

Water without boundaries *Vatten utan gränser*

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Water for all

- Ecosystem services provided by water

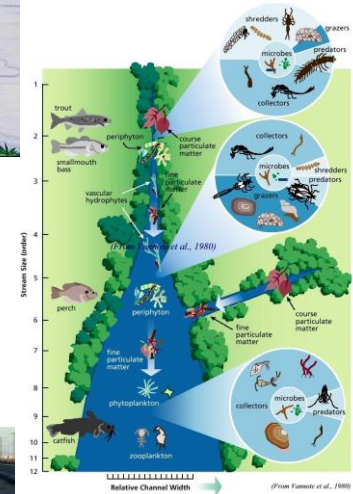
- Drinking water & sanitation
- Recreation
- Transport
- Biodiversity
- Irrigation
- Power
- Food...

→ Can be in conflict

→ Difficult to manage

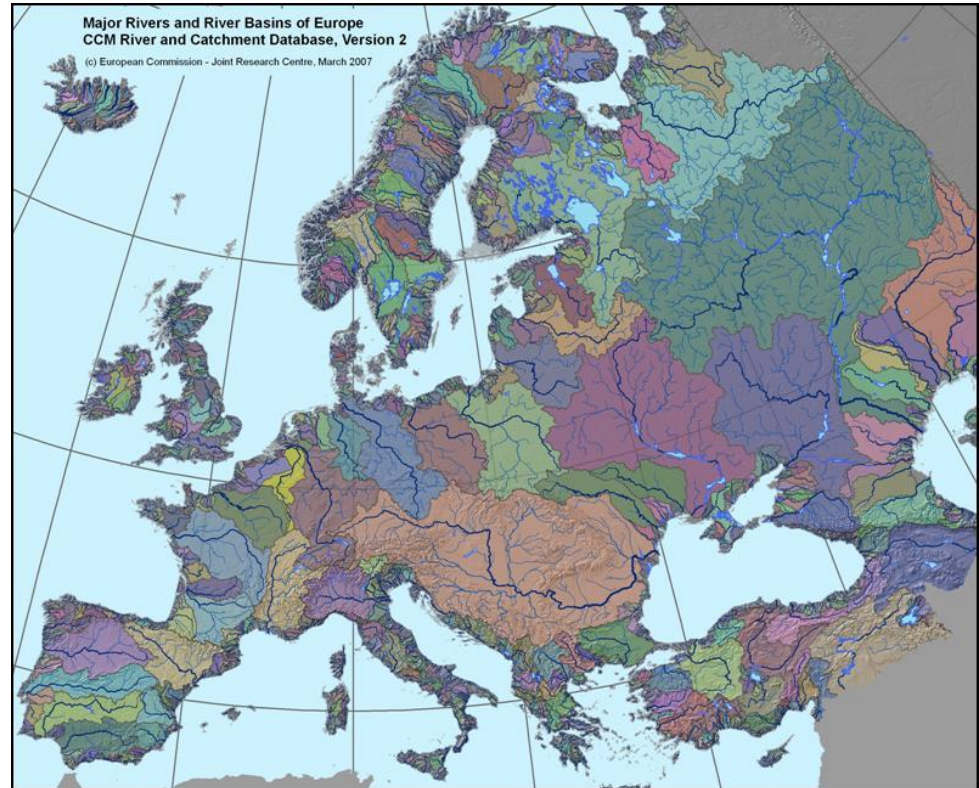
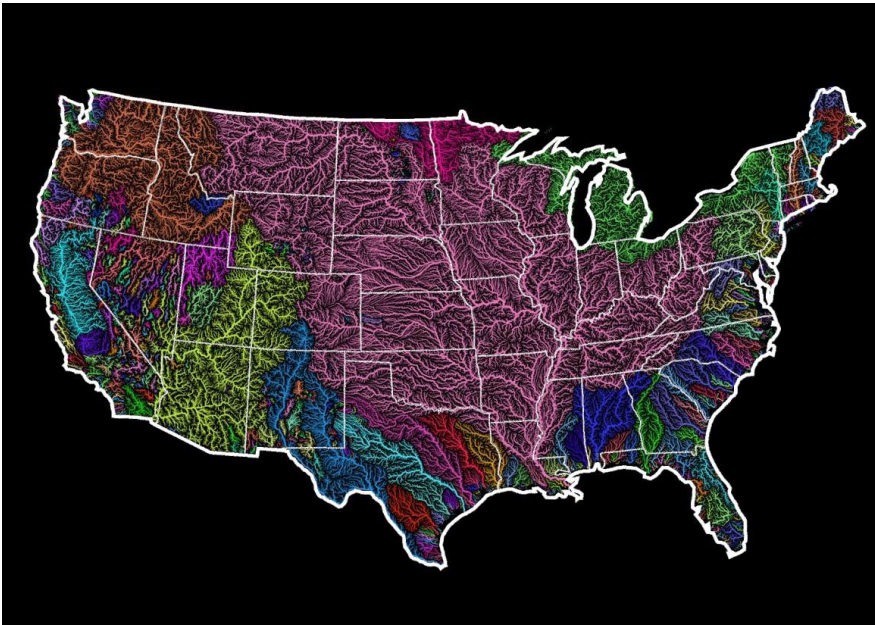


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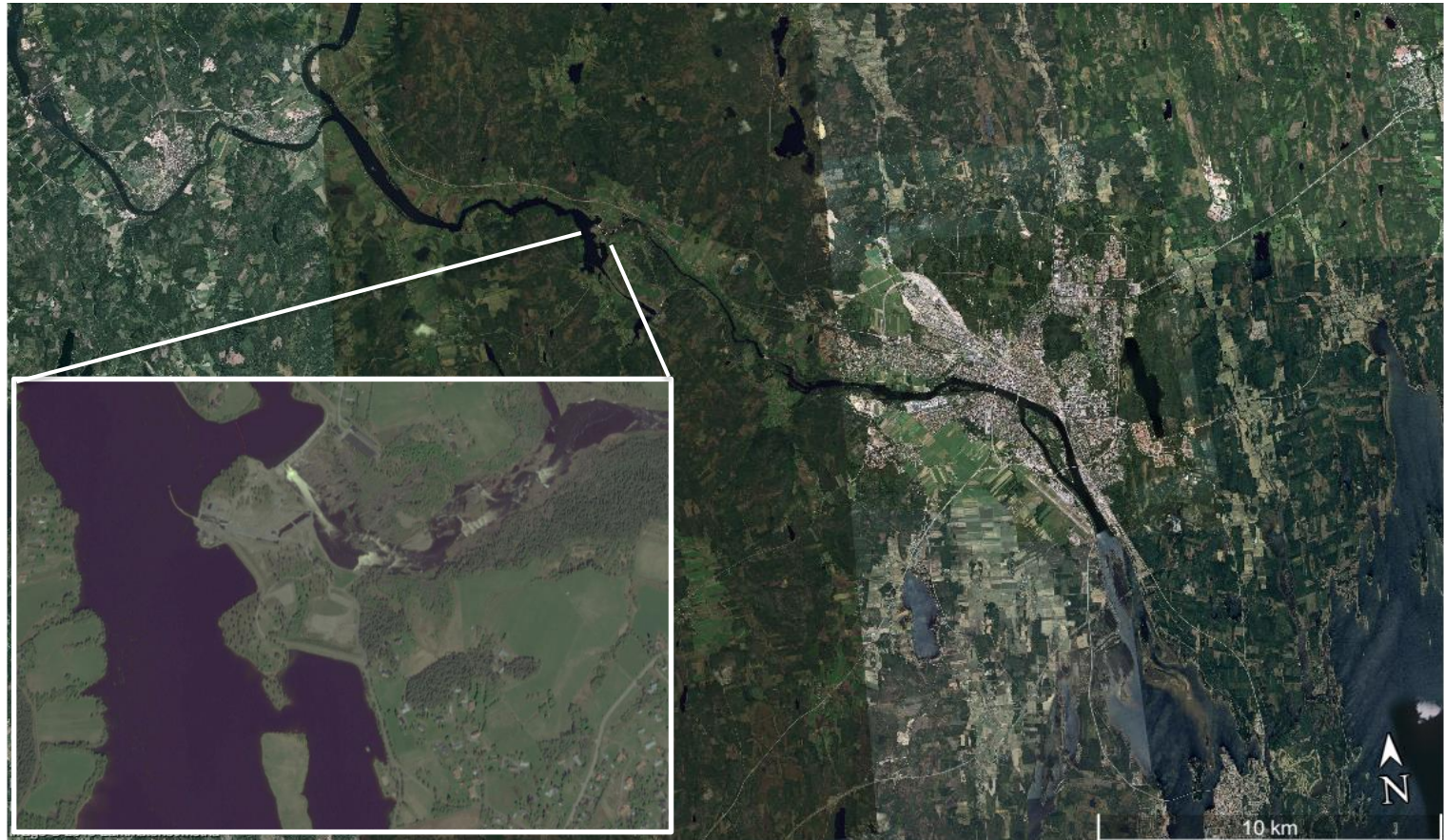
Water crosses boundaries

- Rivers form networks – strong upstream-downstream links
- Crossing jurisdictions and management units
- Extremely important for local management decisions



Upstream-downstream links

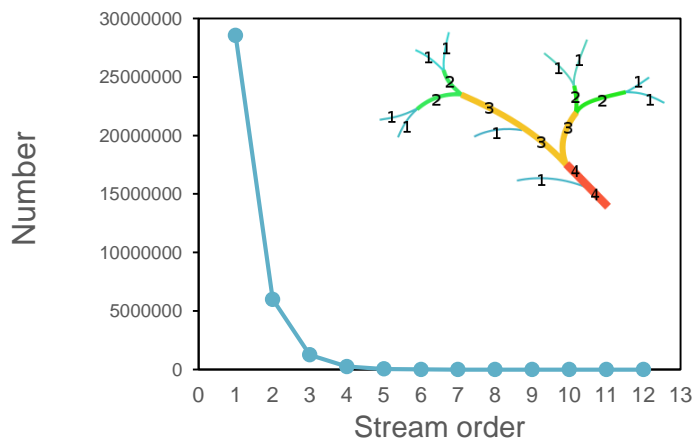
- Hydropower: fish migration (from downstream to upstream)



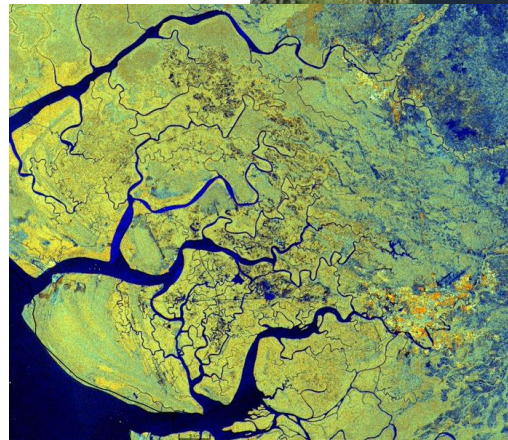
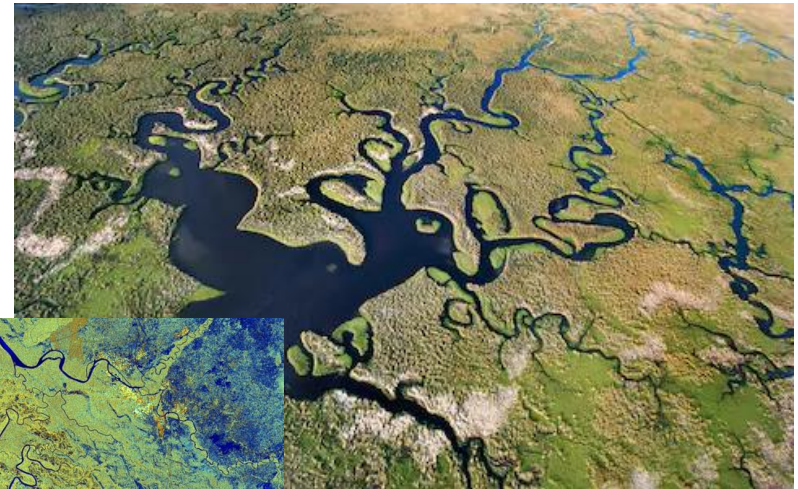
Upstream-downstream links

- Hydropower
- Small stream are sources for water, nutrients, carbon, organisms, sediments... (from upstream to downstream)
- Management decisions do not typically target smallest streams!!!

Global stream distribution

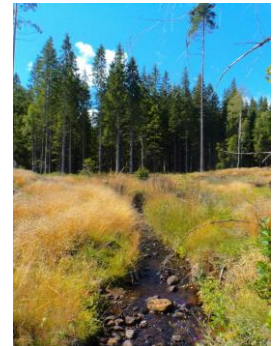


Downing et al. 2012.



‘Leaving no one behind’

- Attention to small streams and how their perturbation affect downstream users
- North America: Urban land use convert small streams to drainage features (buried underground)
- Sweden: Negative effects caused by forestry around small streams cumulatively carried on downstream.
 - Fishing associations, reindeer herding, communities and municipalities, Baltic countries...



Thank you Questions?

<https://www.youtube.com/watch?v=GuhLnBJAGlg&feature=youtu.be>

