CRiSDA

Climate Risk Service Austria

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Identifying tools and methods to co-create a Climate Risk Service (CRS) for managing drought risk in Austria

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Background

- When **identifying** the **requirements** of (real world) Stakeholders/potential users of a Climate Risk Service for agricultural drought in Austria one may ask… …**what is possible?**
- with available data & information on components of
  - **hazard** (direct physical impacts)
  - **exposure** and
  - **vulnerability** (capacity for coping & adapting)?
- **Current products** & approaches **hazard-centric**: Do not sufficiently consider exposure & vulnerability (Hagenlochner et al. 2019)
- Impact-based warnings & behavioral recommendations through **integrated risk assessments**

(a)

(modified after: IPCC; Field et al. 2014)

Overall Objective

- Support knowledge-based comprehensive climate **risk** management
- **Bridge gap between CCA & DRM in practice**
- Develop participatory process for **co-creating** tools & methodologies towards a **climate risk service for Austria**
- Focus: **agricultural drought**

→ Create a **prototype** for a climate risk service for agricultural drought for Austria

Methodology:

- **Qualitative mixed methods:**
- Literature review
- Semi-structured interviews (coding in Nvivo*)
  (10 in first round & 13* in second round; international, national & regional level)
- Survey
  (79 completed submissions & ca. 140 incomplete 'usable' submissions)
- **Co-Creation: Scientists⇔Stakeholders**
- SH-engagement & integration from beginning (including proposal!)
- Regular workshops & 'JourFixes'

Co-Creation

- **Supply-driven** models and services did **not lead to needed actions**
- CRS should account for **different world views: engagement** with society
- Transdisciplinary engagement and collaboration processes **rarely applied to co-designing CRS**

Results: Requirement Profiles of Stakeholders

- Identified potential **users**:
  - On **regional government level** (for setting short & long-term measures)
  - **Implementation** of recommendations & measures on **regional & municipal/individual level**
- **Beneficiaries**: mainly farms and firms (agricultural; municipal/ind. level)
- **Impact chains**:
  - Diagrams/graphic representation of systemic risks already useful to SH (without data)
  - Allow for **systemic view of risks**
  - Potential to **foster cooperation & coordination** among SH
- **Risk communication preferences (normative & one-way)**:
  - Transmitting risk info without distortion, bias or misunderstanding
  - Risk communication as information transfer (encoder-decoder model)
- Main **technical CRS requirements**:
  - For cropland & grassland (food security)
  - Temporal scale: forecasting & projections preferred (medium to long-term)
  - Spatial scale: fine (municipal)
  - **Low-threshold of service/interface/app (traffic light system & map), written reports: easy to use and interpret**
  - Open access

Results: 'low threshold'!

The good:

*Stakeholders have recognized the issue and are **willing to implement** – **users are ready** with clear requirements.*

The bad:

*Technical **limitations** (trust!) and costs.*

The ugly:

*Stakeholders operate in a highly complex playing field with **limited time and (personal) resources**.*

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