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Fostering social learning through role-play simulations to operationalize comprehensive climate risk management

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Introduction

- Increasing losses from extreme events, both globally and at national levels
  - Different drivers of risk: anthropogenic climate change, natural climate variability, socioeconomic development (exposure, vulnerability)
- Linking of climate adaptation planning with disaster risk reduction strategies is key for achieving the SDGs
- In practice, we observe „science-policy-implementation gaps“
  - insufficiently clear roles and responsibilities
  - diverging stakeholder interests, priorities and risk perceptions
  - inexistent or incipient cooperation mechanisms
- Hypothesis: fostering social learning via participatory stakeholder engagement processes (e.g., role-play simulations) aids closing prevailing science–policy–implementation gaps in CRM

Climate-related risks in the SDG context

NATURAL HAZARDS

Storms, Tropical Cyclones, Floods, Landslide, Fires, Tsunami, Earthquake, Drought, Heatwave, Cold Snap, Volcanic Activity

Causes loss of life and damages assets, infrastructure, settlements and ecosystems, and can trigger displacement

Losses and damage disrupt economic activities and governance, and access to basic services and education

Asset loss, livelihood and service disruption entrench multi-dimensional poverty and inequalities, and can trigger migration

SLOW-ONSET CLIMATE CHANGE-RELATED HAZARDS

Ocean Acidification, Sea Level Rise, Increasing Temperature, Desertification, Salinization

Damages and undermines the resilience of ecosystems, ecosystems services and settlements

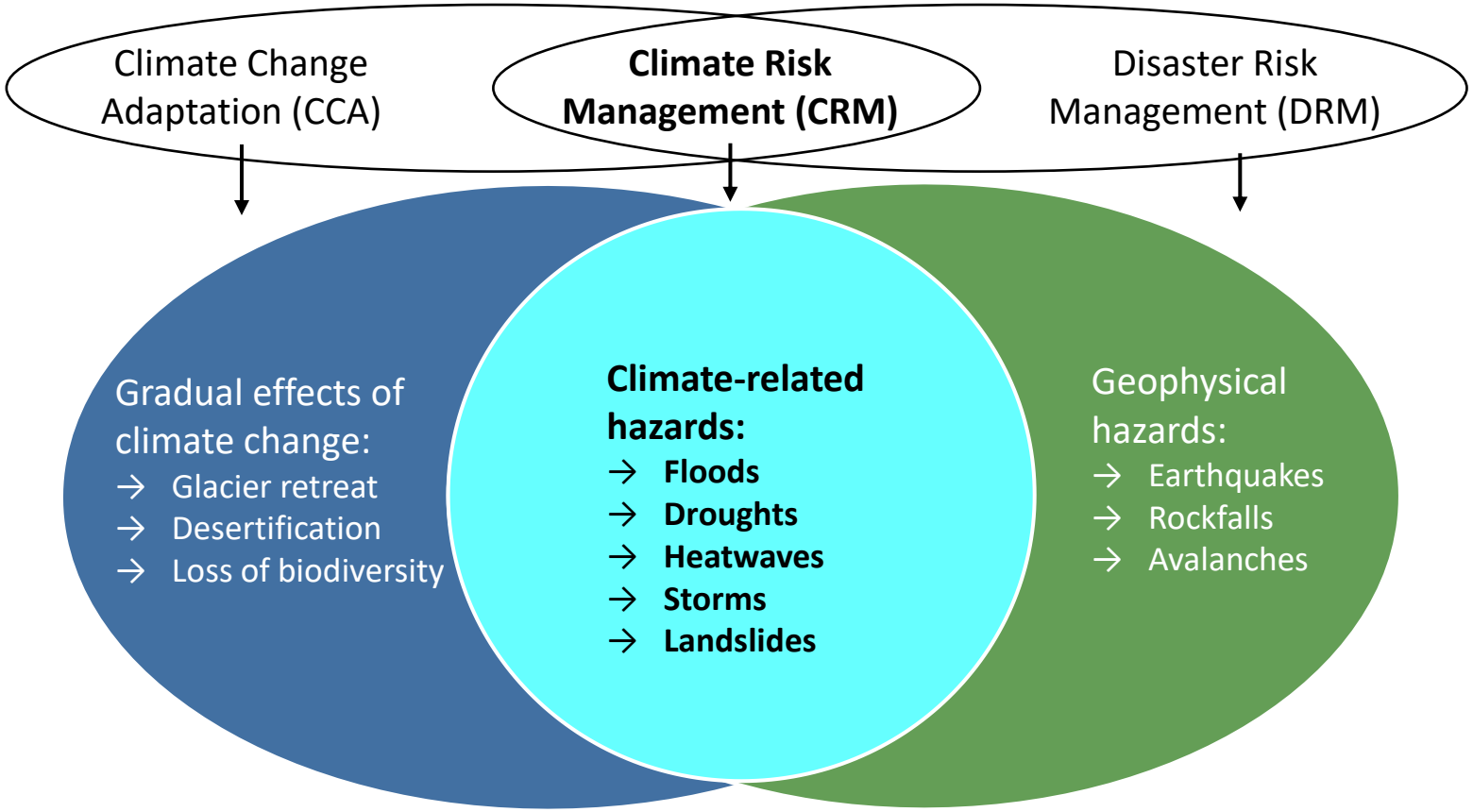
Climate stresses and shocks on settlements and ecosystems undermine economic activity and can trigger displacement

Disrupted economic growth and severe weather affect human health and trigger negative coping mechanisms

Negative coping mechanisms and further shocks entrench multidimensional poverty and inequalities, and can trigger migration

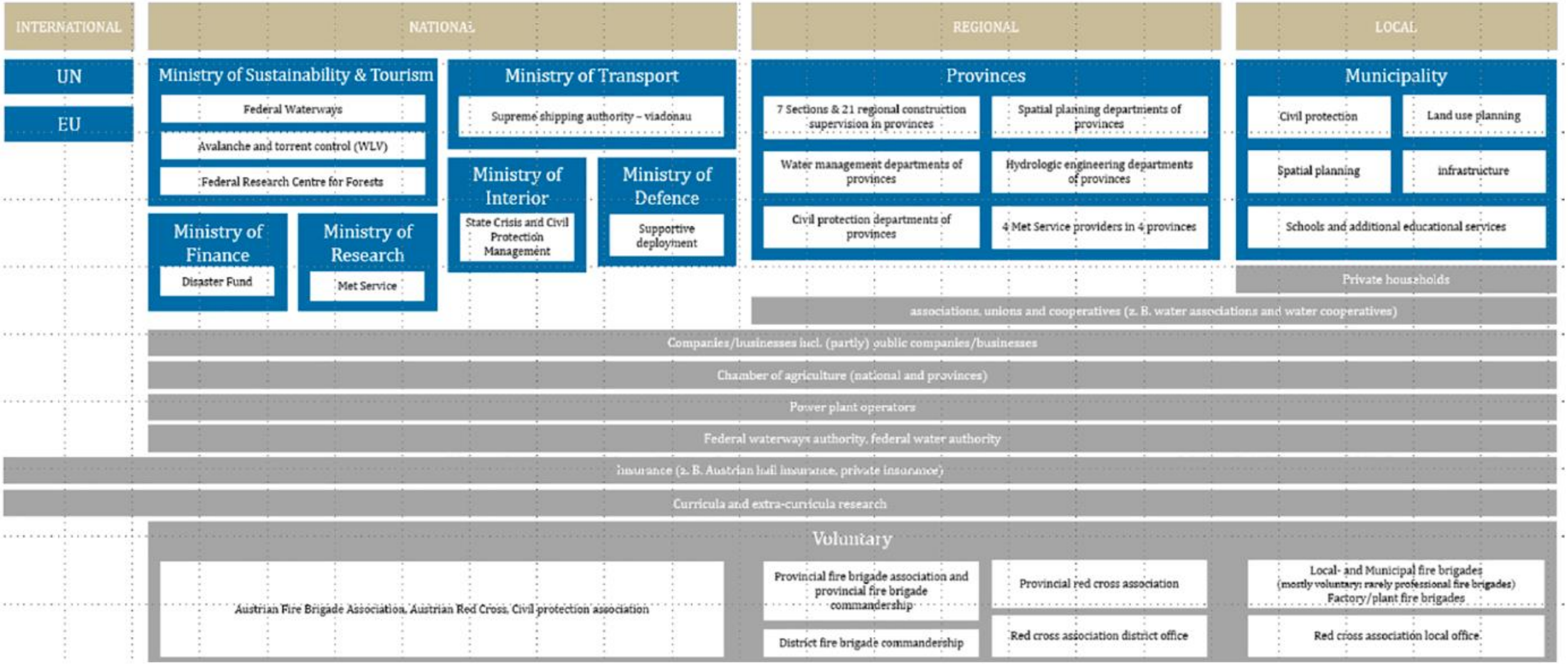
Source: UNDRR (2020)

Integrated Climate Risk Management



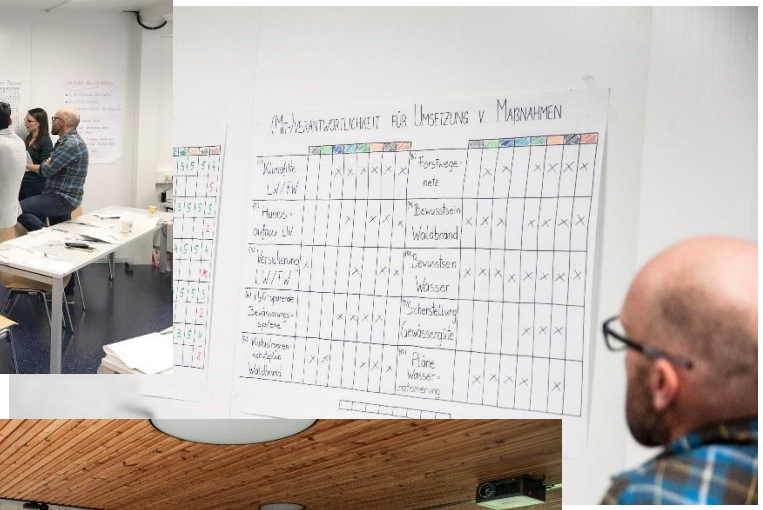
Source: Leitner et al. (2020)

Stakeholder and governance mapping



Source: Leitner et al. (2020)

The RESPECT role-play simulation



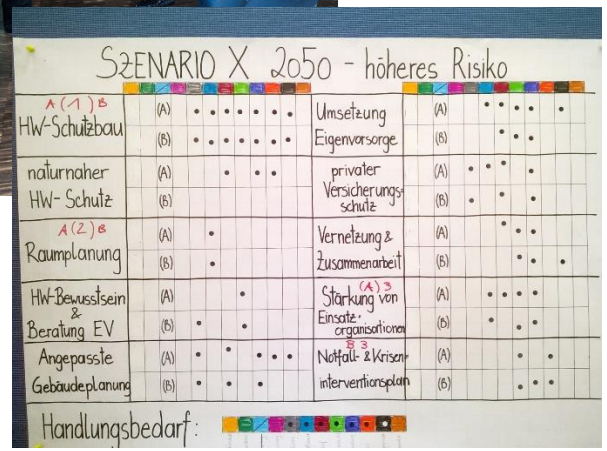


Foto-Credits: Michèle Lintschnig

Insights & conclusions

- Role play simulations have a high potential to foster social learning
- The diverse participating societal stakeholders were found to better understand:
  - the interacting dimensions and drivers of riverine-flood risks,
  - the effectiveness and possible positive and negative effects of risk management measures,
  - the diverging risk perceptions, and
  - each other's interests and needs in addressing such risks at the individual and institutional level.
- Insights are relevant beyond Austria and flood risk management.

Thank you for your attention!

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