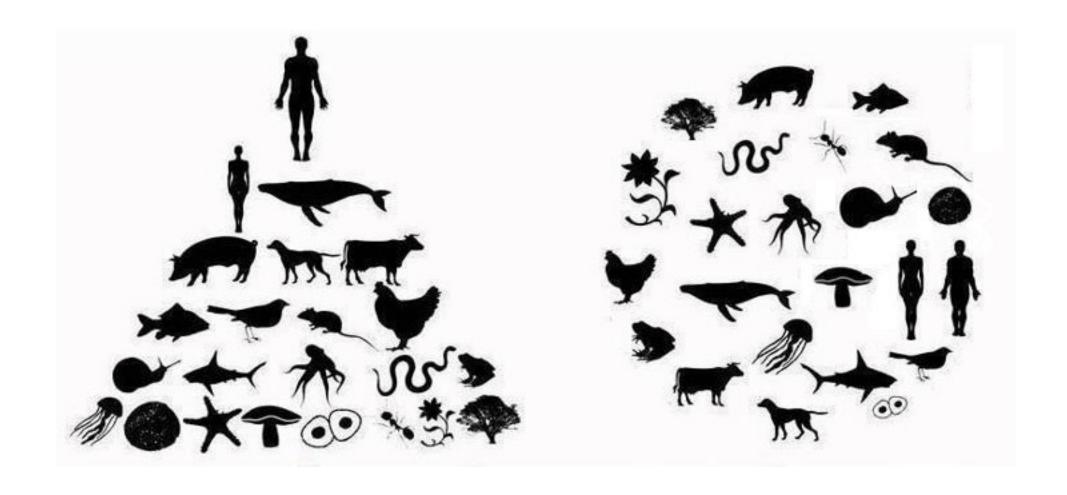


VIII Multispecies encounters and empathy





At its best, a well-designed and implemented urban environment can offer insights into the interdependence between humans and the rest of nature and strengthen a positive connection with nature.



In the core of solving sustainability crises are not technical solutions or measurements, but need to understand the mutual interconnectedness of humans and other species together with the planetary systems and revaluation of our needs, rights and priorities according to that.

VIII Multispecies empathy

II Partnership with nature

VII Co-creation

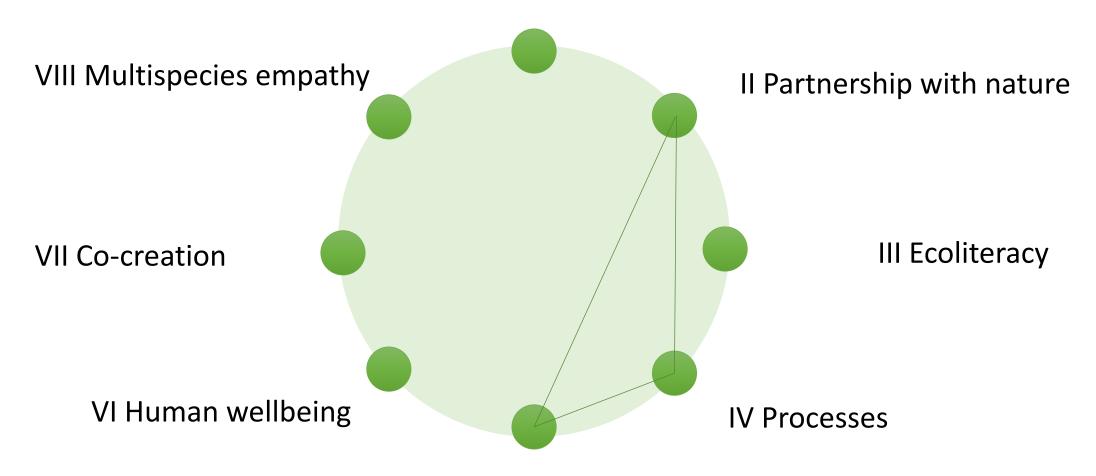
Step-by-step approach?

III Ecoliteracy

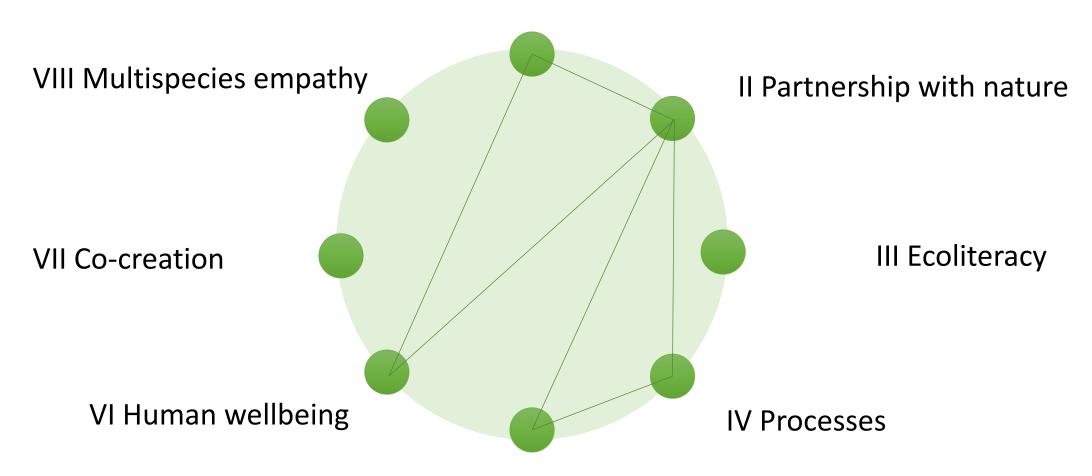
VI Human wellbeing

IV Processes

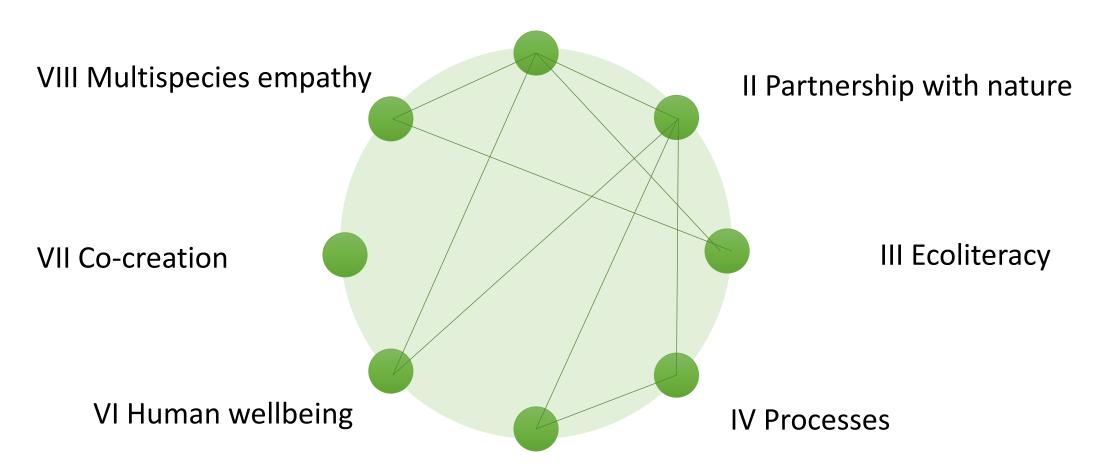
V Place-based design



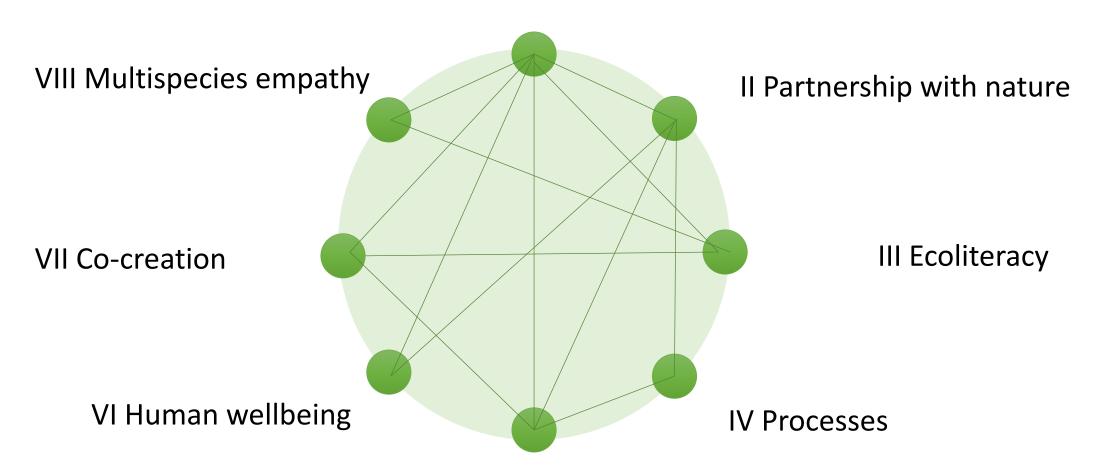
V Place-based design



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V Place-based design



Thank you, kiitos

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O elisa_maarit

www.aalto.fi/en/landscape-

architecture