

Where do we stand?

Research and policy cooperation
in mainstreaming nature-
based solutions in Finland

Riikka Paloniemi,

Environmental policy centre,

Finnish Environment Institute, SYKE

Twitter: @RiikkaPaloniemi



1. Where do we stand?

How well do Nature-based solutions support sustainable development in Finland?

2. Where should we stand and how to get there?

Where do we stand?

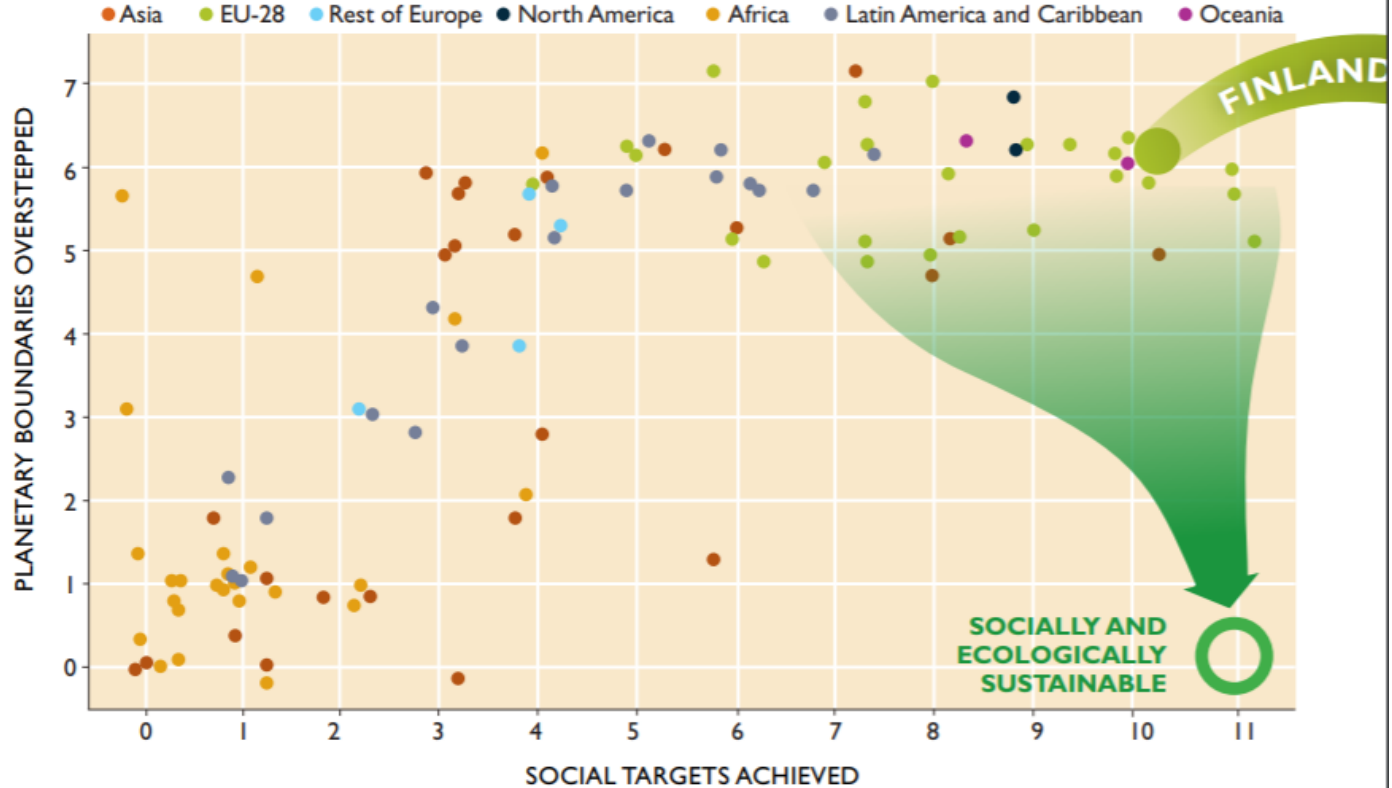
Not a single country has achieved a high level of well-being in an ecologically sustainable way

Graph 2. The social and ecological sustainability level of the countries of the world. Not a single country has achieved a high level of human well-being in an ecologically sustainable manner. It would be the most sustainable and fair for a country to achieve well-being without exceeding the planetary boundaries (lower right on the picture).

The position of the country data points is approximative.

Source: O'Neill et al. 2018²

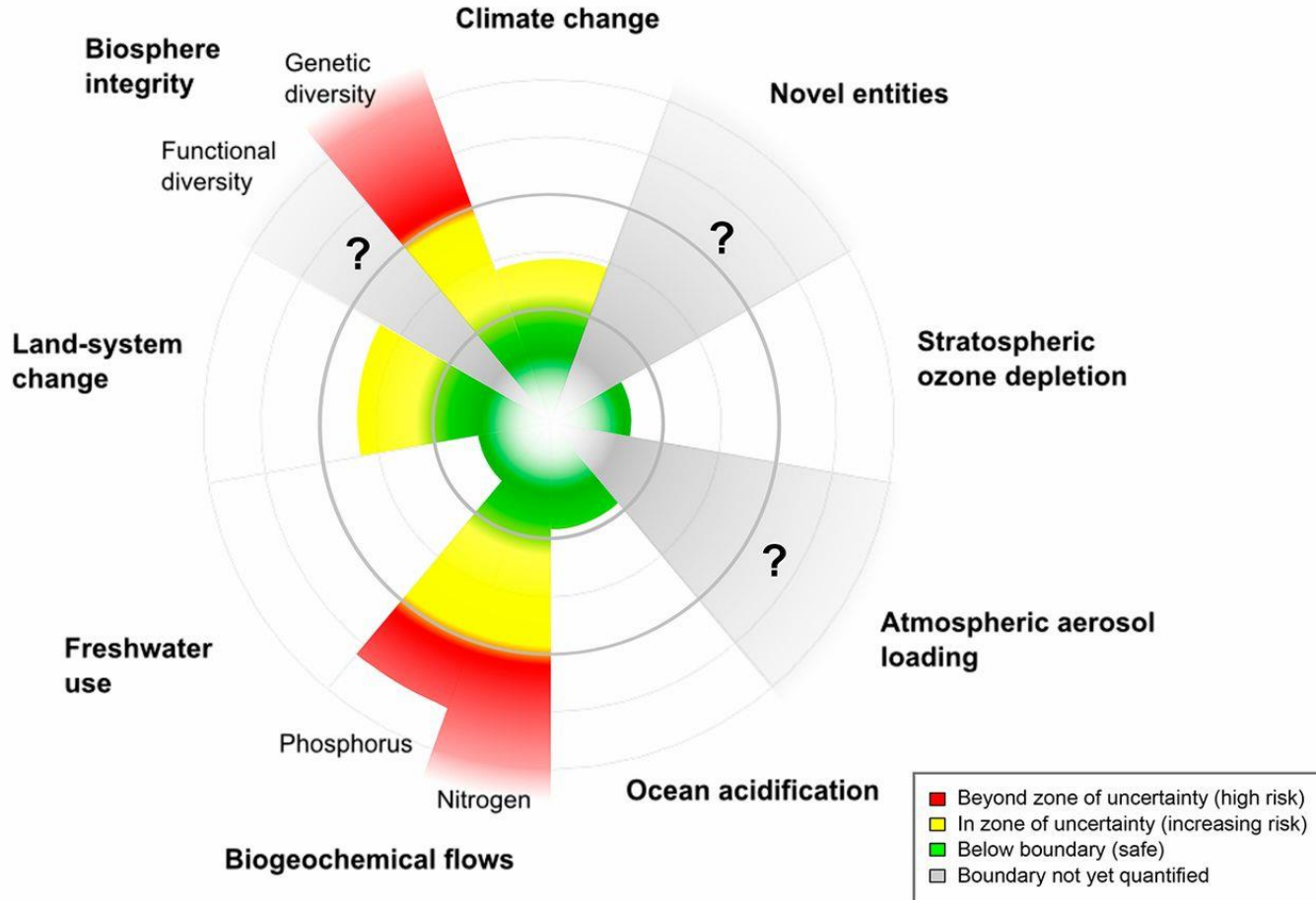
© SYKE & SITRA



A Future that planet can accommodate. SYKE's policy brief 30.5.2018:

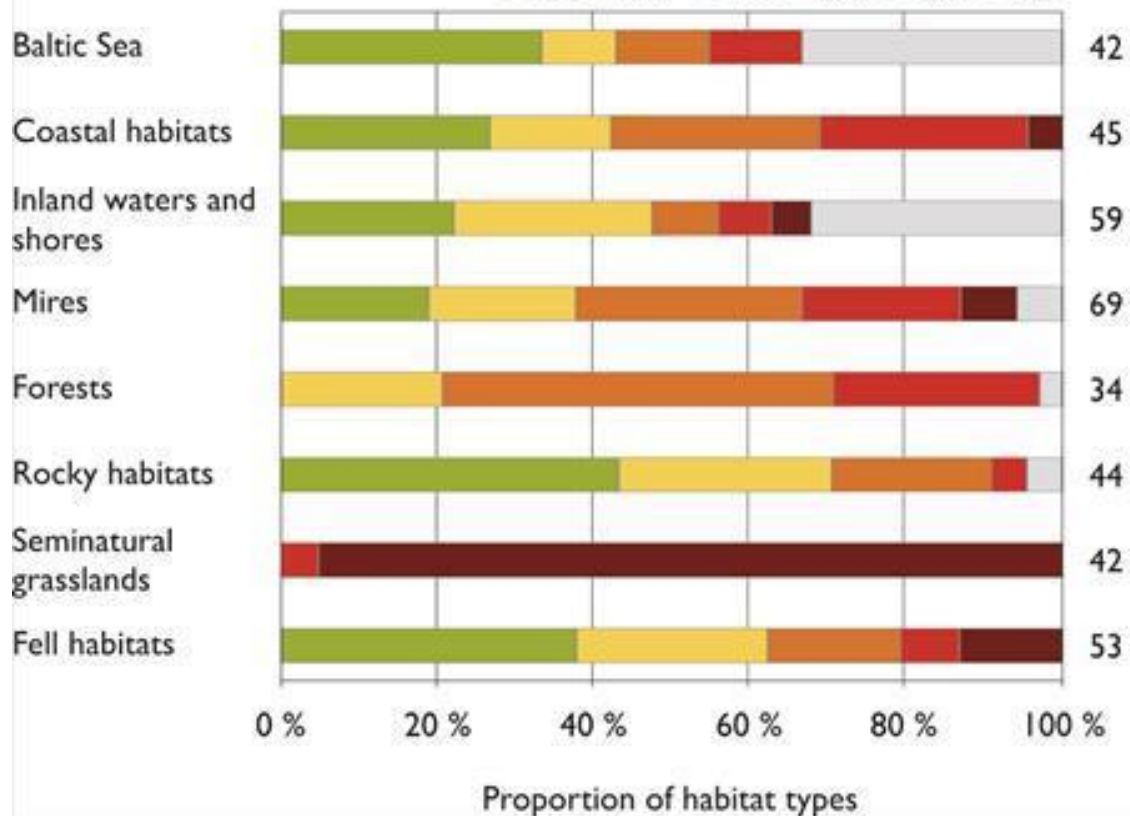
https://issuu.com/suomenymparistokeskus/docs/pb_a-future-the-planet-can-accommod

Planetary boundaries



a) Whole Finland

■ LC ■ NT ■ VU ■ EN ■ CR ■ DD



- 50,000 species in Finland
 - incl. all animals, plants and fungi
- 20,000 species live in forests
- 2,250 forest species are threatened
 - especially fungi and invertebrates

<https://www.luke.fi/en/natural-resources/forest/forest-biodiversity/>
https://www.ymparisto.fi/en-us/nature/Natural_habitats/Assessment_of_threatened_habitat_types_in_Finland/Assessment_of_threatened_habitat_types_in_Finland_2018

[Assessment of threatened habitat types in Finland 2018](https://www.ymparisto.fi/en-us/nature/Natural_habitats/Assessment_of_threatened_habitat_types_in_Finland/Assessment_of_threatened_habitat_types_in_Finland_2018)

LC=Least Concern; NT=Near Threatened; VU=Vulnerable; EN=Endangered; CE=Critically Endangered

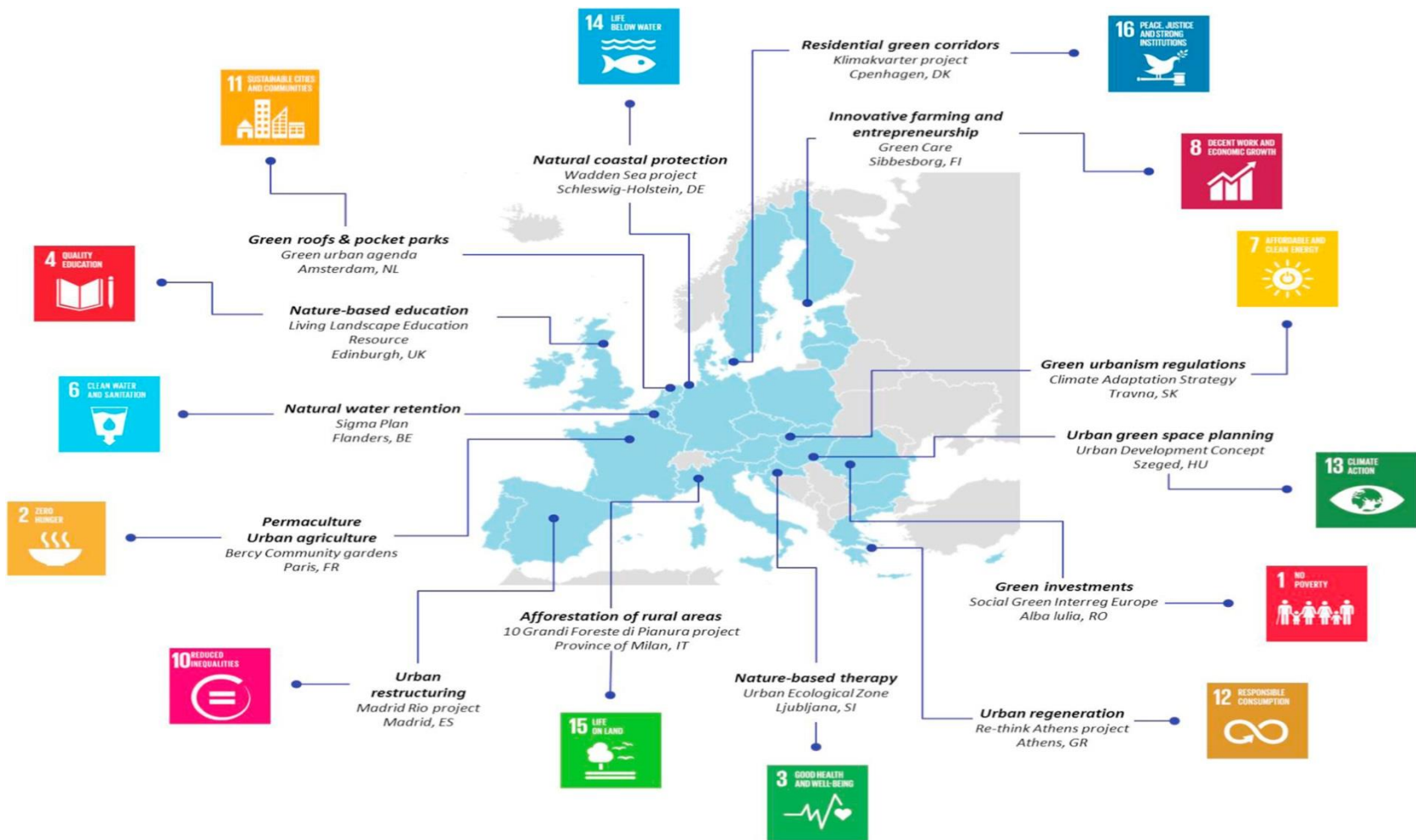
Nature-based solutions aiming at holistic solutions

Solutions to **societal challenges** that are based on opportunities and models created by ecosystem elements and processes.

Solutions that aim at ecologically, economically and socially **sustainable and comprehensive** solutions and long-term benefits.

(IUCN 2018, EC, 2018)





Examples of NBS and measures linked to SDGs across Europe (Faire et al. 2017)

In Finland, nature-based solutions are increasingly approached especially on municipal scale

GOVERNMENT'S ANALYSIS,
ASSESSMENT AND RESEARCH ACTIVITIES

TASAPELI



Biodiversity



Health



Climate
change
adaptation



ILMATIETEEN LAITOS

A''



SYKE



TURUN
YLIOPISTO

TAPIO





Storm water management, Helsingin Vauhtitie; Green factor Kuninkaantammi; Green Street, Jyväskylä



Kindergarden near by forests, Lahti; Green roof, Ruskeasanta HSY; Compensation, Ecosystem hotel



National city park, Hämeenlinna; Master plan & green area strategy, Jyväskylän Kehä Vihreä; Regional ecosystem service mapping, Uusimaa

Experimentations in the Pori housing fair area

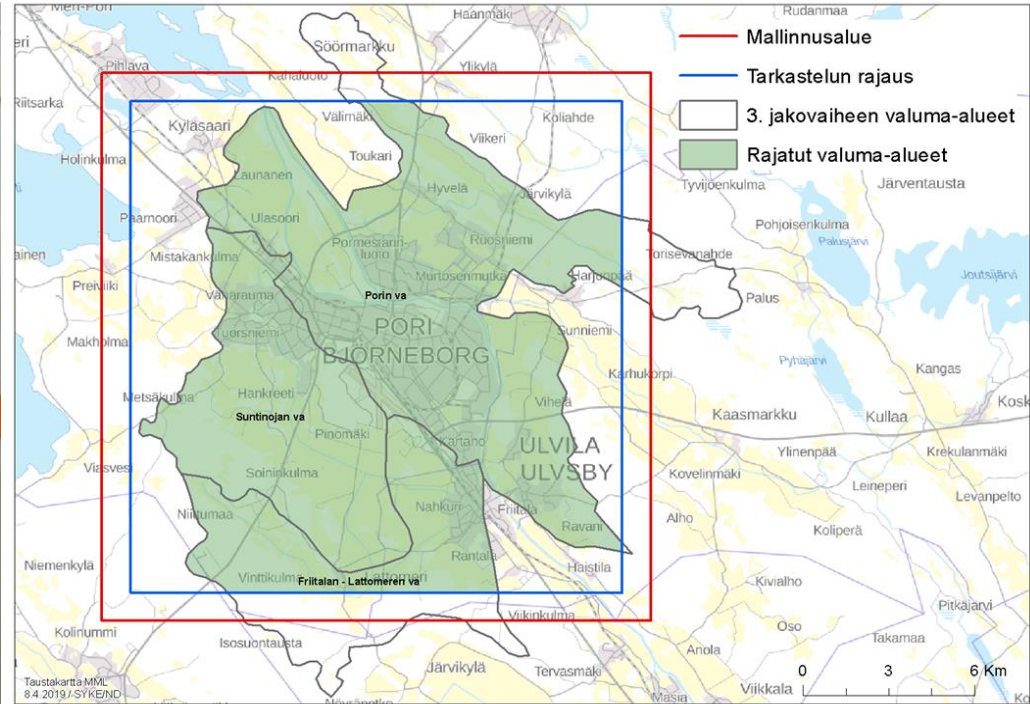


GOVERNMENT'S ANALYSIS,
ASSESSMENT AND RESEARCH ACTIVITIES



**Where should
we stand and
how to get
there?**

GOVERNMENT'S ANALYSIS, ASSESSMENT AND RESEARCH ACTIVITIES





Green roofs



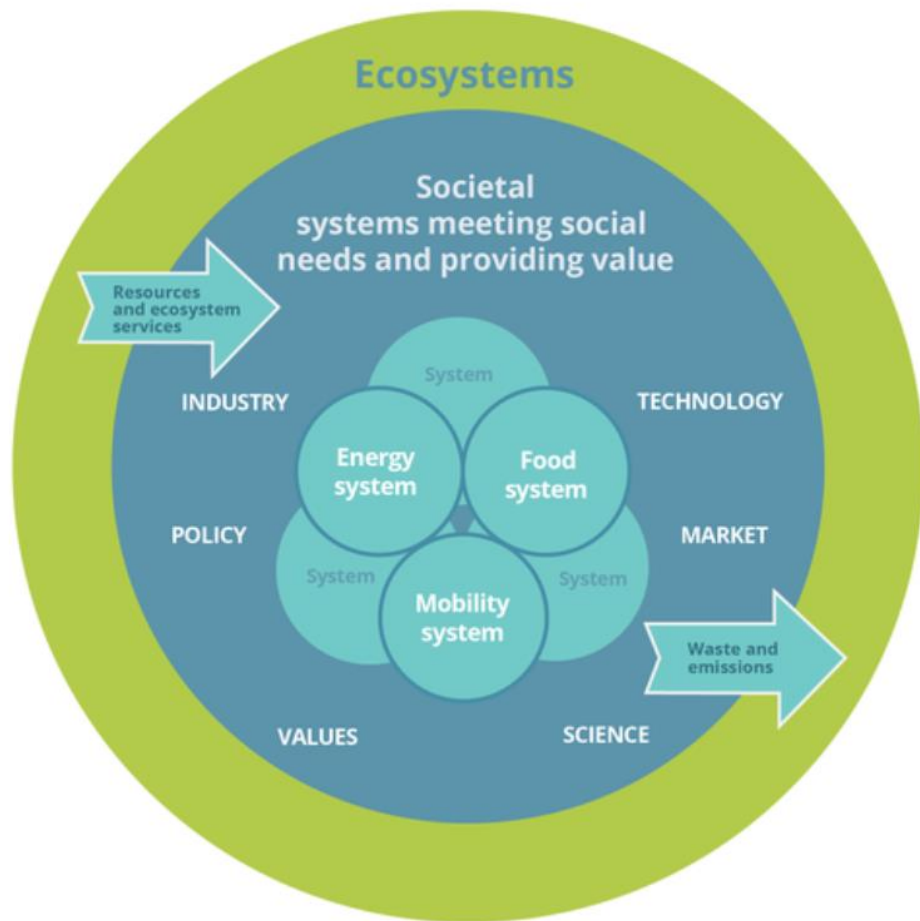
Stream network modifications



Green roofs & stream network modifications

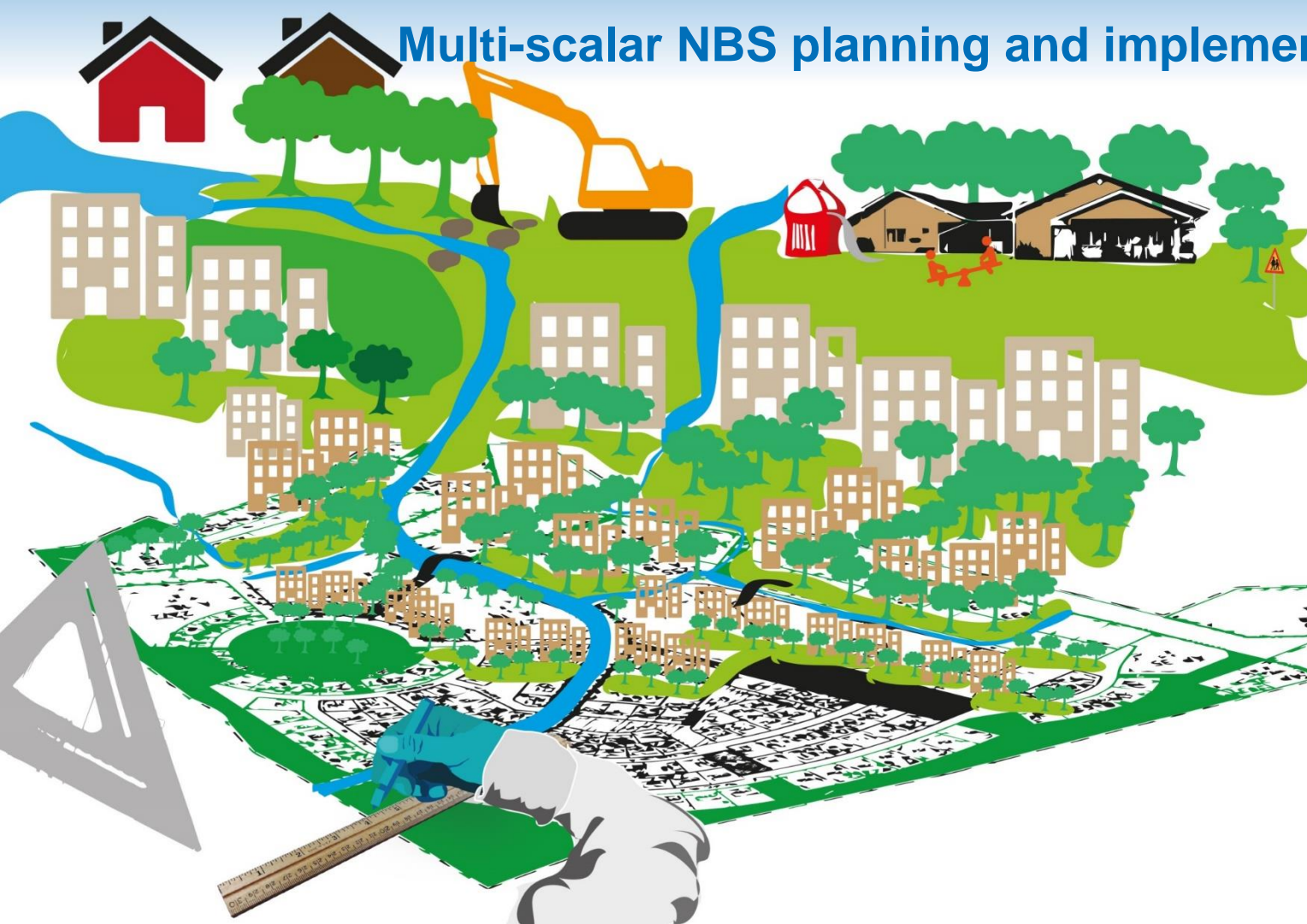


Surface runoff modelling; exceptional rain event and related storm water
Green roofs' impact on storm water management bigger and on larger spatial scale



Need for systemic change to mainstream nature-based solutions, to ensure sustainable development¹⁷

Multi-scalar NBS planning and implementation



Regional green infrastructure to safeguard biodiversity and produce various ecosystem services in urban and rural contexts

Green corridors to ensure the interlinkages between national parks etc, wider landscape, and also cities and city regions

Living environments - green roofs, parks etc. - to bring multiple benefits of nature to every day life

Key messages:

New sustainable normal:
by co-creating new culture

New capacities and practices through:
e.g., Green recovery

Current reforms in:
e.g., Nature conservation,
Land use and building,
Welfare system



S Y K E



Tehokkaat ja vaikuttavat luontopohjaiset ratkaisut ilmastonmuutoksen sopeutumisen välineinä (TASAPELI)

Paloniemi ym. (2019) Luonnosta ratkaisuja kaupunkisuunnittelun haasteisiin. VN TEAS policy brief: <https://tietokayttoon.fi/julkaisu?pubid=32501>

Paloniemi ym. (2019) Kestävää kaupunkisuunnittelua – luontopohjaiset ratkaisut maakunnissa ja kunnissa. VN TEAS raportti: http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161757/TEAS_48_2019_Kestavaa%20kaupunkisuunnittelua.pdf

Paloniemi et al. (2019) Luontopohjaisten ratkaisujen käytännön toteuttaminen maakunnissa ja kunnissa. VN TEAS raportti: http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161758/49_19_Luontopohjaisten%20ratkaisujen%20kaytannon%20toteuttaminen_netti.pdf



ILMATIETEEN LAITOS



TURUN
YLIOPISTO

TAPIO

