

Experiences and prospects on urban greening and ecosystem accounting in the City of Tampere

11 October 2022, 4th ESP Europe Conference

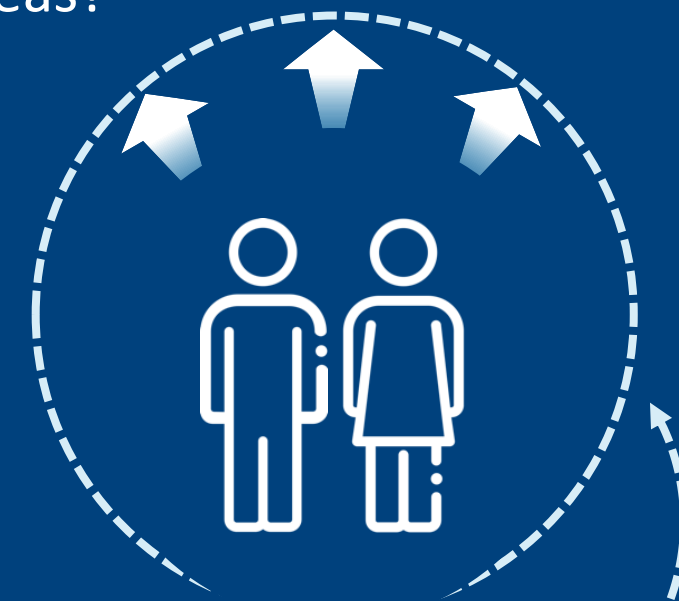
SESSION: S10 - Gearing up toward Urban Greening Plans
to bring nature back in cities

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City of Tampere

- Third largest city in Finland.
- Population is growing fast.
- How to find a balance between strong construction and preservation of green areas?



2022: 241,000 residents
2033: 291,000 residents

Sustainable Tampere 2030

- Tampere targets to reduce its direct carbon emissions by 80 per cent compared to the 1990s levels and become **carbon neutral**.
- Climate mitigation has dominated the discussion, but lately climate adaptation and biodiversity have gained increasing attention.
- The climate is already warming, and urban planning must prepare for **extreme weather conditions**.
 - Heatwaves and heavy rainfalls are becoming more common even in Finland.

Image: Visit Tampere / Laura Vanzo

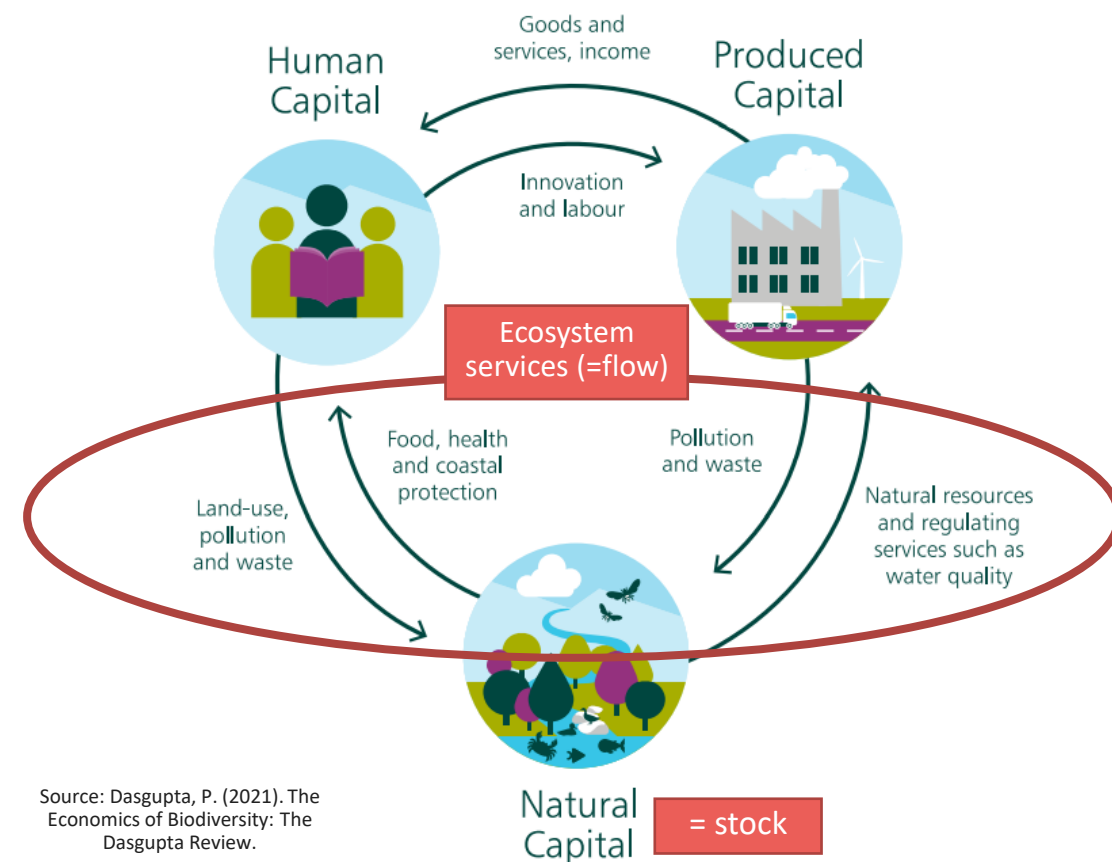
TAMPERE.
FINLAND



Tampere's aims

- To ensure healthy and resilient urban environment capable of adapting to climate change in a fast-growing city, we need to measure and monitor the development of **green infrastructure** and the ecosystem services they provide.
- Tampere wants to:
 - **UNDERSTAND** the state of the ecosystem and monitor the development of ecosystem services.
 - **PROVIDE INFORMATION** on ecosystem services and their benefits in mitigating and adapting to climate change in order to enable better land use-related decisions and urban planning.
 - **MAKE NATURAL CAPITAL VISIBLE IN MONETARY TERMS** to be considered when making investment decisions.

Figure 1.1 Interaction Between the Capitals



Ecosystem accounting as a tool

- Tampere sees that bringing environmental issues into economic processes and talking about them in the language of economics is vital for accelerating the change and understanding their real value.
- There has been a growing political interest in biodiversity, ecosystem services and the possibilities of ecosystem accounting.
- As a result, Tampere has started applying urban ecosystem accounting related to green areas, as it is seen as one possible tool to:
 - Provide decision-makers information about the impacts of e.g. land use policies on the provision and quality of green areas and biodiversity.
 - Monitor and report the indicators to be compliant with international and national legal requirements.
 - Measure and assess the impact and implementation of the city's own strategy in quantitative terms.

Image: Visit Tampere / Laura Vanzo

Pilot projects

- The first pilot projects related to ecosystem accounting in Tampere in collaboration with the Finnish Environment Institute have focused on stormwater regulating services provided by green infrastructure.
 - This is seen as one of the main challenges locally in a changing climate.
- In the future, there is also a need to address issues such as the urban heat island effect and the role of green areas in mitigating it.



Image: City of Tampere

TAMPERE REGION

A terrible sight in the morning in Tampere: the streets are flooded after heavy rains

At worst, there was up to 70 centimeters of water on the streets.

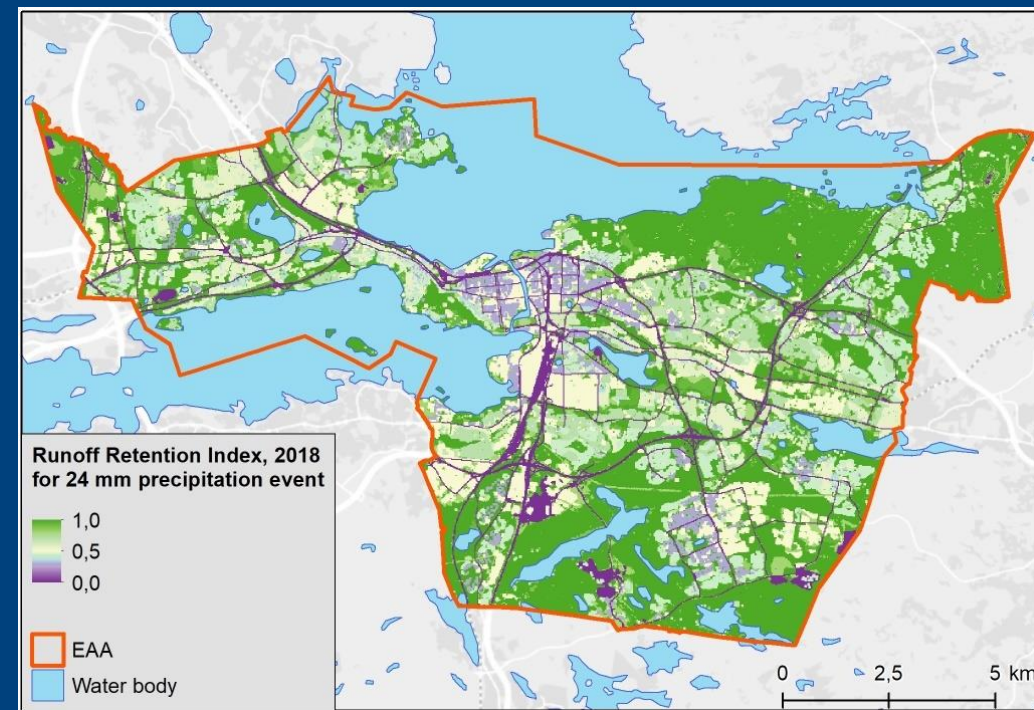
Joona Laukkanen
24.8. 8:37 am

THE CENTER OF TAMPERE flooded on Wednesday morning as a result of heavy rains overnight.

The water rose to a considerable height in the low points of the streets, says **Pauli Keskinen**, fire chief on duty at the Pirkanmaa rescue service, to Iltä-Sanom. Aamulehti was the first to report on the floods.

<https://www.is.fi/tampereen-seutu/art-2000009023769.html>

This is what it looked like on Satakunnankatu in the morning. PHOTO: PIRITTA PALOKANGAS / AAMULEHTI



Data as a basis

- Cities often have a lot of **spatial data**.
 - Tampere has high-quality data e.g. related to land cover (high resolution!), heat islands, impervious surface, small waters, watercourses, stormwaters, flooding, etc.
- **One challenge** is, that the data is not always in an applicable format for ecosystem accounting.
 - In addition, the different data sets are often very **scattered** and bringing them together can be a challenge.
- To achieve the most effective outcome in ecosystem accounting, **close dialogue** between cities and method developers is needed, as well as better understanding of the requirements of the data.



Image: Visit Tampere / Laura Vanzo

Final remarks

- The development of urban ecosystem accounting requires contributions from a wide range of experts.
 - In a municipal organization, such development work is often done “on top of other work”, and engaging experts can be difficult.
- Concrete examples are needed to increase the understanding and applicability of ecosystem accounting in a municipal organization.
- The results need to be in an easily usable format and allow e.g. scenario analysis of the impacts of different solutions.

→ HOW TO APPLY THE FRAMEWORK TO A POLICY AND STRATEGIC LEVEL?



THANK YOU

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Image: Visit Tampere / Laura Vanzo