

Environmental vulnerability, social resilience and multi- scale governance (ENVGOV)

Anja Nygren, Sirkku Juhola, Markku Kanninen,
Maarit Kallio, Mira Käkönen,
Adrián Monge Monge, Aleksi Räsänen

Funded by Helsinki University Centre for
Environment (HENVI)

Background

- The loss of life and economic assets from coastal and inland flooding represent the two major climate-related risks in the future (IPPC 2014).
- Furthermore, rapid land-use changes, building of water-management infrastructure and other human-influenced changes affect multifaceted water-related risks and vulnerabilities in the context of global environmental change (Liverman 2015, Nightingale 2011, Sultana 2013).



- In this project, we focus on water-related risks and vulnerabilities in the context of transforming environmental conditions, multi-scale land-use changes, shifting agrarian policies, water-management mechanisms and strategies of water governance.



Research objectives:

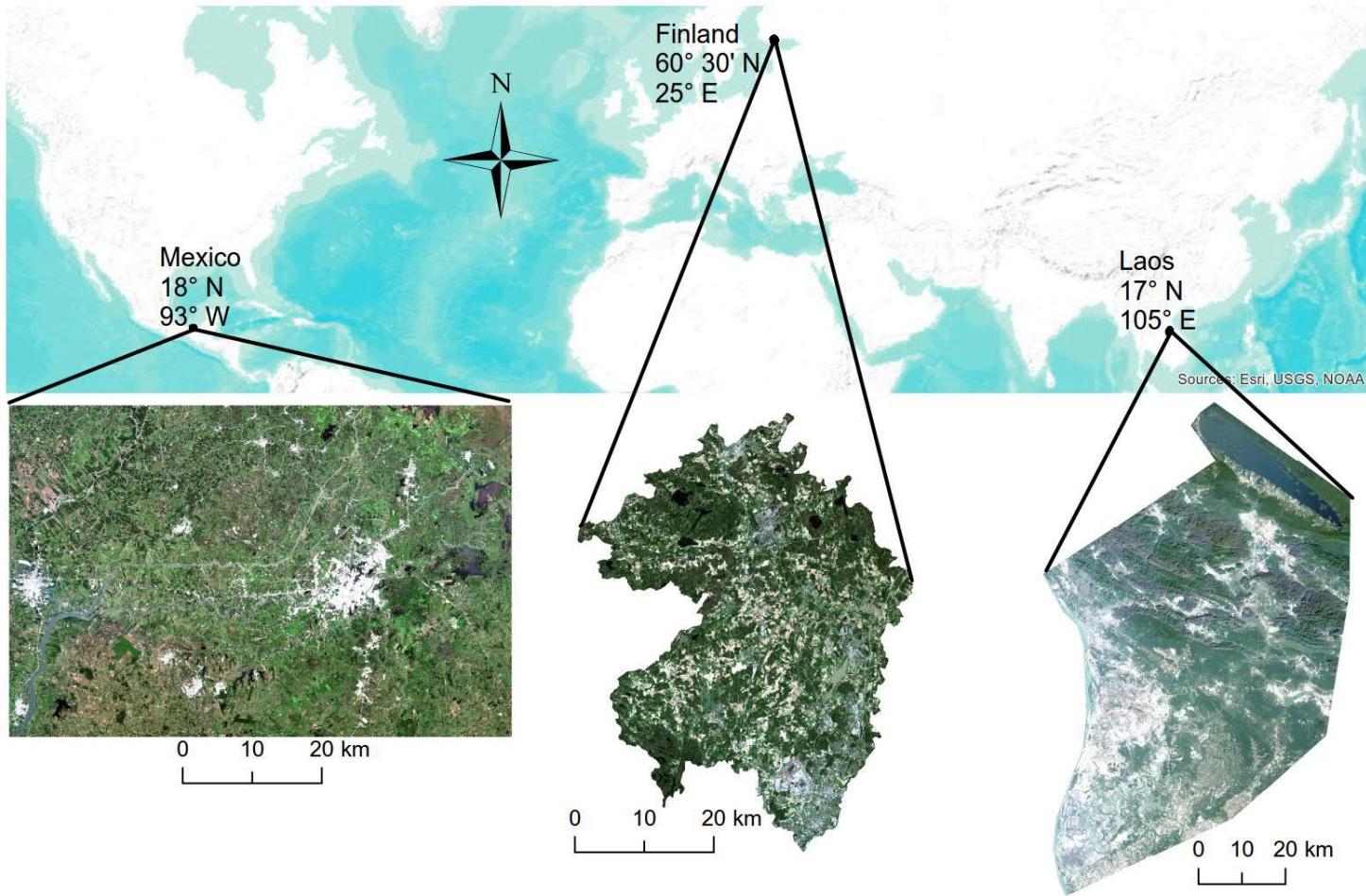
1. Analyse past, present and future water-related risks and vulnerabilities in the selected study areas.
2. Understand multi-scale water-governance structures and processes in different bio-physical, socio-cultural and political-economic contexts. Examine their similarities and differences.
3. Identify alternative governance initiatives and their strengths and challenges.

Study areas

We analyse multi-scale governance in three river basins:

- 1) River Grijalva in Mexico, Latin America
- 2) River Xe Bang Fai in Laos, South-East Asia
- 3) River Vantaanjoki in Finland

These cases offer an interesting combination of socio-spatial and political-economic diversity relevant for gaining insights into heterogeneous environmental governance structures and practices (a low-income developing country, an emerging economy, and a post-industrialist northern society).



Case study areas. USGS/NASA Landsat 8 satellite image from each site. Source: Räsänen et al. 2016 (forthcoming).

Methods

- Systematic literature review on vulnerability.
- Remote-sensing analysis of land-use changes during the past 30 years.
- Analysis of policy documents, development plans and water-governance reports.
- Participatory workshops with relevant institutional stakeholders.
- Interviews with governmental officials, private-sector actors and representatives of NGOs and environmental-social movements at different levels.
- Interviews and participant observation with local residents.
- Archive and media analysis on water-related risks and vulnerabilities.



Preliminary results

- Need to broaden analytical-methodological frameworks to understand the diversity of actors and institutions involved in governance, with their differentiated access to knowledge and power.
- Diverse bio-physical, political-economic and socio-cultural drivers shaping people's vulnerability to water-related risks and their ability to cope with them: climatic, land-use - related, water-related and policy-, planning- and politics- oriented factors (Räsänen 2016).

- Shifting governance strategies over time and hybridity at a given time: technocratic flood-control and water-management strategies; integrated flood resilience-strategies; self-governance approaches.



- Attention to a wider water-basin context when profiling risks and alternatives for sustainable transformations: upstream plans and policies -> downstream impacts.



- In the multi-scale analysis of water governance need to consider scalar politics and the networked forms of governance, with their environmental and social implications.



- Social differentiation in people's exposure to risks and in the distribution of services and everyday vulnerabilities within and between the cases.
- Differences in people's engagements in arenas of political representation.
- Need to search new ways for dialogue, debate and co-creation of knowledge among researchers, decision-makers, development experts, activists and resource-users in/between the global North and South.

