Interreg CENTRAL EUROPE

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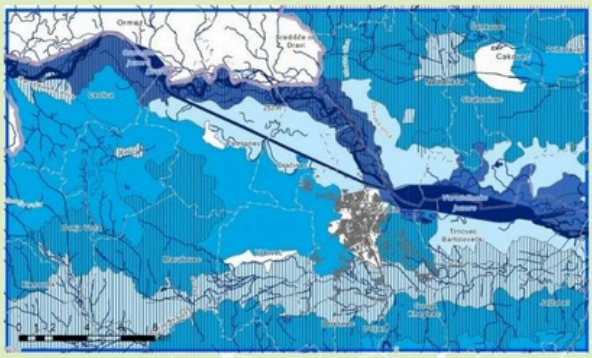
MAURICE

USE OF THE INFILTRATION CAPACITY MAP FROM FIELD INVESTIGATION TO PLANNING, CONSENT AND DECISION-MAKING

MAP OF INFILTRATION CAPACITY

Where can stormwater infiltrate?



Infiltration capacity map for Varaždin

Infiltration capacity (m/s)	
	Good (k>1x10^{-4} m/s)
	Medium (1x10^{-5} < k (m/s) < 1x10^{-4})
	Poor (k < 1x10^{-5} m/s)
	Settlements;

Thickness of overlaying strata (m)	
	< 2 m
	> 2 m

Identify where stormwater can infiltrate and recharge groundwater.

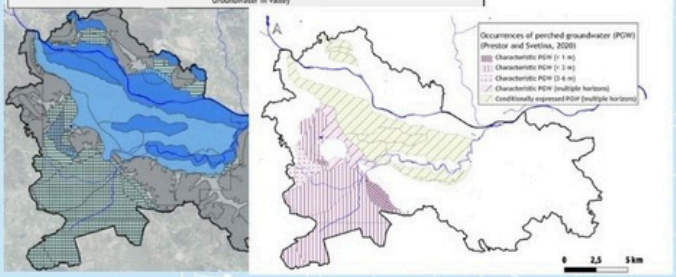
PROJECT CONDITIONS AND DESIGN

What limits infiltration?

1-Infiltration capacity; 2-Cover layer depth; 3-Depth to groundwater; 4-Perched groundwater; 5-Soil contamination

Hydraulic conductivity	Infiltration capacity	Infiltration capacity
1: good (k >1×10^{-4} m/s)	1: good (q_p > 6 mm/min)	1: good (q_p > 1000 l/s/ha)
2: medium (1×10^{-5} < k (m/s) < 1×10^{-4})	2: medium (0,6 < q_p (mm/min) < 6)	2: medium (100 < q_p (l/s/ha) < 1000)
3: poor (<1×10^{-5} m/s)	3: poor (<0,6 mm/min)	3: poor (<100 l/s/ha)
Groundwater directly above the bedrock		
Groundwater in valley		

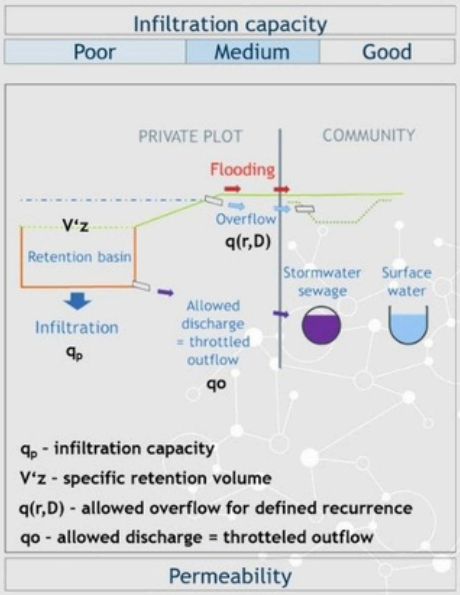
Overlaying strata	Depth to the groundwater
A: < 3 m	a: < 3 m
B: > 3 m	b: > 3 m



Infiltration capacity = f(Permeability of subsoil; Infiltration area)

Infiltration capacity classes = f(Local rainfall intensity, ...)

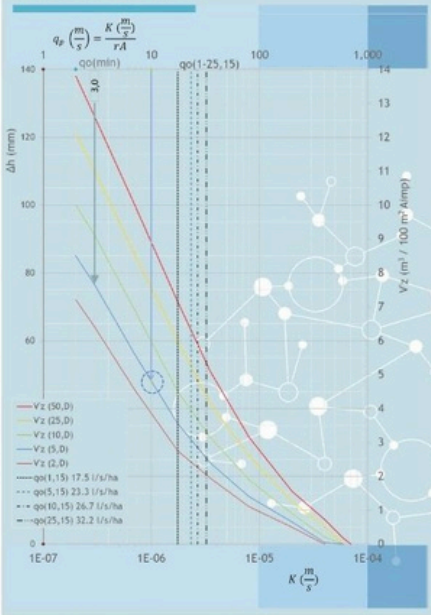
INFILTRATION CAPACITY



How should drainage be planned?

Plan retention and infiltration measures adapted to local conditions.

SOLUTION



Which solution best protects groundwater?

Optimization of retention volume (Vz) and ratio of infiltration and sealed areas (rA)

Support climate-resilient drainage and reduce sewer overload.

See more: [Optimization of urban drainage and resilience of groundwater quality]