

MUST Scenario Development – Forum Program

How can multispecies thinking could help meet the needs of urban and regional land-use planning objectives ?

7th March 2024, Sofia Helsinki

Program



Time	Theme
1000-1015	Introductions
1015-1020	Welcome and overview of MUST – Prof. Christopher Raymond
1020-1100	Setting the scene Multispecies & EU Environment Legislation – Dr Jonathan Carruthers-Jones Multispecies & Nature-based solutions – A/Prof. Nora Fagerholm Multispecies vs traditional ecological approaches – Dr Maria Hällfors
1100-1115	Fika
1115-1230	Workshop session 1 - Bringing multispecies thinking into existing biodiversity and climate mitigation scenarios
1230-1315	Lunch
1315-1420	Workshop session 2 - How could NBS help us achieve desired objectives - structures, processes and practices?
1420-1430	Fika
1430-1445	Workshop session 3 - Sharing summaries and insights
1445	Program ends

Welcome to MUST

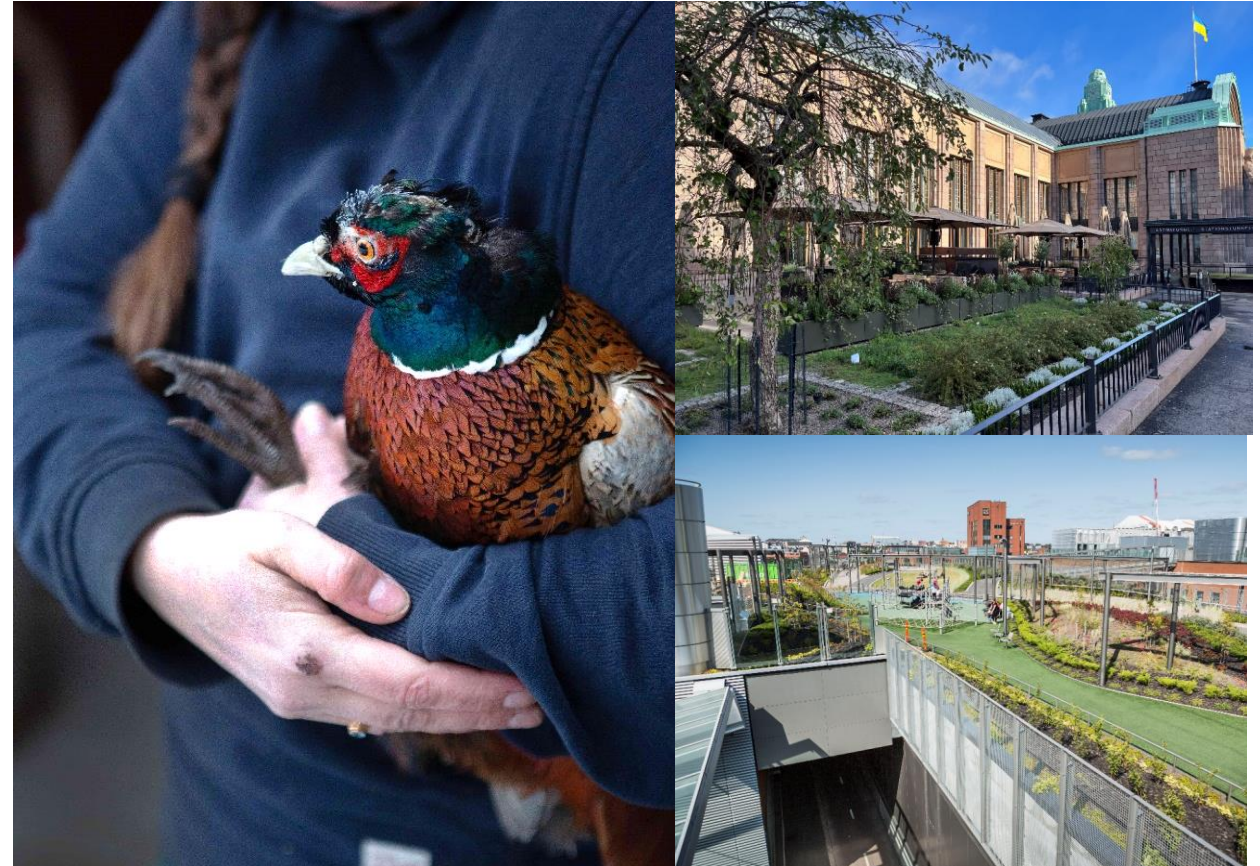
Professor Christopher M.
Raymond



must
Enabling multispecies transitions



Enabling multispecies transitions of cities and regions (MUST)



Partners





Substantial efforts to co-create NBS with human communities



Source: Raymond, Gulsrud

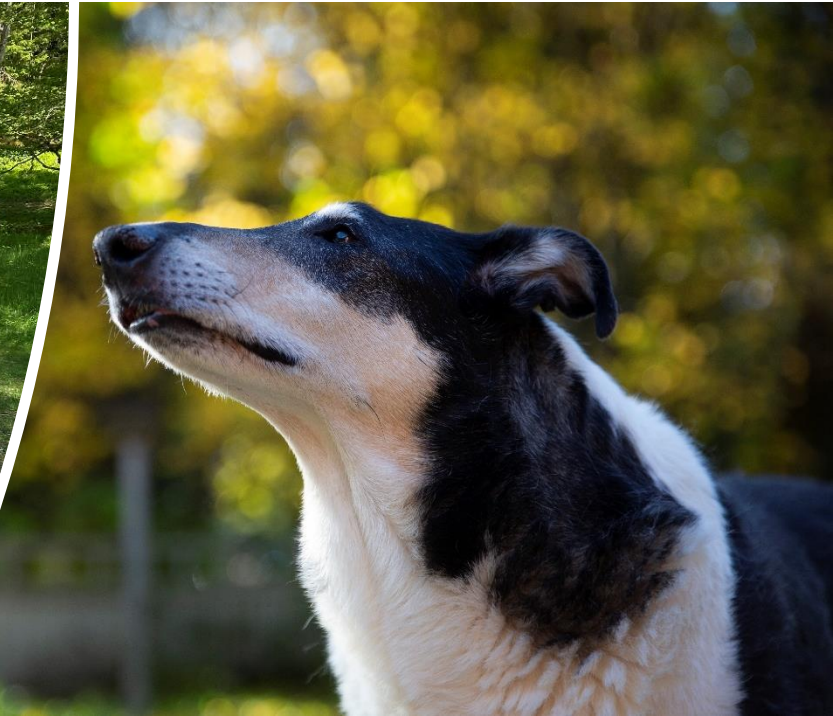
Major challenges

How do we change the **subject of justice** to represent and give agency to both humans and other species in NBS decision-making?

How do we fairly distribute the **benefits and costs** of NBS across humans and other species?

Source: Raymond, Rautio, Shutterstock

19/10/2023



Requires a multispecies justice lens



- **Multispecies justice refers to considering the interests and wellbeing of other species in decision-making processes. It is not only about evaluating impact but actively striving for conditions that support the flourishing of diverse beings.**
- Diverse beings: Not only planners but also children and other minority groups, companion animals, animals considered as consumable products, insects and other small species, as well as many plants



Why do we need to consider multispecies justice in NBS planning?



Helps us to think about the importance of biodiversity in new ways

- It enables planners to focus on the wellbeing and welfare of all beings
- It helps planners to rethink the nature-culture divide that permeates our work
- Creates an ethic of responsibility and accountability for relationships rather than particular subjects of justice

Aims of MUST



Aims of MUST

- Create a **paradigm shift in NBS planning and governance** by developing new theory, methods and practical tools that enable **multispecies transitions** of cities and regions.
- Create a **multispecies movement** that is able to connect communities with multispecies needs and contribute to a more inclusive democracy.



Source: Rautio

What are multispecies transitions?



MULTISPECIES TRANSITIONS

Representation in NBS Processes

Distribution in NBS Structures

Agency in NBS Practices

REPRESENTATION

Opportunity for meaningful involvement; recognising diverse identities and needs

DISTRIBUTION

Ensuring fair allocation of costs and benefits

MULTISPECIES JUSTICE

AGENCY

Making space for multiple voices to act

SOCIAL-ECOLOGICAL RESILIENCE

Spatial connectivity; cross-sectoral governance; new ways to assess the costs and benefits of NBS

STRUCTURES

Building skills, confidence, power, relationships and courage to change

PRACTICES

Systems thinking, new ways of representing diverse values of nature in NBS planning

PROCESSES

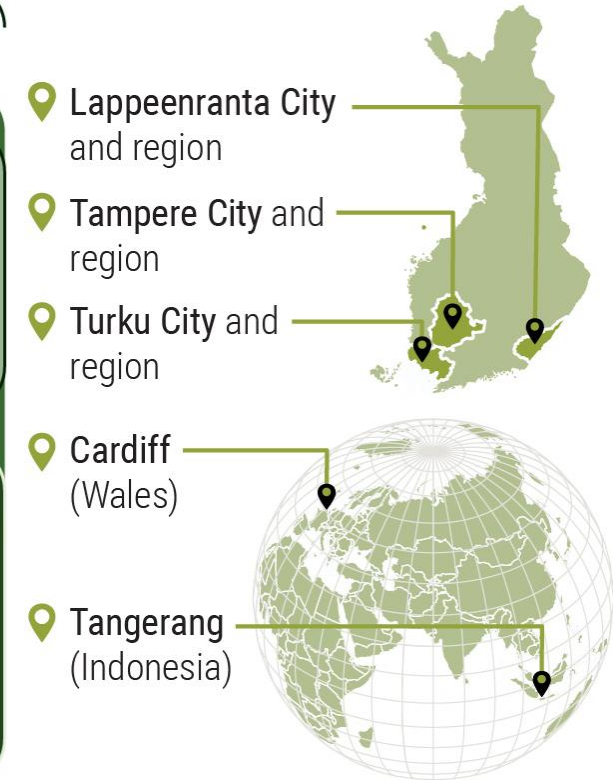
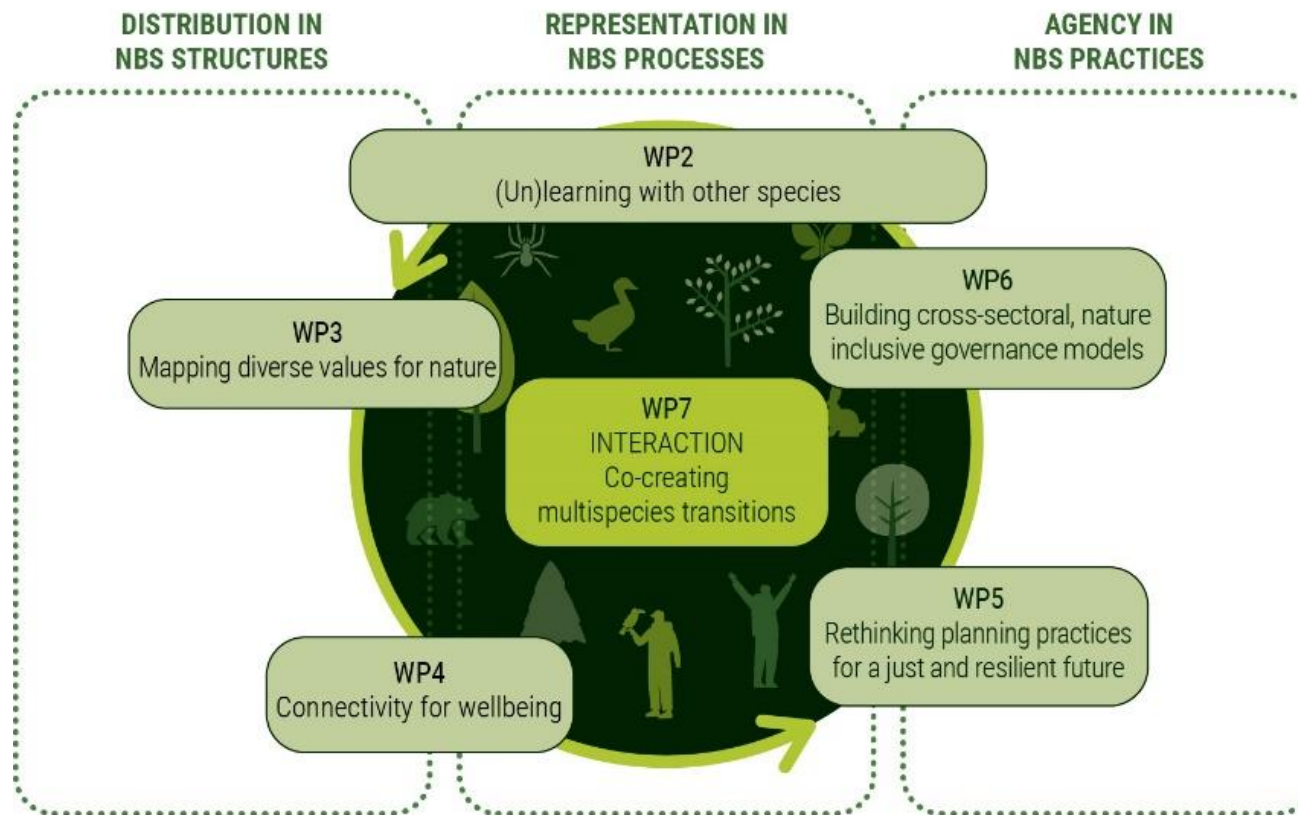


Fig. 1. MUST's novel concept and study areas

Project organization + solutions



WP1 – Sensing multispecies transitions



SOLUTIONS FOR MULTISPECIES TRANSITIONS

S1: Experiential methods for learning and communicating about multispecies needs (WPs 2,6).

S2: Spatial approaches to elicit and integrate the diverse values of nature (WPs 3-4). Results to be combined in the MUST Platform (WP1, WP7).

S3: Cross-sectoral, nature inclusive governance frameworks, including a MUST Compass (WPs 5-6).

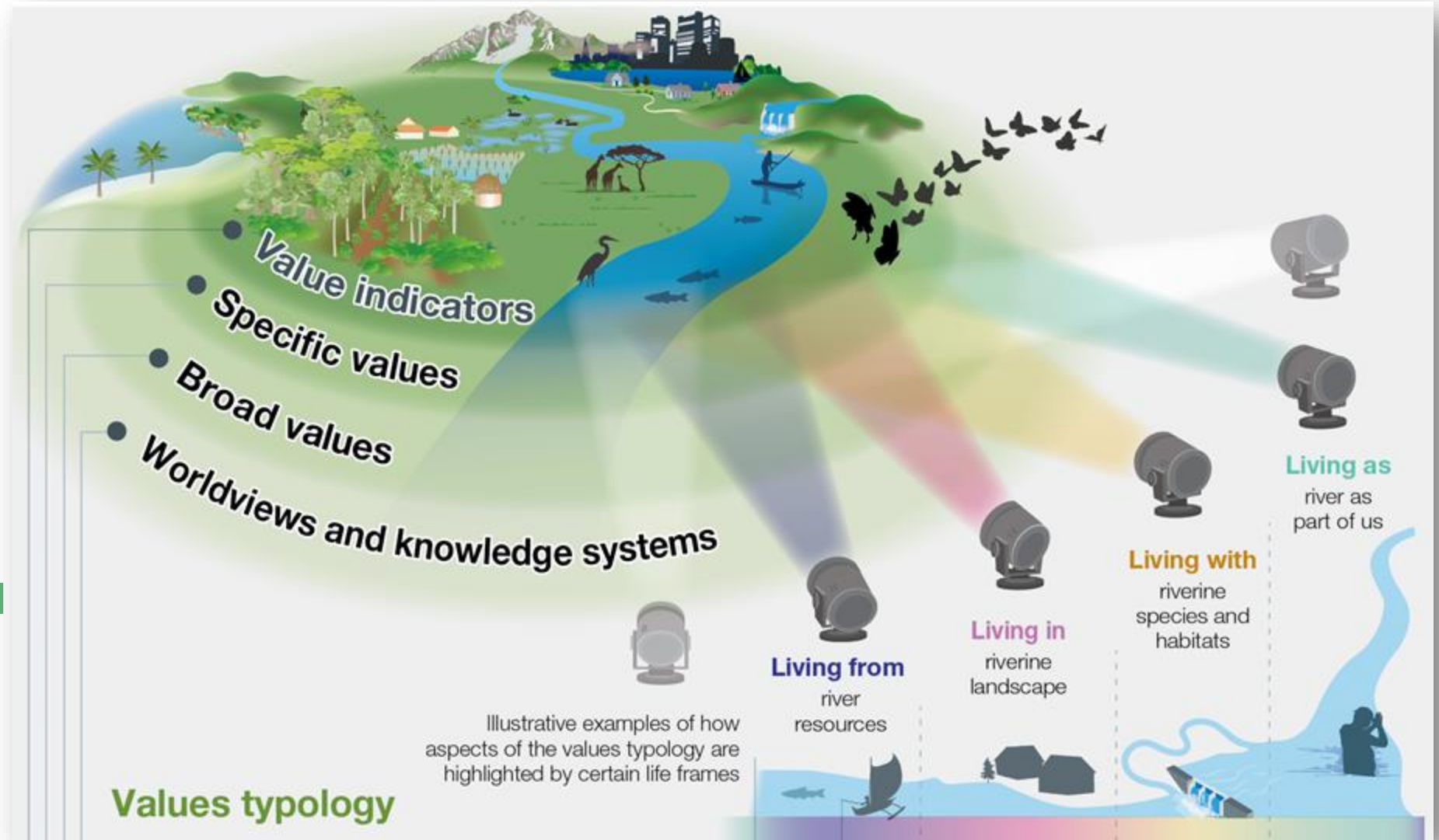
S4: MUST Capacity Building and Outreach Program (WP7 with all WPs).

Fig. 2. Work package structure

WP3 Mapping diverse values of nature

WP3 will identify, evaluate and map the:

- human-based *instrumental* and *relational* values, and
- other species-based *intrinsic* values



IPBES (2022): Summary for policymakers of the methodological assessment of the diverse values and valuation of nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. 37 pages. <https://doi.org/10.5281/zenodo.6522392>

WP 4 Connectivity for wellbeing

Model connectivity for multispecies based on a range of profiles:

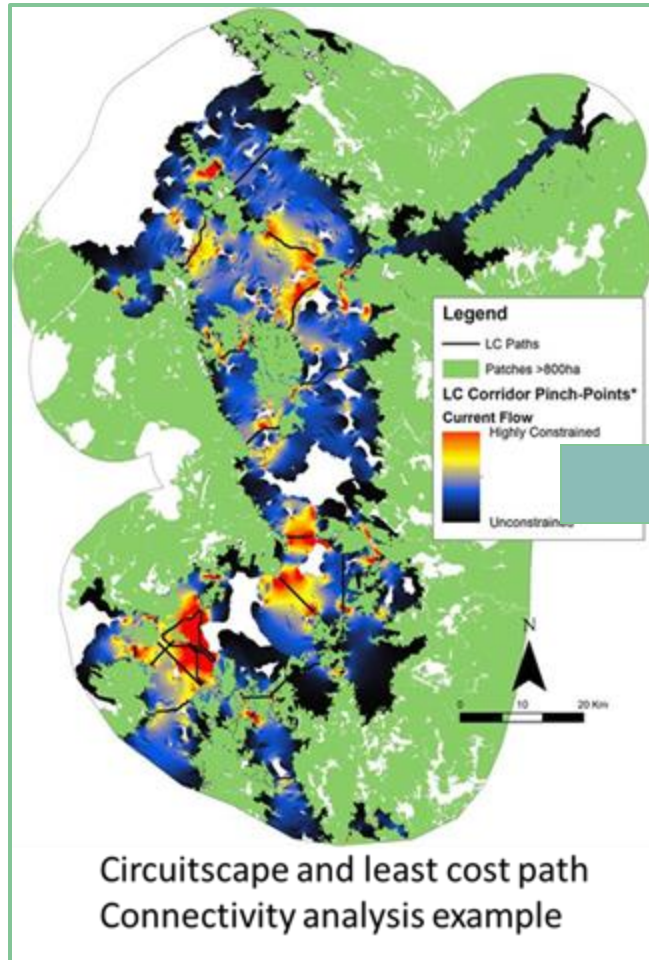
-ecological (poor dispersers, habitat specialists, forest species)

-human (elderly, cyclists, urban families, disabled)

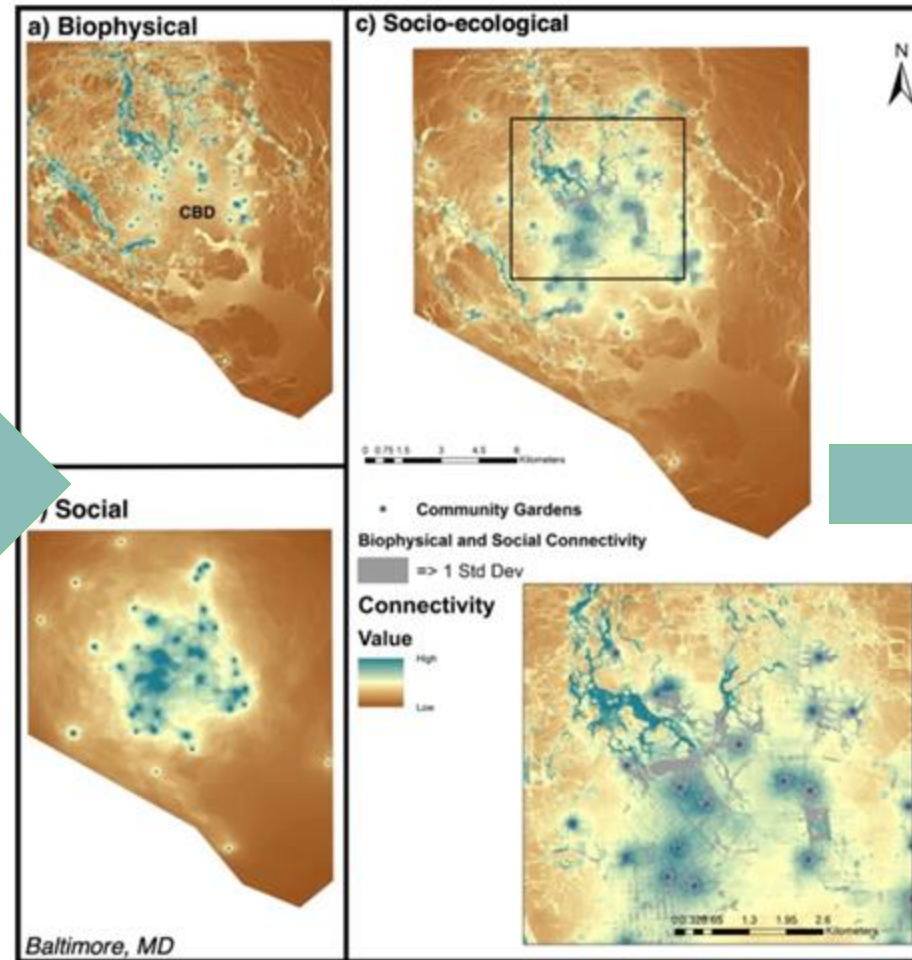
→ Identify critical habitat patches and corridors that maximise requirements for multispecies groups while avoiding conflicts and resistance



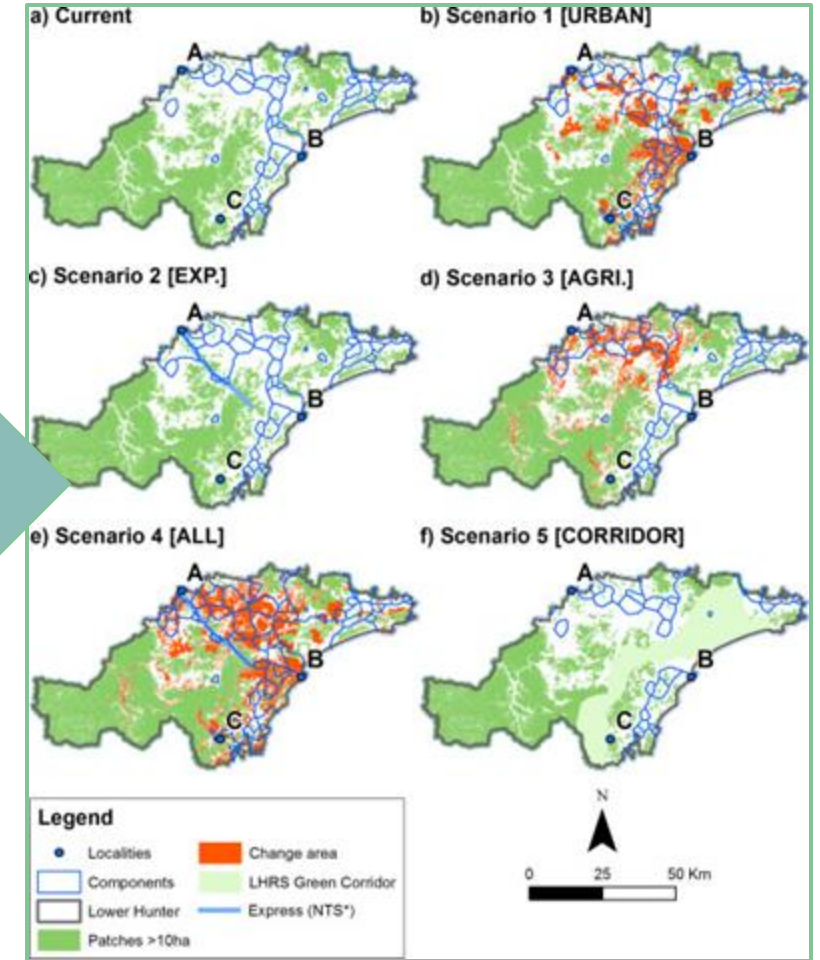
WP 4 Connectivity for wellbeing



Non-human
(Lechner et al. 2017)



Multi-species
(Egerer et al. 2020)



Alternative futures
(Lechner et al. 2015)

Solutions: Integrated valuation methods and protocol (S2). Spatially explicit alternatives to guide inclusive NBS policy options (S3)

Multispecies & EU Environment Legislation

Dr Jonathan Carruthers-Jones



Context:

Core environmental legislation in Europe

- Overarching legislation Green Deal
- This covers the period 2019-2050
- Why is this important ? Interlinkages...
 - A package of policy initiatives, which aim to set the EU on the path to a green transition
 - Ultimate goal of reaching a healthy planet and climate neutrality by 2050
 - Climate, the environment, energy, transport, industry, agriculture and sustainable finance
 - “Green transition” “Circular Economy”
 - Supports the transformation of the EU into a fair and prosperous society
- **MUST** recognises the challenges to date of achieving environmental targets
- **MUST** highlights the critical importance of going beyond the ‘standard model’
- **MUST** raises the importance of including ‘diverse beings’ in this vision of a healthy planet and society





Context:

Three core components

○ 1. Biodiversity Strategy

- Outlines a path to biodiversity recovery by 2030 for the benefit of nature, people and the climate
- Protects at least 30% of the EU's land area and 30% of its sea area, & integrates ecological corridors
- Strictly protects at least 30% of the EU's protected areas, inc. all primary and old-growth forests

○ 2. European Climate Law

- Writes into law the goal set out in the European Green Deal for Europe's economy and society to become climate neutral by 2050.
- Sets the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels

○ 3. Upcoming Nature Restoration Law (just passed)

- Supports (1) - sets binding target at EU level for member states
- Effective restoration measures to cover at least 20% of the EU's land and sea areas by 2030



1. Biodiversity strategy: Record to date and challenges

- **Previous strategies are not working**
 - EU 2010 biodiversity baseline 4 indicated that up to 25 % of European animal species were facing extinction, and 65 % of habitats of EU importance were in unfavourable conservation status, (due to human activities)
 - Mid-term review of the EU biodiversity strategy to 2020 found that the number of species and habitats in secure/favourable or improved conservation status has increased slightly since the 2010 baseline
- **Strategy to 2020 – “Bringing nature back into our lives”**
 - Ongoing anthropogenic focus
 - 30% biodiversity targets are habitat focused (for wetlands, forests , grasslands, river and lakes, heath & scrub , rocky habitats and dunes)
 - Lacking a multispecies perspective (goal is improving and enlarging species habitats)
- **Improvements in human-wellbeing are also seen as a key objective**
- **Multi-species thinking responds to both of these**
 - demands more effective policies for recognising the interlinkages between human wellbeing and other species' wellbeing
 - Interlinked socio-ecological objectives



2. EU Climate and Energy Framework

- A commitment to continue reducing greenhouse gas emissions, setting a reduction target of 40% by 2030 relative to 1990 levels
- Aims to progress towards a competitive, secure and sustainable energy system via:
 - A renewable energy target of at least 27% of energy consumption
 - Improved energy efficiency
 - Reform of the EU emissions trading scheme
 - A new governance framework for reporting by member states, based on national plans coordinated and assessed at EU level
- Also promotes nature-based solutions to help build climate resilience and protect ecosystems
- **In order to respond to the mid-term review criticism and deliver the objectives of (1) and (2) the EC has developed (3) Nature Restoration Law**



3. Nature Restoration Law

- Nature Restoration Law (NRL) aims to provide a guiding framework for the member states to initiate effective restoration measures for degraded ecosystems across the European Union.
- The subject matters outlined in article 1 include “long-term and sustained recovery of biodiverse and resilient ecosystems across the Member States’ land and sea areas” (European Commission, 2022a).
- The law not only addresses restoration for the sake of conservation, but also accounts for the related ecosystem services and other benefits.
- Legally binding
- NRL requires member states to create **Nature Restoration Plans**



3. Nature Restoration Plan aims

- NRL requires member states to create Nature Restoration Plans
 - ensure that habitats and species show no deterioration, and that at least 30% of those in unfavourable conservation status reach favourable status, or at least show a positive trend
 - reduce by 50% the number of 'red list' species threatened by invasive alien species
- Support cities with more than 20,000 inhabitants to put in place ambitious urban greening plans by the end of 2021. Links to:
 - Plant 3 billion trees for biodiversity, according to ecological principles;
 - Restore at least 25,000 km of free-flowing river
- Highlight Nature Based Solutions as a way to address the biodiversity and climate challenges and meet these NRL targets
 - **A good example is Green infrastructure** - *“A strategically planned network of natural and semi-natural areas with other environmental features, designed and managed to deliver a wide range of ecosystem services, while also enhancing biodiversity.”*
 - Services include water purification, improving air quality, providing space for recreation
 - Network of green (land) and blue (water) spaces to improve the quality of the environment, the condition and connectivity of natural areas, as well as improving citizens' health and quality of life.

Example: Nature Restoration Law and Cities



- The original proposal for the article indicated that the area of urban green space should be increased by 5 percentage points of the total area of cities and of towns and suburbs and canopy cover should be increased to a minimum of 10 percentage points of the area at the municipal level by 2050 compared to the 2021 baseline (European Commission 2022) These original targets received heavy criticism due to their challenging applicability in different geographical contexts and the inherent risk to increase urban sprawl (Regional Council of Southern Finland, 2023).
- The rephrased form of the article 8 includes several significant compromises. These include no net loss in the national area of urban green space or tree canopy cover of urban ecosystem areas in 2030 compared to 2024 rates, excluding areas that exceed the thresholds of 45% of green spaces and 10% of tree canopy cover in their urban centres and urban clusters. After 2030, there shall be an **increasing trend in the national level of urban green spaces** in urban ecosystem areas until a **satisfactory level** is reached.
- Moreover, there shall be an **increasing trend of tree canopy cover** of urban ecosystems in urban ecosystem areas until a **satisfactory level** is reached (European Council 2023).



Challenges presented by the NRL

- Current threshold levels introduced in article 6 could incentivize high-green cities to exercise land grabbing to ensure that they have sufficient room for future urban development.
- What constitutes a satisfactory level of urban green coverage in the context of urban areas is not currently defined in any way
- Currently defined thresholds of 45% green space and 10% canopy cover could become the de facto guidance values for achieving a satisfactory level of green space - not intended as such
- NRL does not take into account the large variation across small areas of urban habitats, nor connectivity between habitats e.g., lawn is equal to wooded vegetation when only counting the amount of urban green spaces.
- More generally how to recognise the needs of other species in urban and regional planning is overlooked.

Multispecies justice, nature-based solutions and well-being

A/Professor Nora Fagerholm

University of Turku

Department of Geography and Geology

What are NBS?

IUCN Definition

“Actions to **protect, sustainably manage, and restore natural or modified ecosystems**, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.”

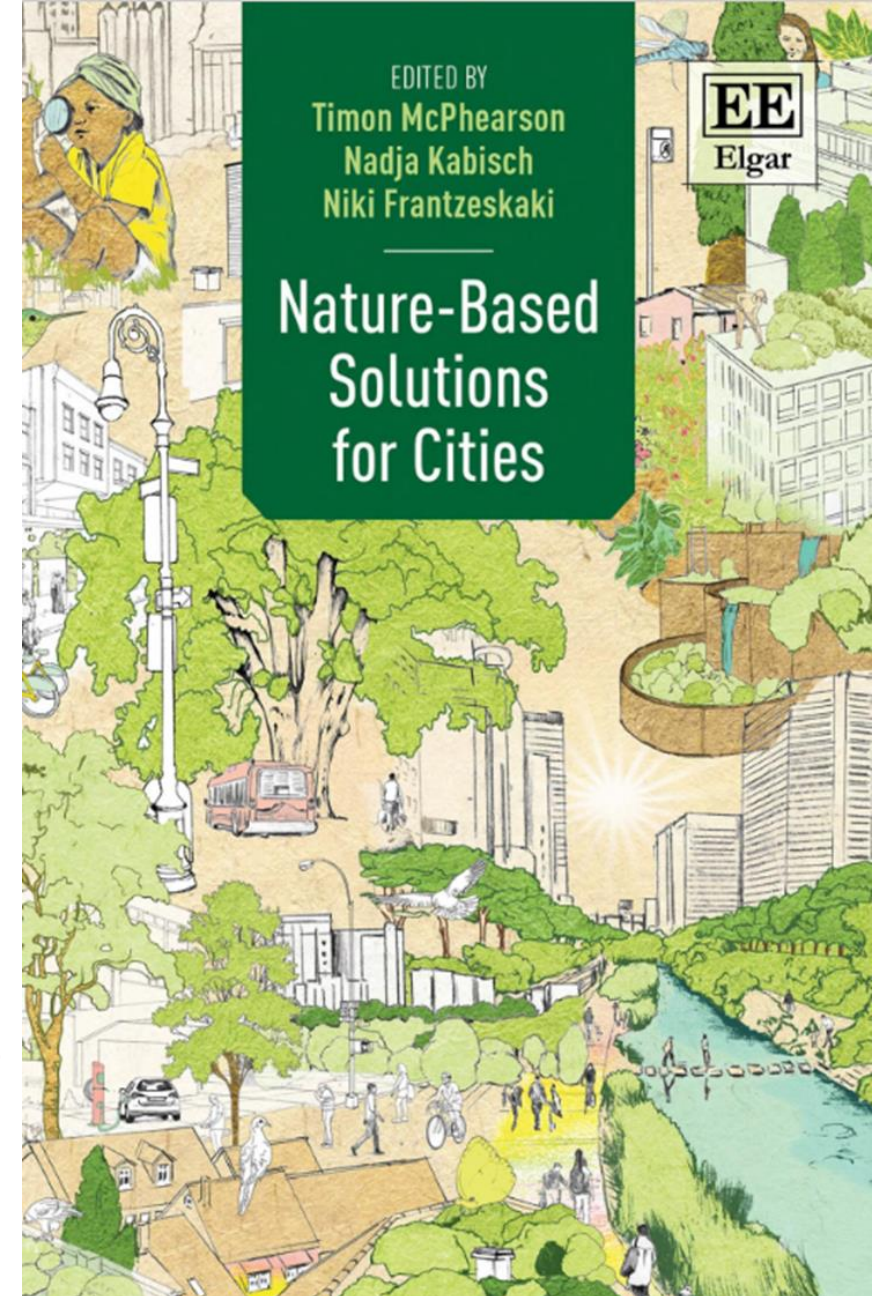
EU Definition

“Solutions that are inspired and supported by nature, which are cost-effective, **simultaneously provide environmental, social and economic benefits** and help **build resilience**. Such solutions **bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes**, through locally adapted, resource-efficient and systemic interventions.”

McPhearson et al., 2023

"Systemic solutions that **restore or create new feedback loops between social, ecological, and technological systems** in the urban landscape and have the ability to deliver multiple co-benefits across social, ecological, and economic domains." **Open access book:**

<https://www.elgaronline.com/edcollbook-oa/book/9781800376762/9781800376762.xml>



What do nature-based solutions look like?



Co-benefits



Wide range of co-benefits



Paloniemi (ed.), 2019. Kestävää kaupunkisuunnittelua: Luontopohjaiset ratkaisut maakunnissa ja kunnissa <https://julkaisut.valtioneuvosto.fi/handle/10024/161757>



Challenges



- Anthropocentric – **prioritises some humans over other species** (Maller, 2021)
- NBS designs are often premised on the **commodification of nature**:
 - leading to the centralisation of power and benefits among privileged groups, including corporations and investors
 - unequal access to the benefits of NBS can contribute to social inequalities, lead to displacement of vulnerable groups, loss of community connections and damage to local livelihoods
- Structures and practices underpinning NBS planning need to be **rethought from the perspectives of both humans and other species**
- NBS planning decisions need to better **consider how the wider range of benefits are distributed across society and nature**

NBS and multispecies transitions



- We raise critical questions such as *who or what can be considered a stakeholder*, and what NBS planning could look like when the perspectives of *multiple species and diverse subgroups* are recognised in decision-making.
- To enable a just green transition, a paradigmatic change is needed in NBS planning at urban and regional scales that:
 - recognises the *interdependencies between the needs of humans and other species*
 - moves beyond existing approaches to NBS governance by introducing the novel concept of *'multispecies transitions'*
 - implements NBS in ways that enable more just and resilience-driven decision-making by ministries, cities, regional authorities, companies and local communities
 - considers how, where and for whom NBS can be just, effective and resilient for humans and other species
- Co-flourishing of people and other species



**European
Environment
Agency**

BRIEFING

**Exiting the Anthropocene? Exploring
fundamental change in our relationship
with nature**

<https://www.eea.europa.eu/publications/exiting-the-anthropocene>

Policies like the European Green Deal and the 8th Environment Action Programme make steps in the right direction. However, profound transformations in established mindsets and paradigms are likely to be necessary. Specifically, we should move from viewing nature as a source of capital to respecting its inherent value.

It is not 'us and them'

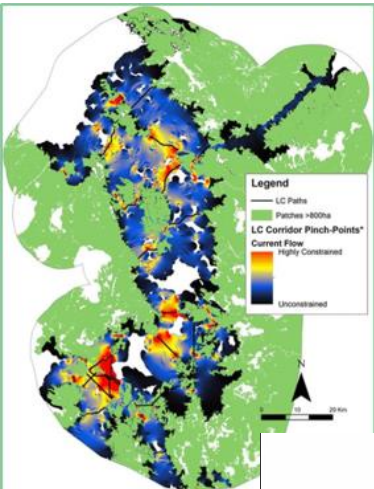


MUST approach to NBS

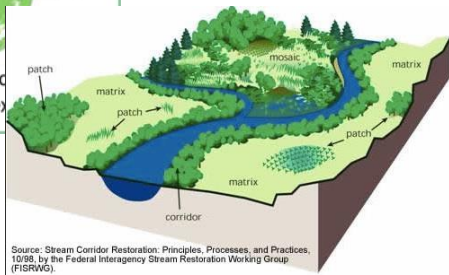
In MUST, we move beyond the-state-of-the-art in NBS research by integrating theory on *social-ecological justice (i.e. multispecies justice) and social-ecological resilience*, leading to multispecies transitions:

- Stresses collective well-being of humans and other species, *without high levels of suffering or inequality between different groups of people, other species or populations.*
- This approach has potential to address biodiversity and climate crises: we aim to provide *representation, distribution and agency* for multispecies concerns in NBS planning.

Green infrastructure connectivity as NBS that supports wellbeing of people and other species



Circuitscape and least cost connectivity analysis



Source: Stream Corridor Restoration: Principles, Processes, and Practices, 10/98, by the Federal Interagency Stream Restoration Working Group (FISRWG).

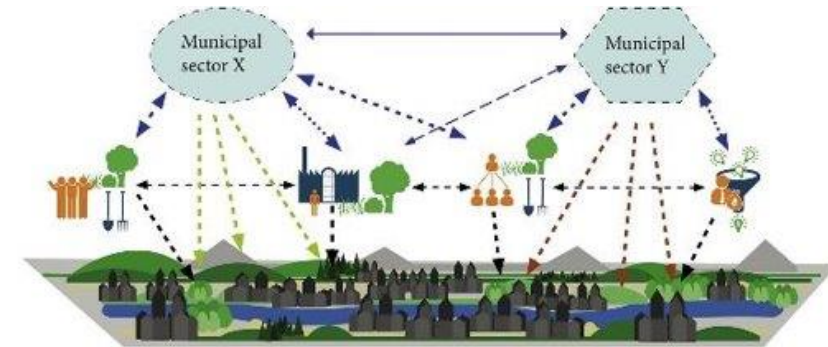


Solutions that support:

- Diverse species & their mobility (**ecological connectivity**)
- People's accessibility & active mobility (**human connectivity**)

AND

- Ecological processes (CO2 sequestration, drainage water detention, urban heat island, air quality etc.)
- Economic benefits (climate change impacts, investments, physical and mental health etc.)



How do multispecies approaches differ to traditional ecological approaches?

Dr Maria Hällfors



must
Enabling multispecies transitions

How are multispecies approaches different to ecological approaches?

Maria Hällfors, WP4 leader
Senior Research Scientist,
Nature Solutions, Finnish Environment Institute



Ecology

Ecology, from Ancient Greek οἶκος (oîkos) 'house', and -λογία (-logía) 'study of'

≈ What kind of homes do species require

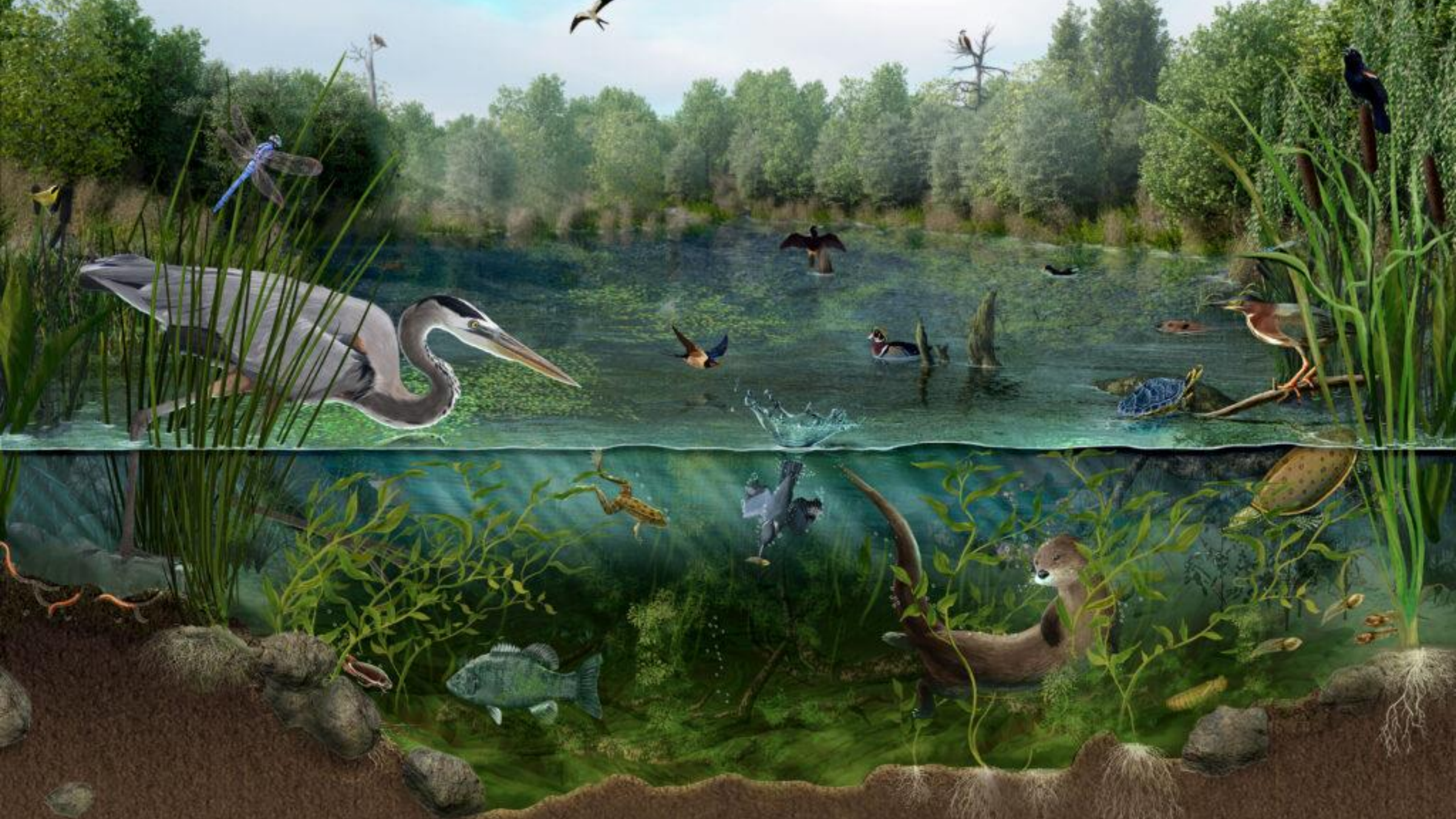
“Ecology [...] the study of abundance, biomass, and distribution of organisms in the context of the environment.”

11/03/2024

ANIMAL HOMES

Take the animals to their homes by drawing a line!







John James Audubon

California parakeet

PLATE 26

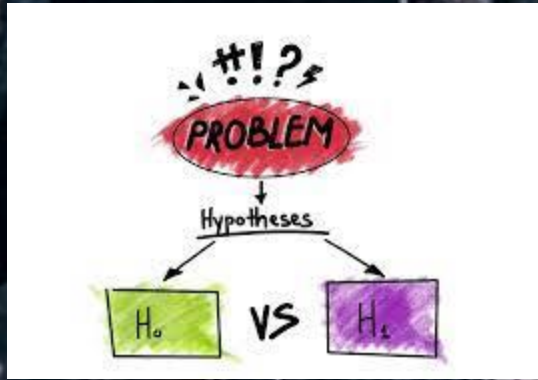


Carolinus Parakeet, Miles 1. F. & Young 3.

PSITTACUS CAROLINENSIS.

Plant. Vitige. Creeks. Turc.

Engraved from the Collection of the Hon. G. C. Silliman, Esq.



How is ecology practised?

- Hypothesis-led theory testing
→ Aims to understand species diversity patterns through the scientific method
- Attempts to be scientific and objective, **non-normative**
→ Any value judgements relate to scientific support of species ecosystem importance
- Biased representation through a distorted lens

Multispecies justice

All beings we share our surroundings with have necessary needs.

Some of the basic needs are shared by many species, but some are contradictory.

Multispecies justice concerns the complex interrelations of diverse needs.





How is multispecies justice practised?

- focuses on justice across human and non-human life
- emphasizing ethical considerations and rights for all species.
- considering the interests and wellbeing of other species in decision making processes.



How is multispecies justice practised?

is necessarily incomplete:

- burdens to some beings cannot be completely avoided
- but the distribution of harms should be acknowledged already in planning
- human needs should not automatically override the needs of other beings.

Ecology versus(?) MSJ

Dichotomous to its nature → ecologists are the active observers and interpreters of nature

Attempts to distance itself from values

May value species based on their importance in the ecosystem



Attempts to move past the dichotomy of us vs. them

Endorses values

Emphasizes the intrinsic value of all life forms

An integrated approach for a holistic and scientifically underpinned view

Can help us **move from a dichotomy** of us and them **towards a holistic view** of ecosystems that humans are part of...

... while simultaneously making **full use of the scientific knowledge** and understanding of other species' wellbeing that ecology holds, while **acknowledging the distorted lens**



@Nicolle R. Fuller, SayoStudio

Moving from a shallow vision of functions and services...



© SayoStudio, by Ari Gea, May Jernigan, Natasha Mutch, and Nicolle R. Fuller

... to a fuller picture of life and all its worth.



© SayoStudio, by Ari Gea, May Jernigan, Natasha Mutch, and Nicolle R. Fuller

Workshop activities

Workshop Sessions 1

- Bringing multispecies thinking into existing biodiversity & climate mitigation scenarios



- **Breakout Group 1:**

- EU Nature Restoration Law (NRL) and Biodiversity Strategy of Finland (facilitated by SYKE)

- **Breakout Group 2:**

- EU Climate and Energy Framework (facilitated by UTU)



Roles during the workshop

Participants

- To represent the perspective of your background group and profession,
- To comment constructively on others' views.
- The group together is responsible for coming to a shared understanding of the perspectives represented, their agreement, differences and any unclarities.

Facilitators

- Focuses on timekeeping, making sure that the discussion follows the planned schedule, and everyone's perspectives receive enough time and attention in the discussion.

Secretary

- Will focus on maintaining clear notes of the discussion for the researchers.

How will the notes be used after the event?



- Will be used by designated MUST researchers for academic publications and MUST interaction activities (blog posts, reports, discussion at events).
- Participants will not be named
- Individual comments will be anonymous

Please respect the Chatham House rule as you refer to workshop discussions: you may report **what** was said, but **not who** said it.

Workshop Session 1

- Bringing multispecies thinking into existing biodiversity & climate mitigation scenarios



• In groups

- How does this policy context apply to your city, region or field of operations?
- How could you better acknowledge the needs of other species in your decision making?
- What would it look like to bring other species such as birds or fragile habitats as a stakeholder into your decision making?
- Whose voices and needs are missing from this process?
- How could we start to include them in the discussion?

Workshop Session 1

- Bringing multispecies thinking into existing biodiversity & climate mitigation scenarios



• Keskustelkaa ryhmissä

- Miten tämä poliittikkakonteksti koskee kaupunkiasi, aluettasi tai toiminta-alueettasi?
- Kuinka voisit paremmin huomioida muiden lajien tarpeet tähän poliittikkakontekstiin liittyvässä päätöksenteossa?
- Miten muut lajit, kuten linnut tai herkät elinympäristöt, voisi tuoda sidosryhmäksi oman alasi päätöksentekoon?
- Kenen näkökulma ja tarpeet puuttuvat tästä prosessista?
- Miten voisimme alkaa ottaa heidät mukaan keskusteluun?

Workshop Session 2

- How could NBS help us achieve desired objectives, structures, processes and practices?



- **Structures:**

- How can we improve connectivity for humans and other species in urban and regional areas?
- How to think about values of nature from different perspectives and include these perspectives into decision making? (Living from, Living with, Living in, Living as)

- **Processes:**

- How can we give space for the voices of other species?

- **Practices:**

- How do we build the capacity to achieve these changes within our own organisation?
- How do we build capacity to achieve these changes with other partners in education and business?

Workshop Session 2

- How could NBS help us achieve desired objectives, structures, processes and practices?



• Rakenteet

- Miten voimme parantaa kytkeytyneisyyttä ihmisille ja muille lajeille kaupunkiympäristöissä ja niiden ympärillä?
- Millaiset tavat lähestyä luontoarvoja eri näkökulmista edistäisivät niiden sisällyttämistä päätöksentekoon? (Living from, Living with, Living in, Living as)

• Prosessit

- Miten pystymme antamaan tilaa muiden lajien näkökulmille?

• Käytännöt

- Miten kyvykkyyksiä tarvittavien muutosten aikaansaamiseksi pitäisi kehittää omassa organisaatiossasi?
- Miten kyvykkyyksiä tarvittavien muutosten aikaansaamiseksi pitäisi kehittää yhteistyössä muiden kanssa? Huomioikaa erityisesti koulutussektori ja liike-elämä.

Workshop Sessions 3

- Sharing summaries and insights



In groups

- Summary of Workshop Session 1 on scenarios
- Summary of Workshop Session 2 on NBS
- Planning next steps

Workshop Sessions 3

- Sharing summaries and insights



Keskustelkaa ryhmissä:

- Miten vetäisitte yhteen ensimmäisen, skenaarioita käsitelleen työpajan keskustelujen tulokset?
- Miten vetäisitte yhteen ensimmäisen, luontopohjaisia ratkaisuja käsitelleen työpajan keskustelujen tulokset?
- Millaisia toimia näiden perusteella aiotte toteuttaa, tai toivotte muiden toteuttavan?

Partners



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UNIVERSITY
OF TURKU



Tampereen yliopisto
Tampere University

**DEMOS
HELSINKI**



MONASH
University



UNIVERSITY
OF OULU



Suomen ympäristökeskus
Finlands miljöcentral
Finnish Environment Institute



Thank you!



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name