

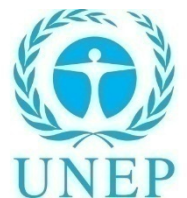
UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP) CLIM-WARN PROJECT

ASHA SITATI

FOURTH INTERNATIONAL CONFERENCE ON CLIMATE
SERVICES



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety



BACKGROUND

- Started in 2013
 - Funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
 - Working in three countries: Kenya, Ghana and Burkina Faso
 - UN partner organizations: WMO, UNISDR, UNDP
 - Working closely with different institutions in the three countries,
-
- **Objectives:**
 - Identifying gaps and opportunities in Early Warning landscape
 - Identifying user needs and best practices for communication and response
 - Creating a prototype of a multi-hazard Early Warning System in three case study countries: Kenya, Ghana and Burkina Faso

ACTIVITIES

3

- Identifying which hazards are of greatest relevance to communities and which actors are involved in DRM
- Identifying how vulnerable receive information and how information could be better delivered (communication best practices)
- Identifying how response capacities can be improved
- Creation of a multi-hazard and multi-sector Early Warning System tool



FIELD SURVEY

- **Sampling**

- Partnered with other institutions e. NDMA & World Vision Kenya
- 4 sites in each country
- 3 villages per site
- 30 Households in each village
- Randomization procedure (50% male & 50% females selected randomly and interviewed)

METHODOLOGY/RESULTS

- Surveys:
 - 3 partners in each country (governmental, NGO)
 - 6 districts in each country, 3 villages in each district
 - 30 households randomly sampled in each village (50% male and 50% female interviewed, selected randomly)
 - 3 focus group discussions in each village
 - Literature reviews: Best communication practices and response plans
 - Consultation with stakeholders and partner institutions
- **RESULTS**
 - **Vulnerability:** Different communities have different livelihood profiles and consequently different vulnerability levels, e.g. sources of income, level of education
 - **Communication:** Varying access to information and media usage between sites (ownership of communication devices)
 - **Trust in institutions:** Most trusted are generally religious groups and headmen/elders
 - **Traditional knowledge:** More relied upon in Turkana, less in Nairobi

Household surveys

- 12 enumerators/site
- Training
- Questionnaires
 - General information
 - Hazard & communication
 - preparedness/response

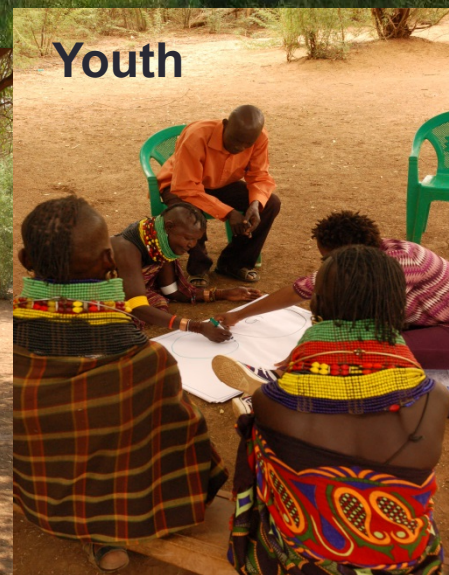


Focus Group Discussions

- 3 groups of 5 each ,Women
Youth, elderly/disabled
 - Hazard timeline
 - Institutional analysis
 - Communication/response
 - Ongoing analysis



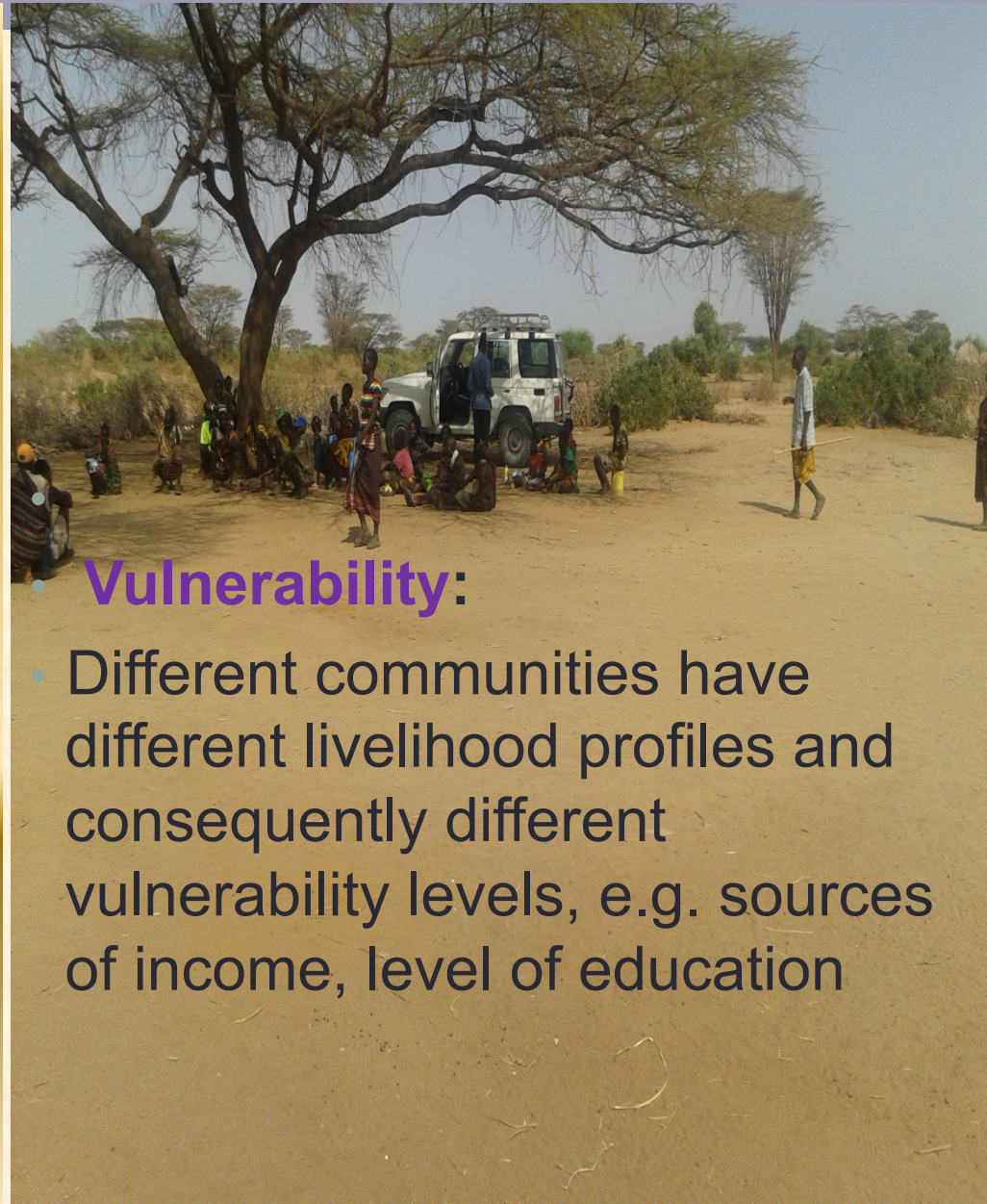
Elderly/disabled



RESULTS....

- Hazards vary from site to site.

- Drought more prevalent in Turkana followed by Kwale
- Flood more in Kisumu
- More disease outbreaks in Nairobi

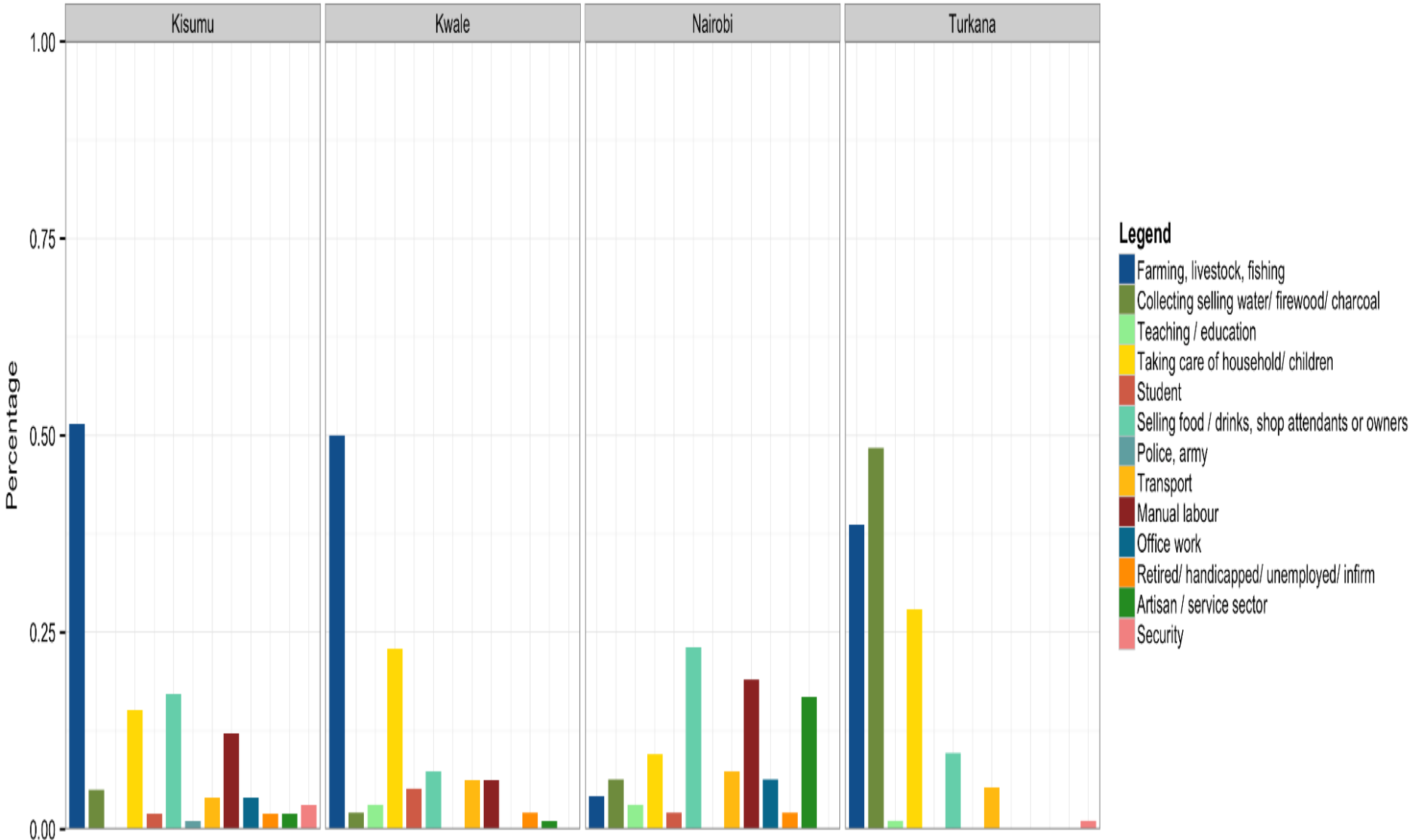


- **Vulnerability:**

- Different communities have different livelihood profiles and consequently different vulnerability levels, e.g. sources of income, level of education

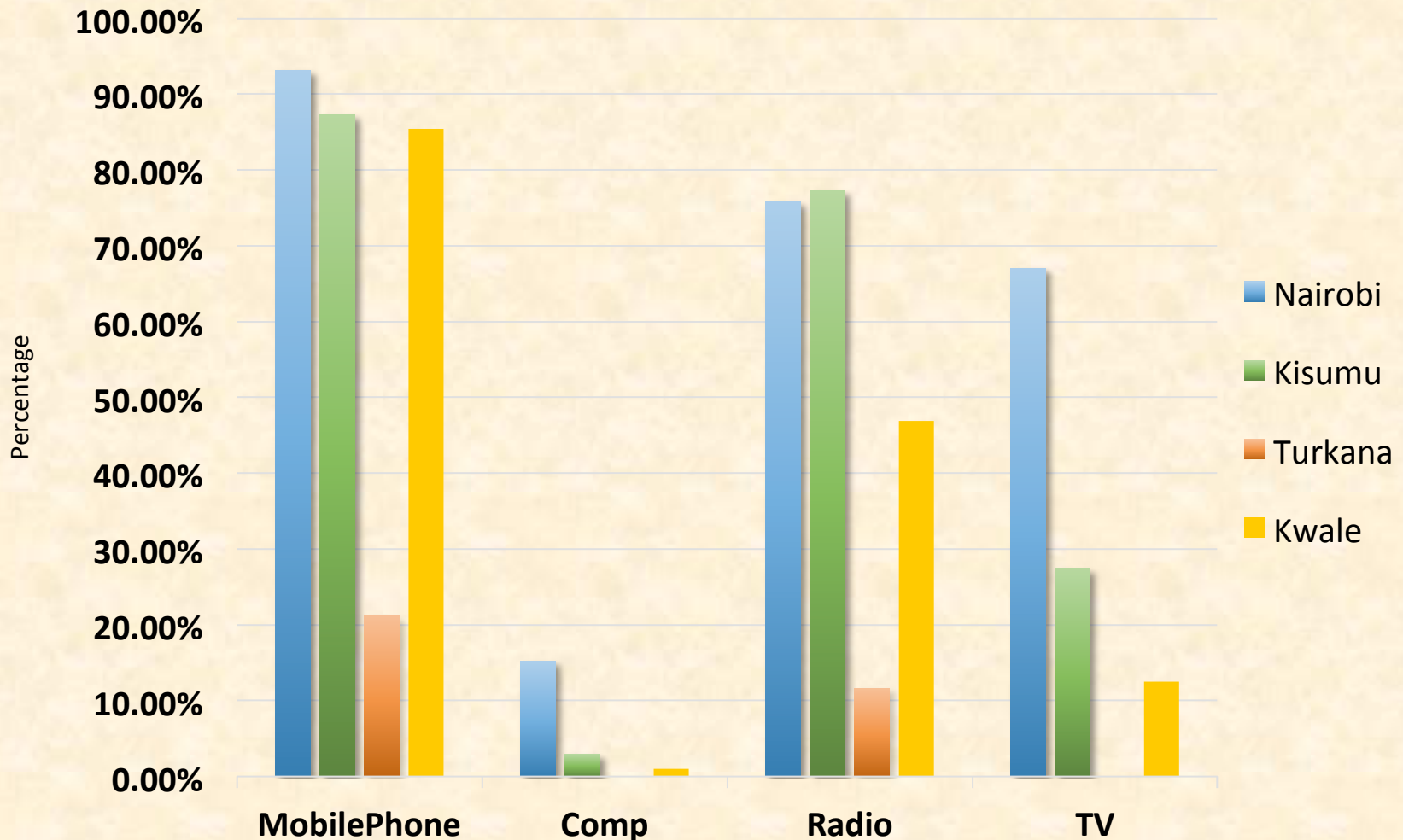
Livelihood profiles

Job sectors of respondent per site, Kenya



Communication:

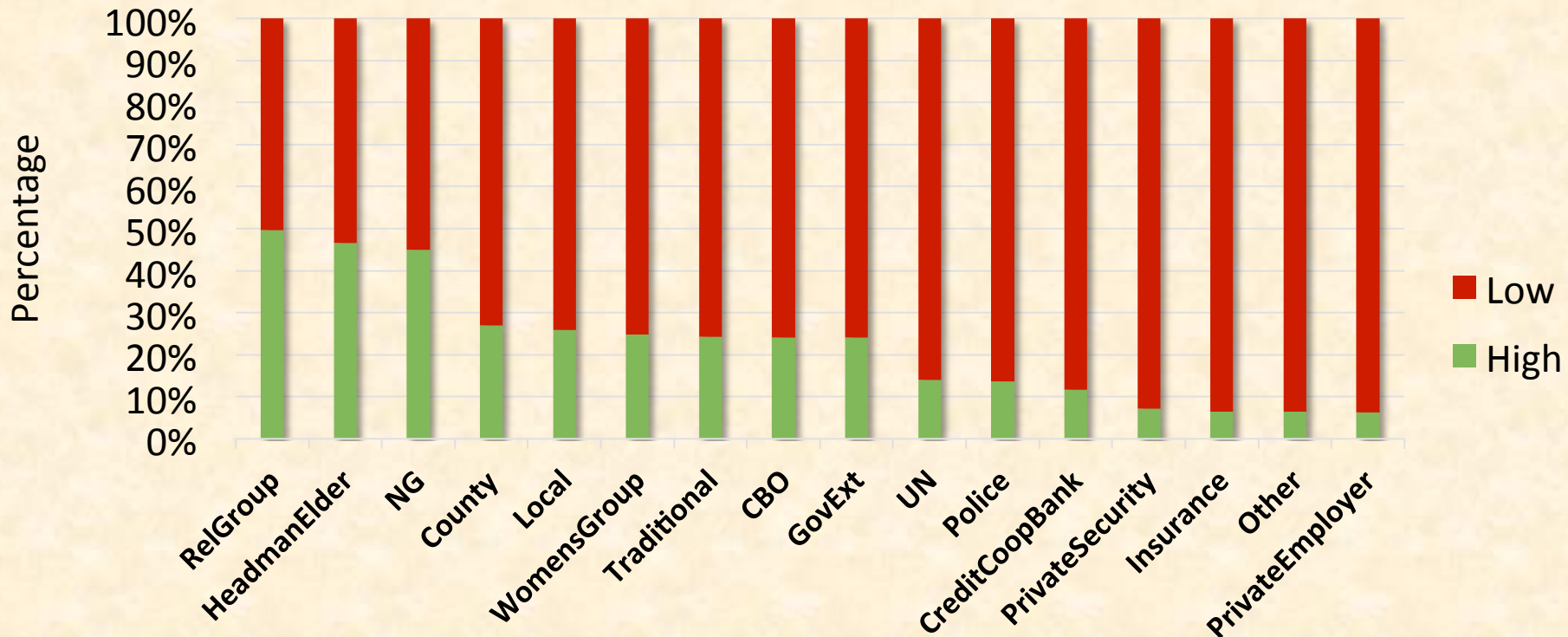
Varying access to information and media usage between sites (ownership of communication devices)



Trust in institutions:

- The most trusted are generally religious groups and headmen/elders
- **Rural areas:** Traditional institutions like headmen/elders & chiefs are more trusted
- **Urban areas:** Trust a major challenge in urban areas but government trusted more

Trust in hazard related information from different institutions



NEEDS

Comprehensive EW e.g.

- ✓ Type of hazard
- ✓ When it will occur-timely information
- ✓ How to deal with it- where & what?
- ✓ What is already in place to deal with it e.g. the strategies put in place by different institutions
- ✓ Feedback in case of 'false alarm'
- ✓ Capacity building

Sites vary in terms of;

- Hazards of relevance
- ❖ Literacy levels
- ❖ Sources of information
- ❖ Levels of trust in institutions

Systematic literature review: Best practices in communication ¹³

- 3 pillars of effective early warning communication

Early-Warning Communication

Recipients

- Tailor communication to local needs and capacities
- Target and reach vulnerable groups
- Train target communities
- Ensure trust

Design

- Create a multi-hazard warning system
- Create mechanisms for local involvement
- Have abundant communication channels
- Have feedback mechanisms in place

Process

- Timely disseminate the warning
- Warning messages must be clear and consistent
- Include instructions for protecting life and property
- Send abundant warnings
- Avoid false alarms

Integrated multi-hazard Early Warning System

- **Next phase:** Integration of research findings into comprehensive, multi-hazard and multi-sectoral Early warning system, drawing upon research findings and existing systems and resources
- **Output:**
 - Report with recommendations and best practices for creation of an multi-hazard Early Warning System

Working together with our partners and other DRM institutions

Integrated multi-hazard Early Warning System



Earth observation data, e.g. satellite data



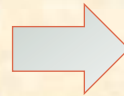
Hydrological data, e.g. stream flow, water levels



Weather stations, e.g. precipitation, irradiation, temp.

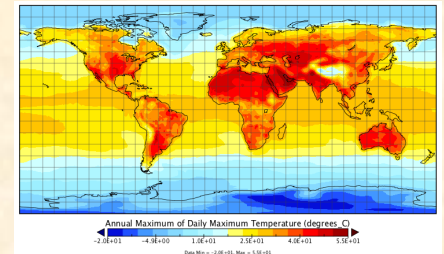
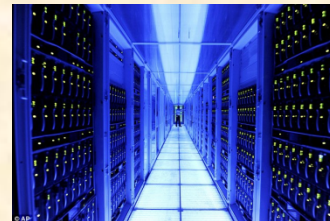


Sectoral data, e.g. crop yields, health data, electricity data
Other observation data



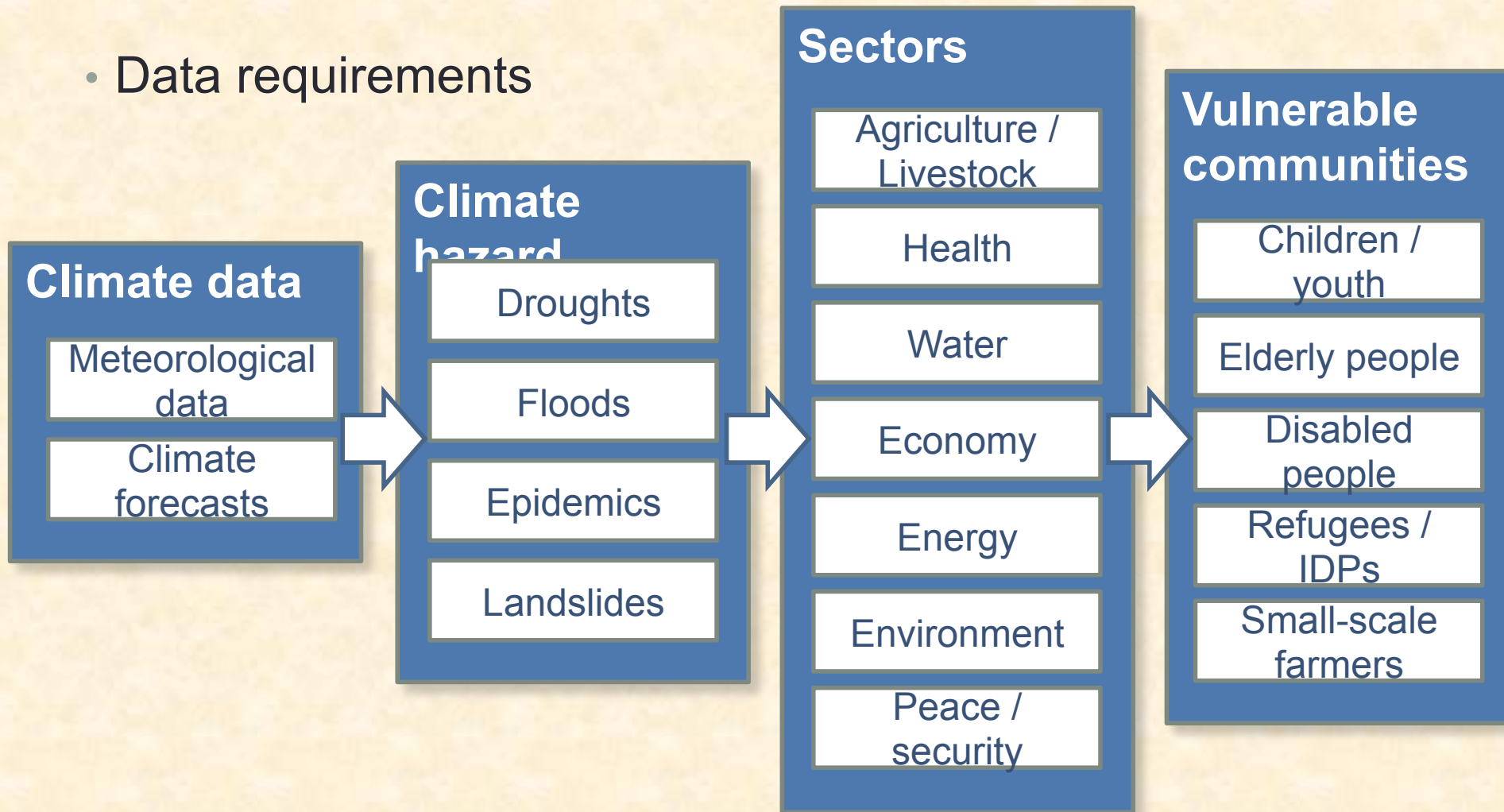
One central data base (pulling of data from various institutions)

Standardized data format per sector and data type, if possible and applicable (e.g. NetCDF, district based data, point-data, ...)



Integrated multi-hazard Early Warning System

- Data requirements



CONCLUSION

❖ HOW DO WE TAKE CARE OF ALL THESE DIVERSITIES?

Early Warning Information should be tailored to suit the needs of different end users e.g. easy to understand language (local language?), Correct format, media (radio, sms, TV, PA?)

THANK YOU!

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