



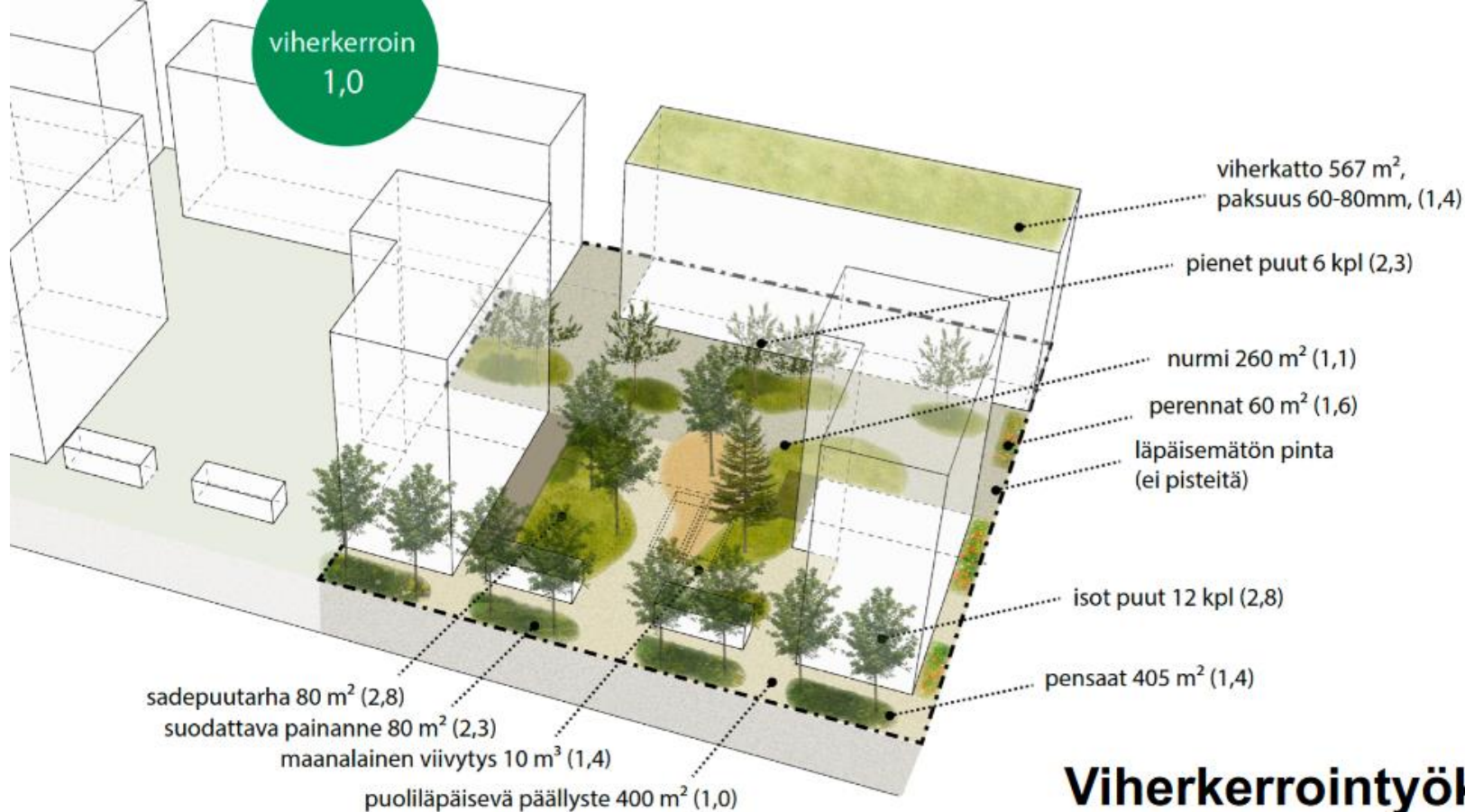
Regulating green efficiency as part of climate resilient urban planning in Turku

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Urban Design and Land Property, City of Turku

Case Green Factor Tool and it's context

Regulating green efficiency as part of climate resilient urban planning

- The blue-green factor tool of Turku – an iWater product!
- Mainstreaming and version development by CANEMURE
- The adaptive context of climate resilient urban planning in Turku:
 - Green and blue urban structure
 - Stormwater management



Viherkerrointyökalu

The blue-green factor tool of Turku

Developed and piloted by iWater in 2016-18. Based on the Helsinki GAF by ILKKA project.

→ stormwater perspective emphasized



So WHAT next?

**CANEMURE to consolidate and mainstream GAF
Updating and further developments**

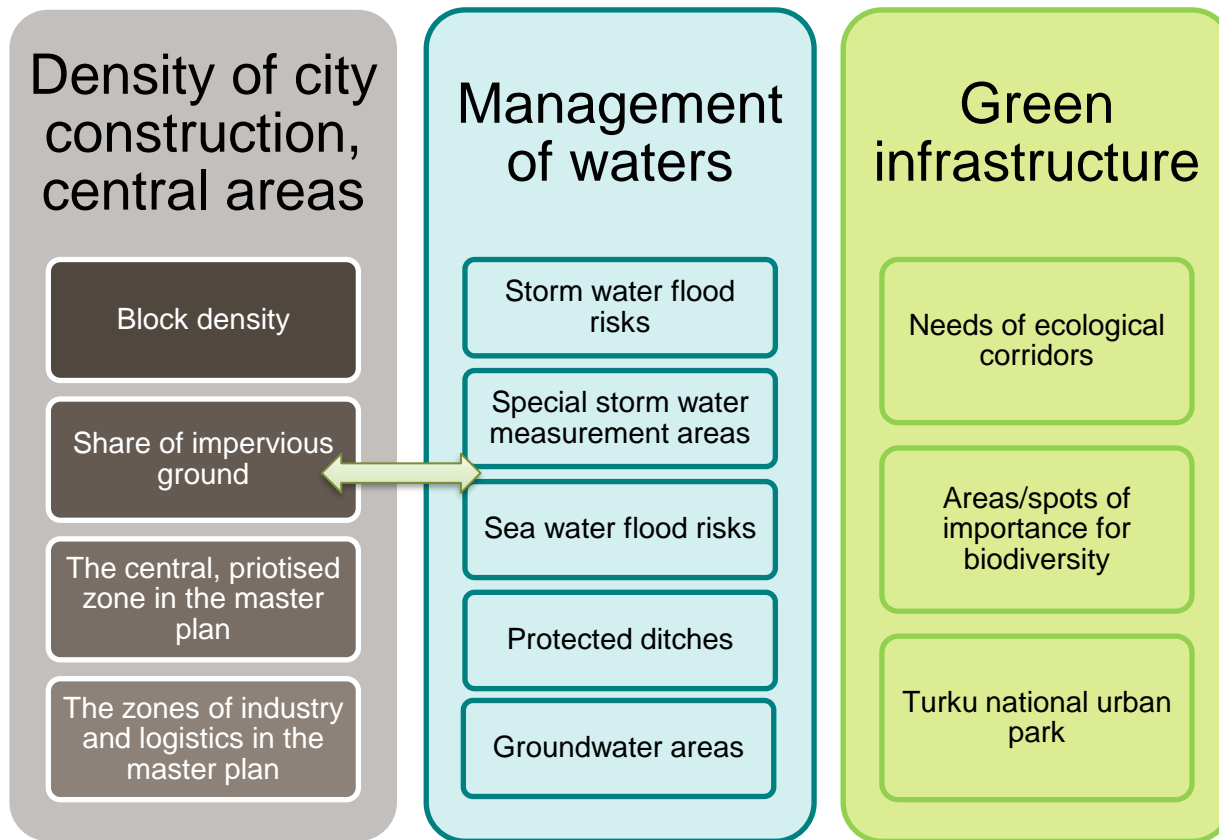
Regulating green efficiency of urban areas by using GAF

Group of specialists worked on questions of

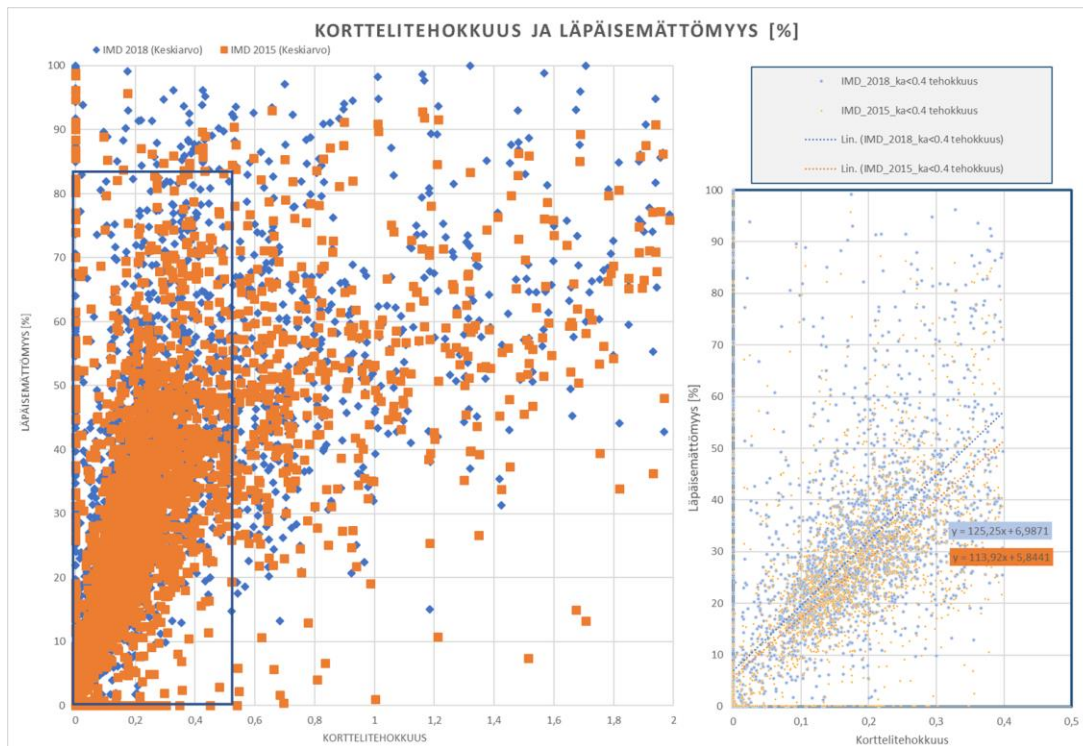
Where would green
efficiency be
especially crucial?

What kind of scope
of application would
be simple and fair to
regulate?

3 perspectives of background analyses:



An example of background analysis: correlation between block density and the share of imperviousness

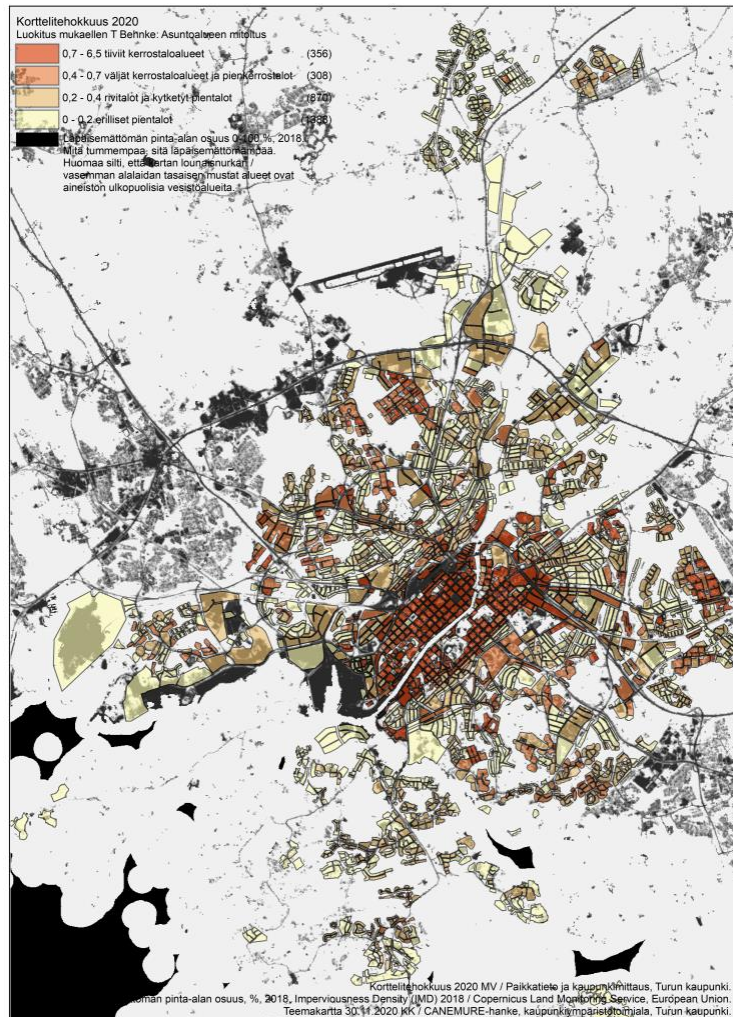


hiilineutraalisuomi.fi

CANEMURE

Tilastoerittely Copernicus 2015 ja 2018 läpäisemättömien pintojen osuuksien (Copernicus IMD) aineistojen korreloimisesta korttelitehokkuuteen 2020. Pekka Raukola 15.12.2020 / Turun vesihuolto oy.

Korttelitehokkuudet ja läpäisemättömän pinnan osuus



Korttelitehokkuus 2020 MV / Paikkatieto ja kaupunkimittaus, Turun kaupunki.
Läpäisemättömän pinta-alan osuus, % 2018, Imperviousness Density (IMD) 2018 / Copernicus Land Monitoring Service, European Union.
Teemakartta 30.11.2020 KK / CANEMURE-hanke, kaupungin ympäristöjohtaja, Turun kaupunki.

Approved by the
City Council in
Feb 2021

The application scope and the target levels of green efficiency in Turku	
	Target levels of the green factor analysed with the blue-green factor tool
Urban land use areas in detail plans	
Housing and central areas (AK, AR, LPA, AL, C)	0,8
Observe: from row houses on i.e. detached single houses not included	
Services and administration (P, Y)	0,7
Commercial services (K)	0,6
Industry and warehouses (T)	0,5

Consolidating the use of blue-green factor tool

from individually and voluntarily investigated pilot plans one by one
to obligatory, regular use and process in all detail plans and major construction permissions at given target levels

Turku city master plan

To be confirmed

Detail plans

From 1.3.21 on

Building regulations

From 1.3.21 on

Canemure helpdesk & version development for the period of implementation in 2021

**Right now, fall 2021:
testing the Swedish tool of areal green factor
on public street and green areas as a pilot**



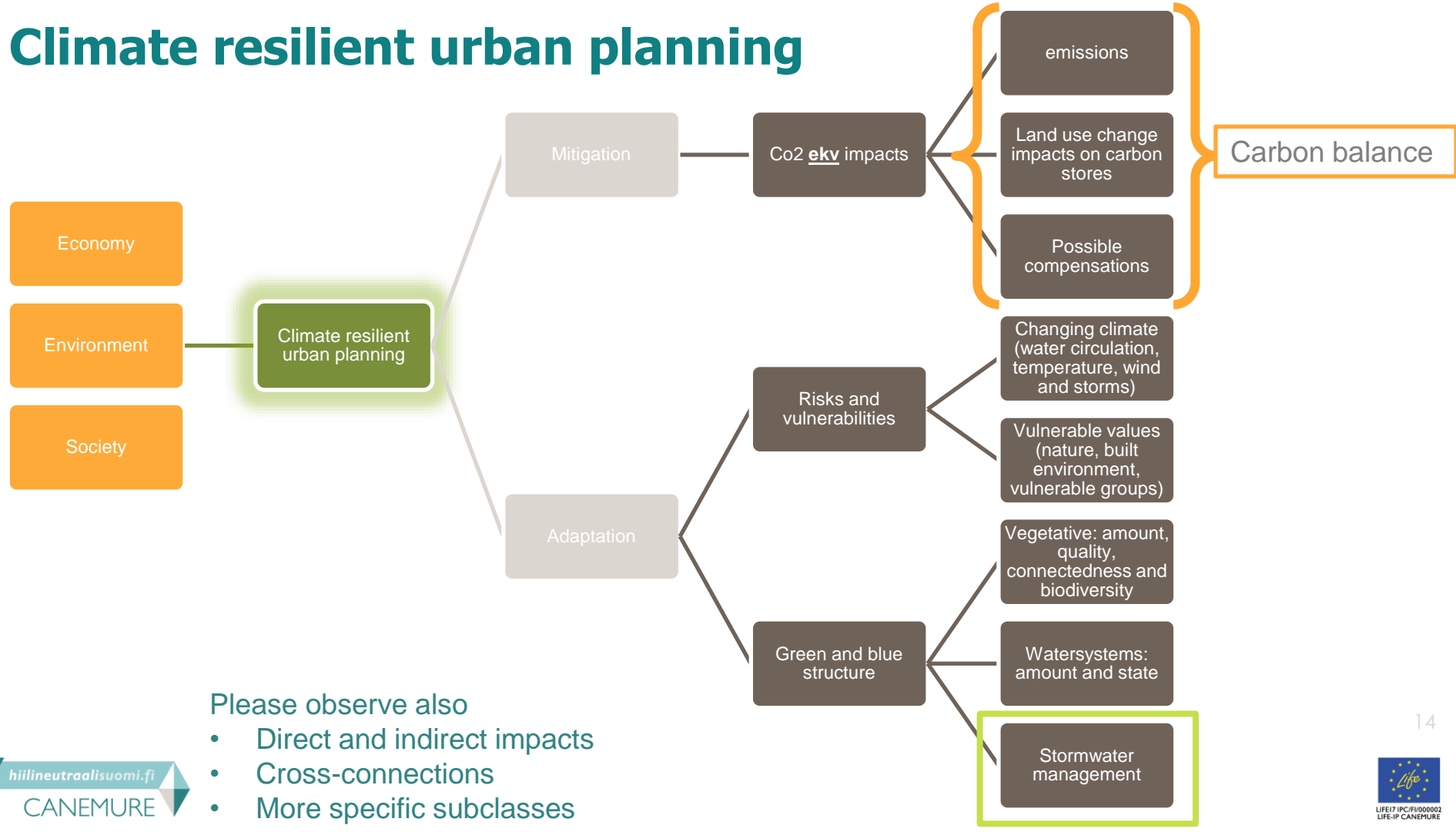
Stormwater calculating adjusted

Values of runoff percentages and some formulas lowered a little to be more cautious

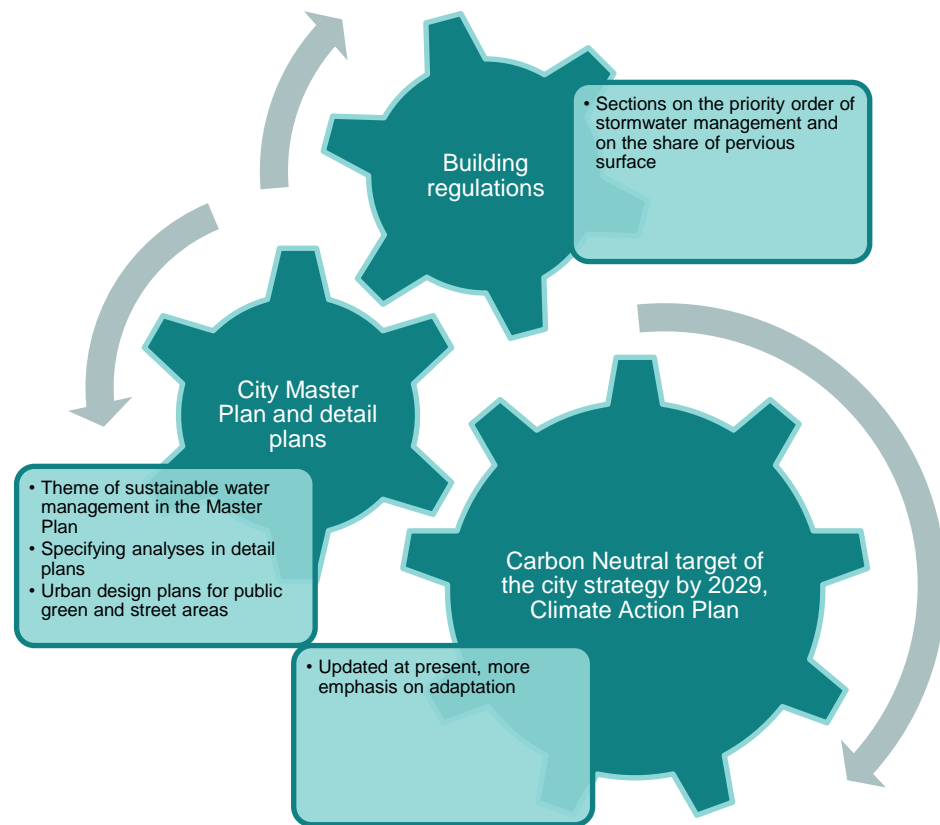
- ▶ Calculations on stormwater retention were adjusted in the original BGF especially as to woody plants, but also e.g. green roofs.
- ▶ The tool has been unrecognised in some permits to be a reliable counter for dimensioning stormwater detention – despite iWater documents did stress that it's only indicative calculation and does not replace a proper stormwater plan for the specific plot/block. This occurs in other cities as well.
- ▶ For both security and communicative reasons the calculation was adjusted to be more accurate – consulting stormwater specialists.
- ▶ It seems difficult to grasp that **the blue green factor tool does primarily count the green efficiency**. Also the decisions done relate to green infrastructure, not directly to stormwater.
- ▶ Challenge for communications!

The context of stormwater management within the umbrella of climate resilient urban planning

Climate resilient urban planning

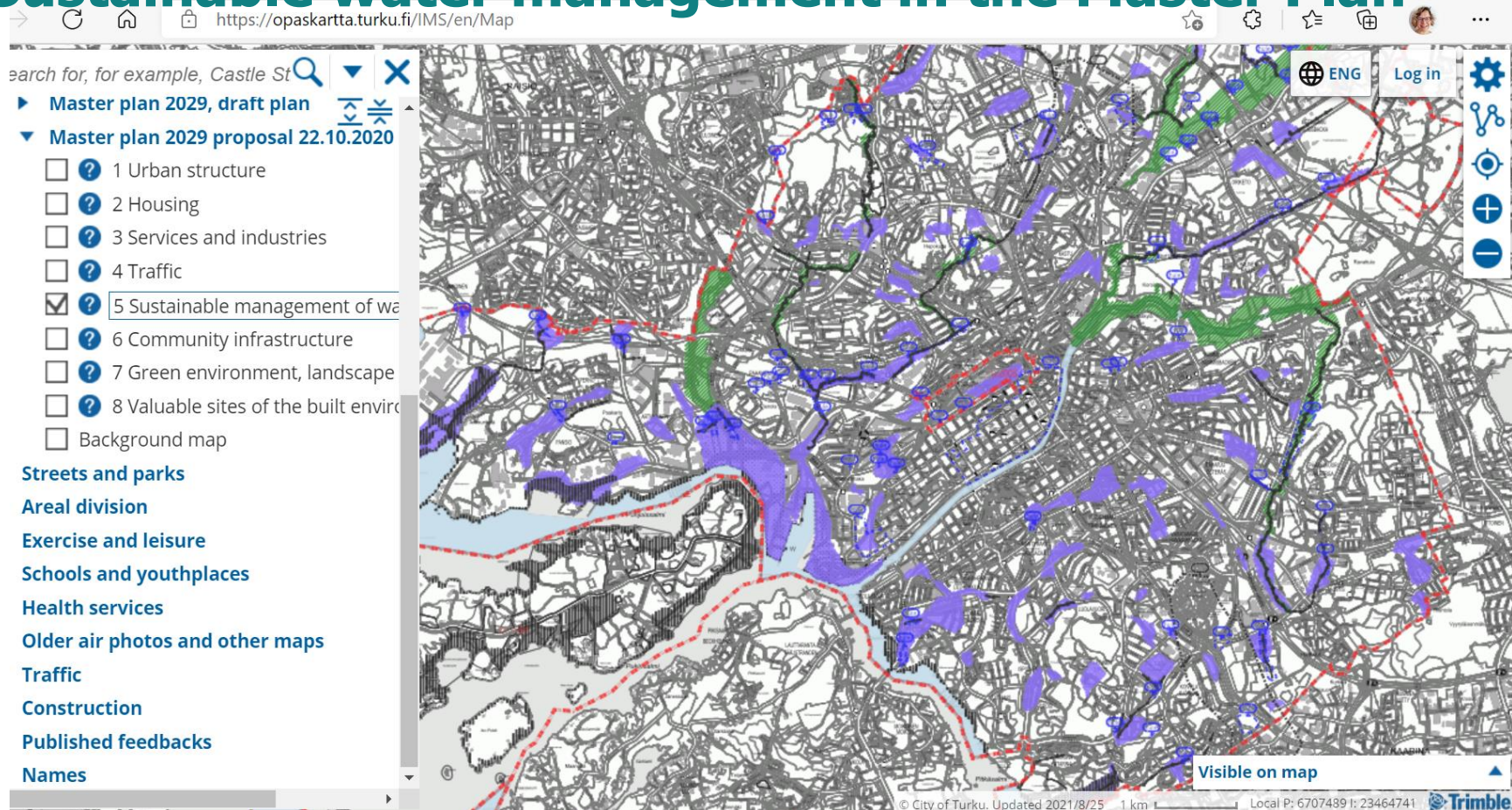


The theme of stormwater management



The Action Plan of Stormwater Management, being updated

Sustainable water management in the Master Plan



Open in the [Turku map service](#) > contents > Urban Planning > Master Plan 2029 proposal 22.10.2020.
Please observe: updated versions soon to come and the legend unfortunately not translated into English.

Thank you!



