



**GLOBAL  
RESILIENCE  
PARTNERSHIP**

# **Resilience Thinking: the Need for New Perspectives**

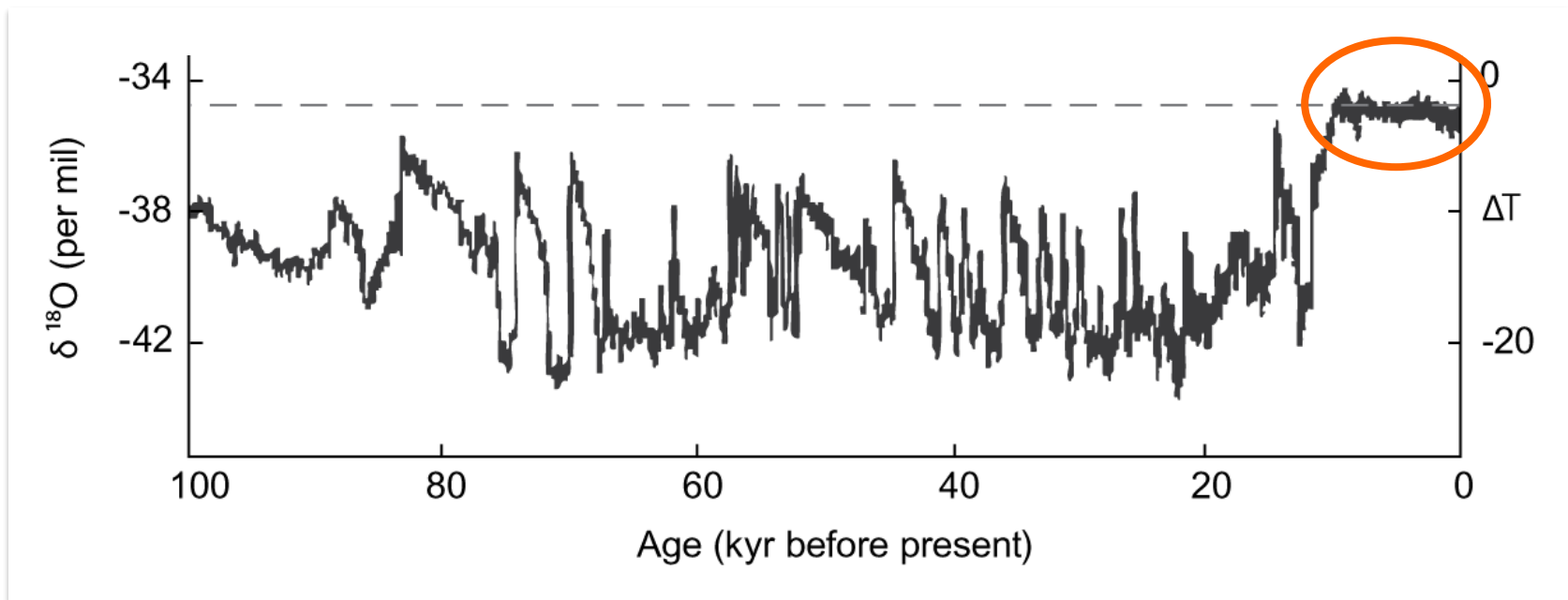
**Dr. Nathaniel Matthews**

**Program Director**

**[nmatthews@globalresiliencepartnership.org](mailto:nmatthews@globalresiliencepartnership.org)**

# The Holocene - 10 000 years of grace

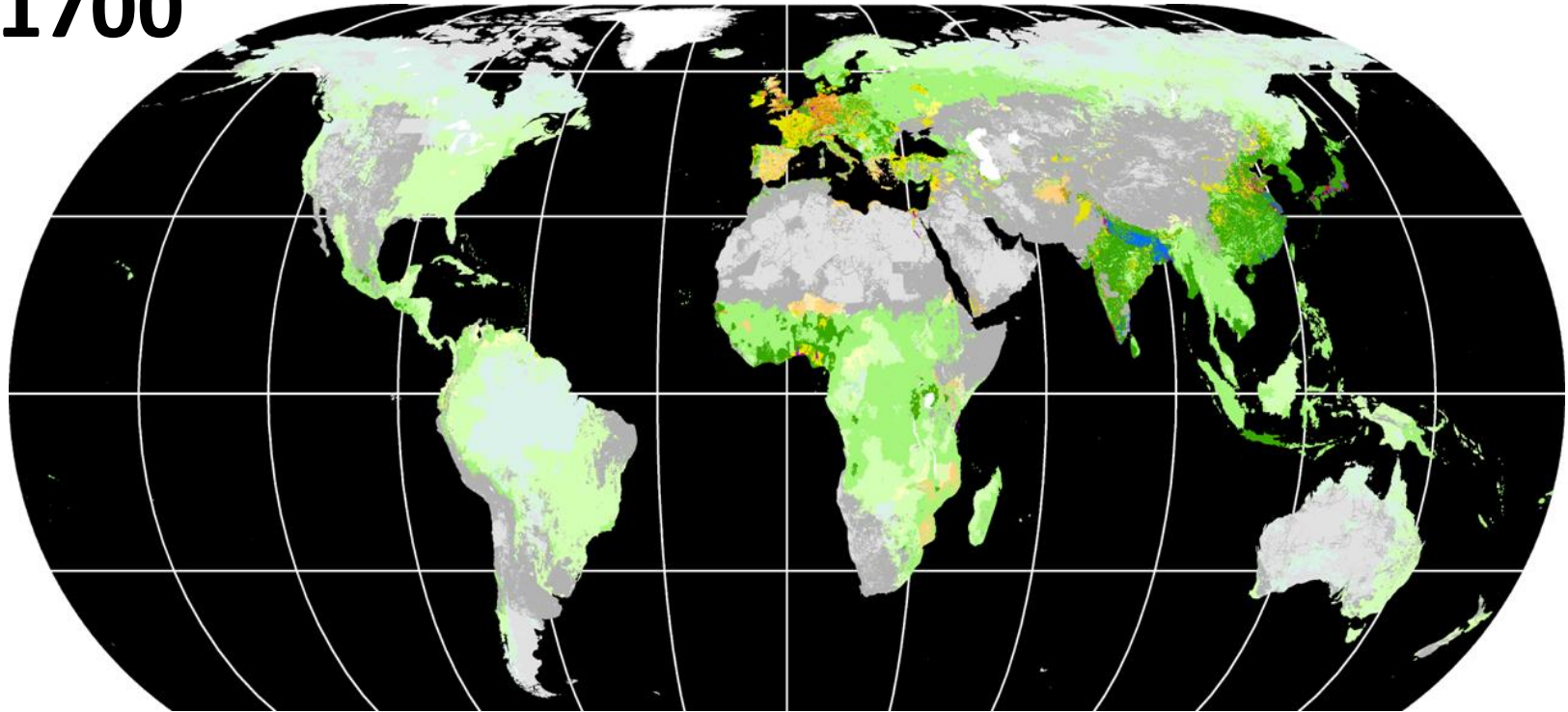
Stockholm Resilience Centre and Rockström and others, Ecology and Society 2009:14





# Scale – human dominated planet

## 1700

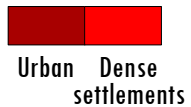


**Used**

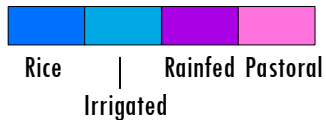
*Seminatural*

**Wild**

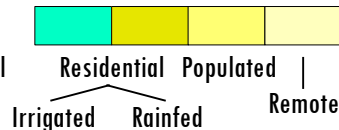
**Dense Settlements**



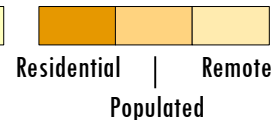
**Villages**



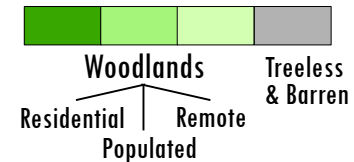
**Croplands**



**Rangelands**



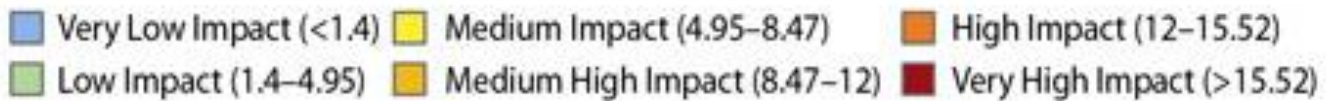
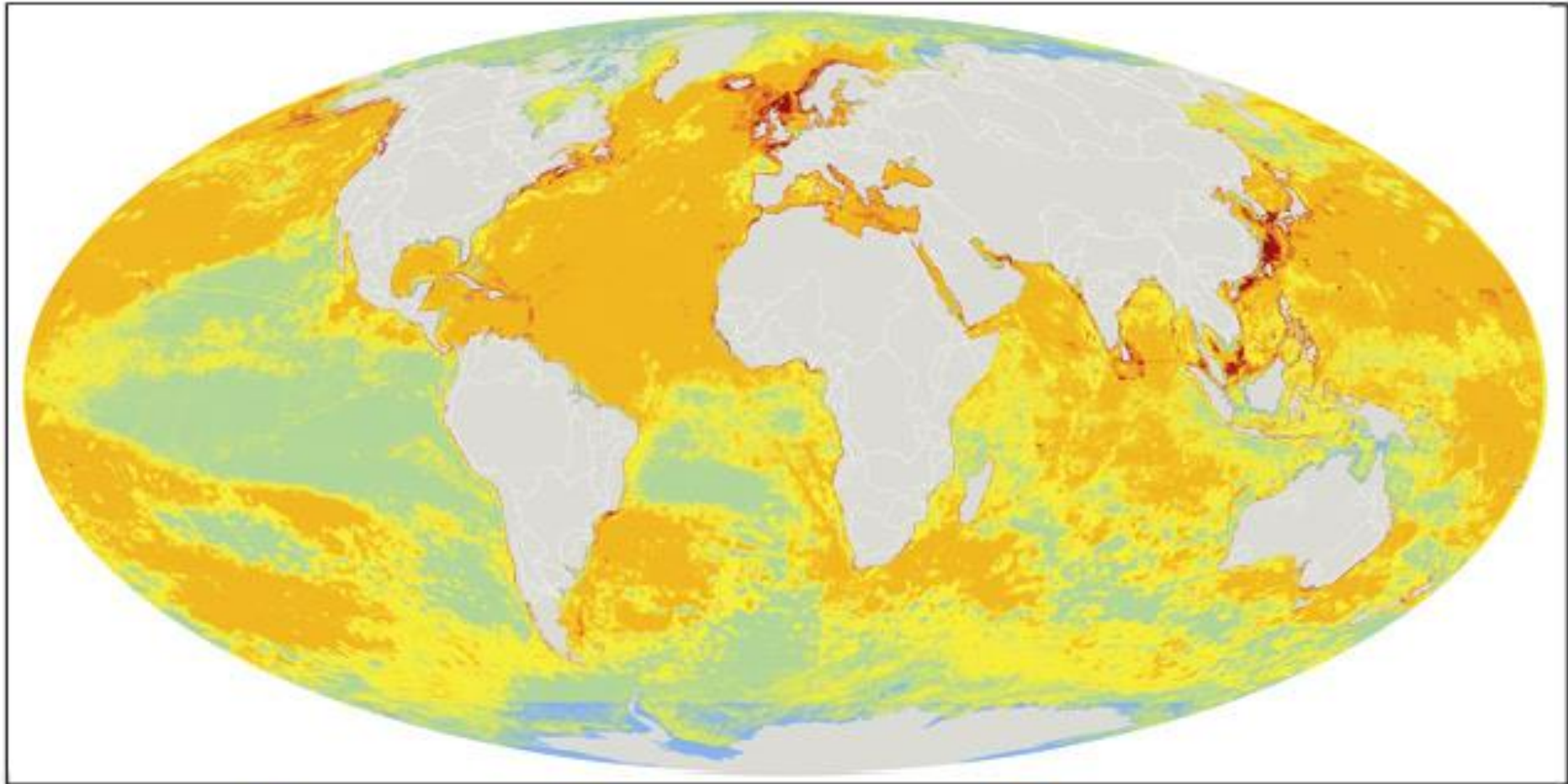
**Seminatural**



**Wildlands**

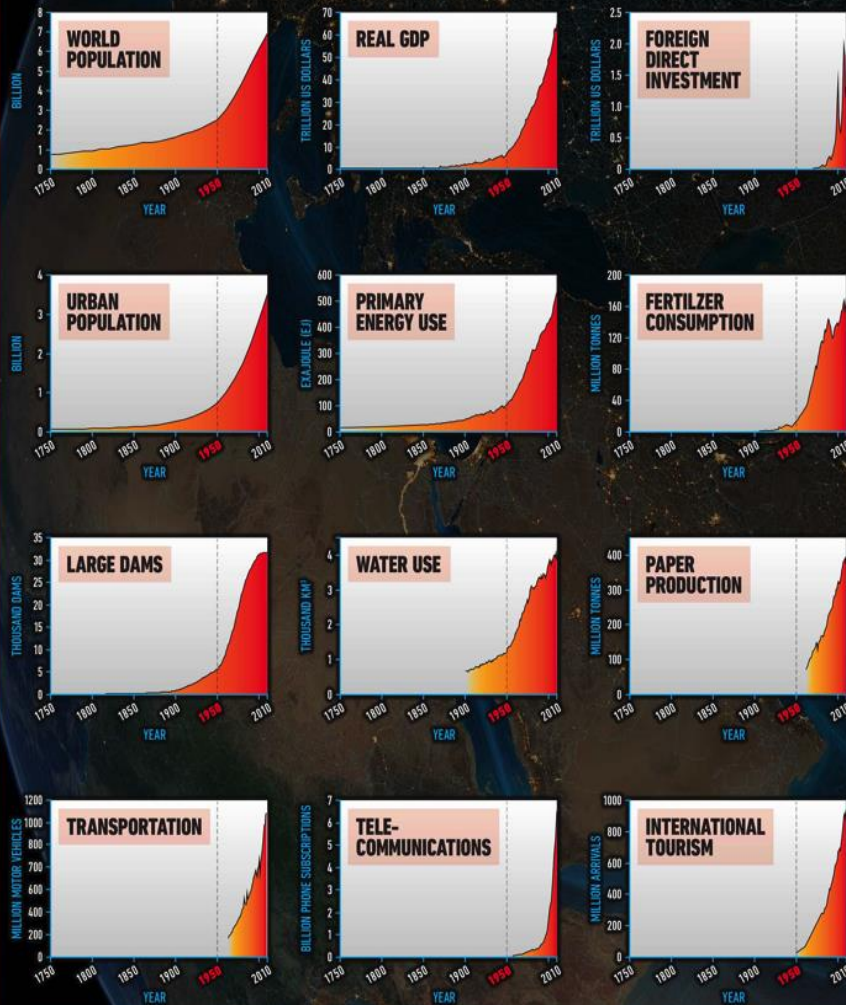


# Spread – human dominated planet



# Speed: The Great Acceleration

## SOCIO-ECONOMIC TRENDS



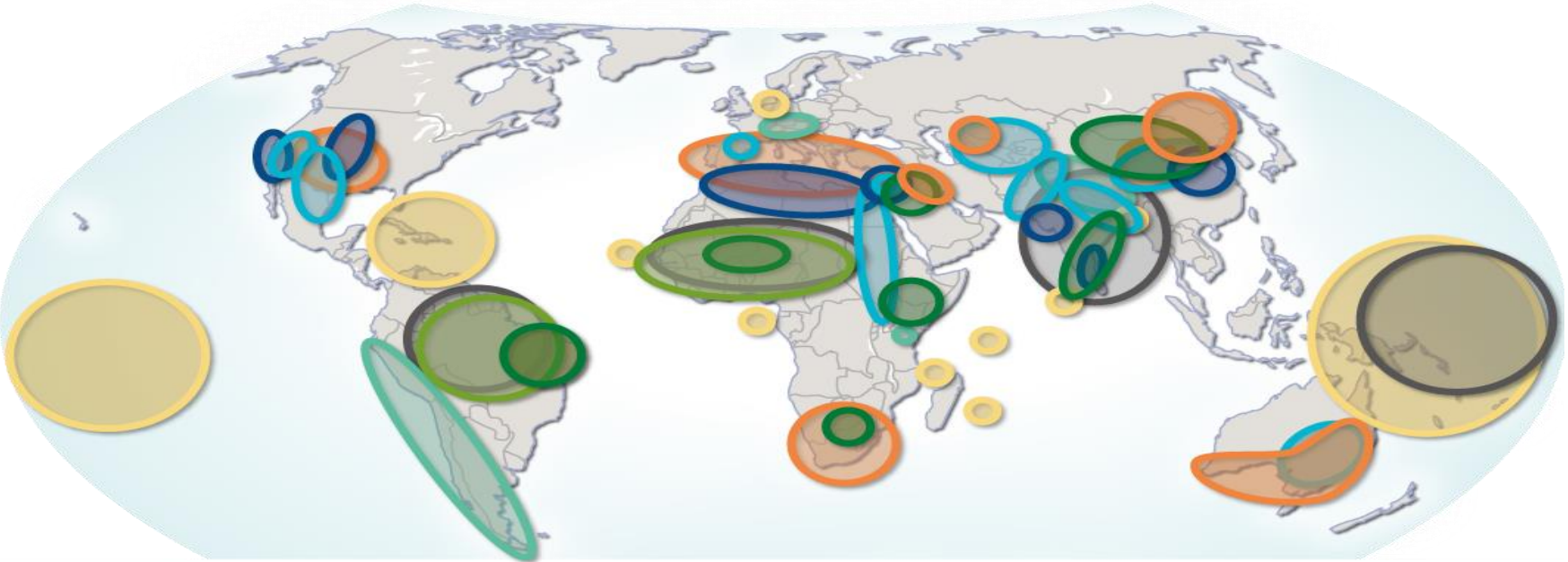
## EARTH SYSTEM TRENDS












REFERENCE: Steffen, W., W. Broadgate, L. Deutsch, O. Gaffney and C. Ludwig (2015), The Trajectory of the Anthropocene: the Great Acceleration, Submitted to *The Anthropocene Review*.

MAP & DESIGN: Félix Pharand-Deschênes / Globaïa

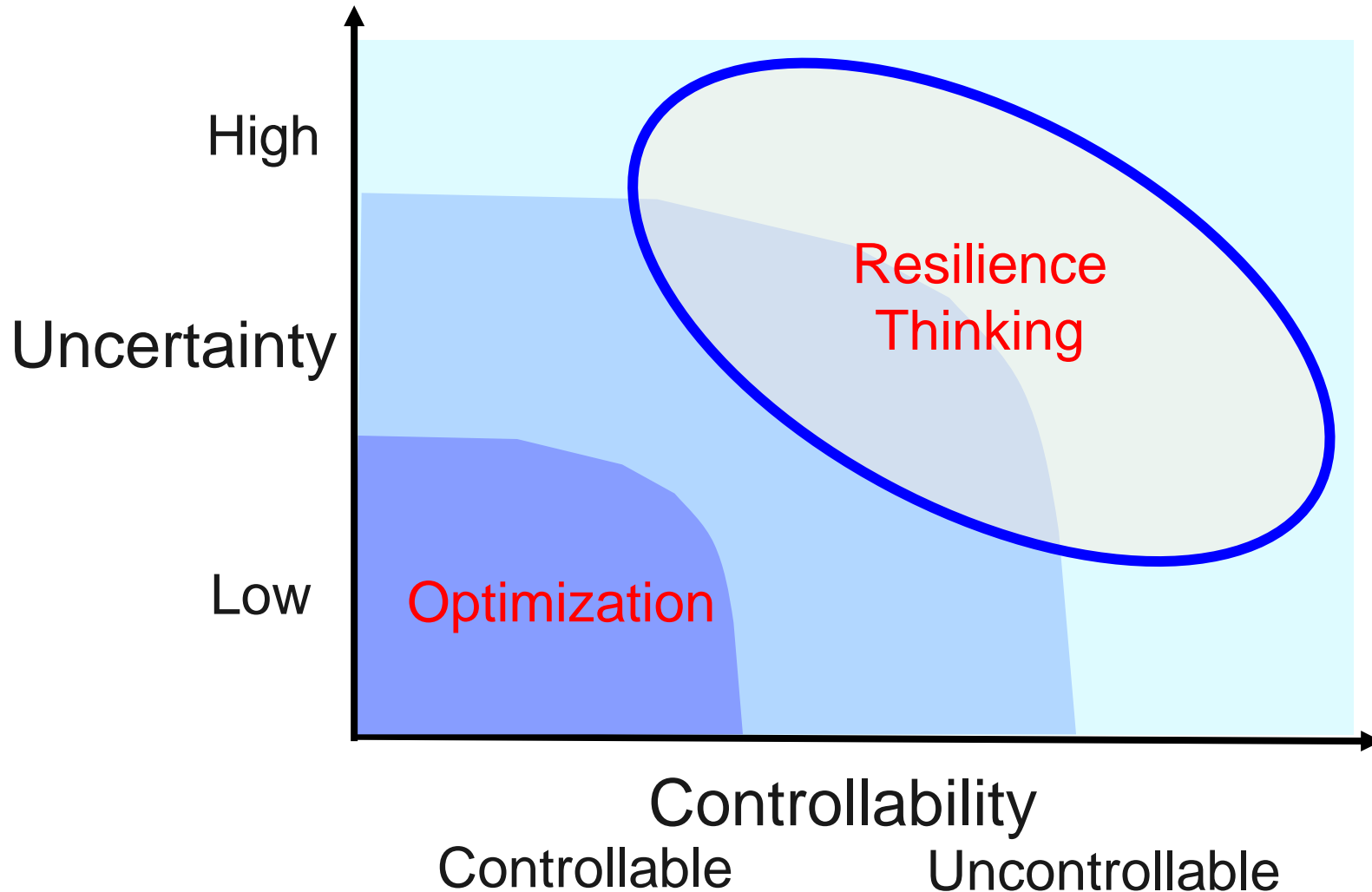
# Connectivity: Water related Tipping Elements in the Earth system



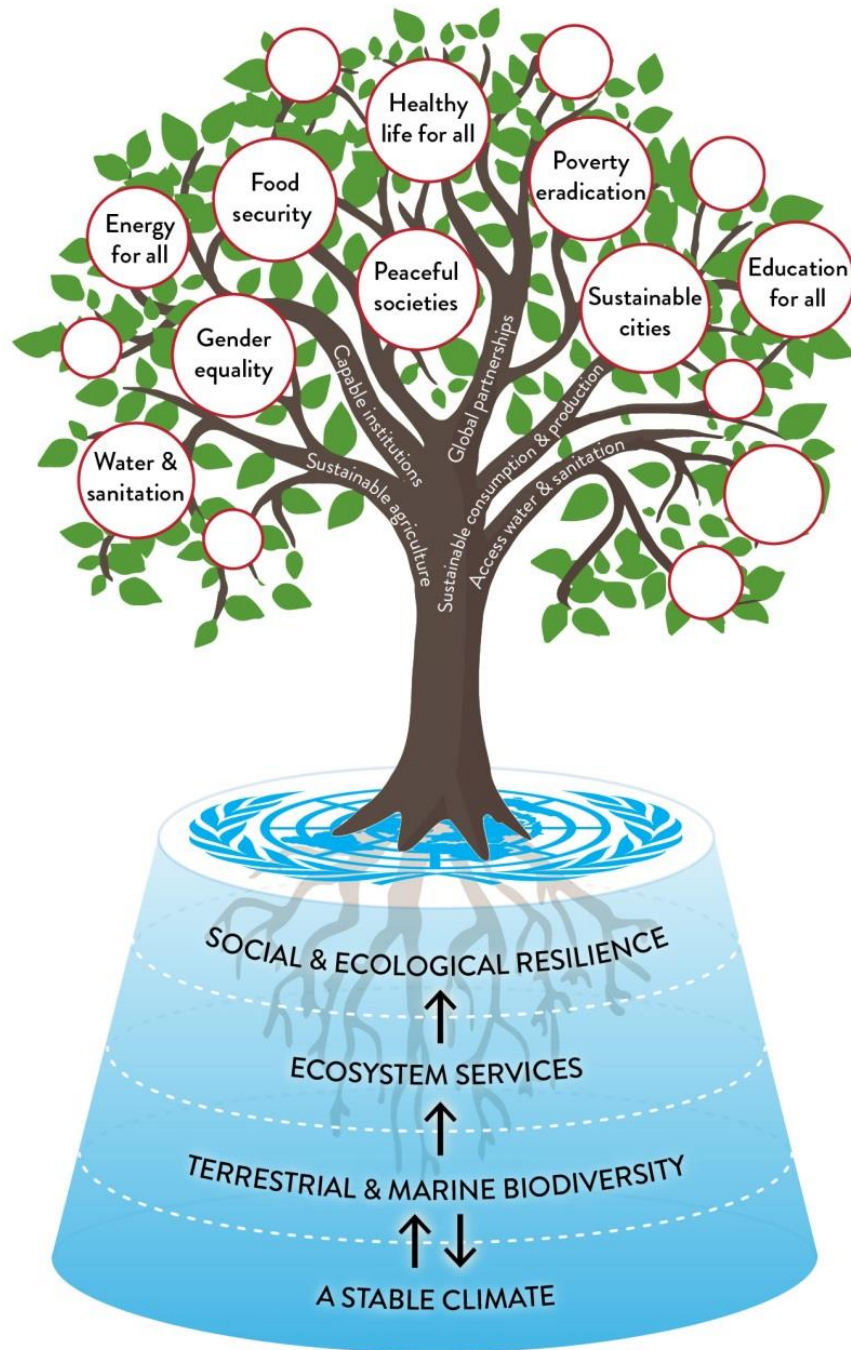
## Water related possible tipping points

-  Deforestation moisture feedback
-  Land mismanagement (e.g. soil loss, land degradation)
-  Salinisation
-  Glacier melt
-  Groundwater collapse
-  River basin closure/river depletion
-  Regional processes
-  Sea level rise and salt water intrusion
-  Drastic rainfall regime change

# Building Social-Ecological Water Resilience: for an uncertain and uncontrollable world







# Natural Alternatives to Water storage

## Natural Infrastructure for Water Management

Investing in nature for multiple objectives



# Thank you!



[www.globalresiliencepartnership.org](http://www.globalresiliencepartnership.org)

*The Global Resilience Partnership is an open alliance of public and private organisations working together to help millions of vulnerable people better adapt to shocks and stresses, and invest in a more resilient, prosperous and sustainable future.*

*The GRP Secretariat is hosted by the Stockholm Resilience Centre.*