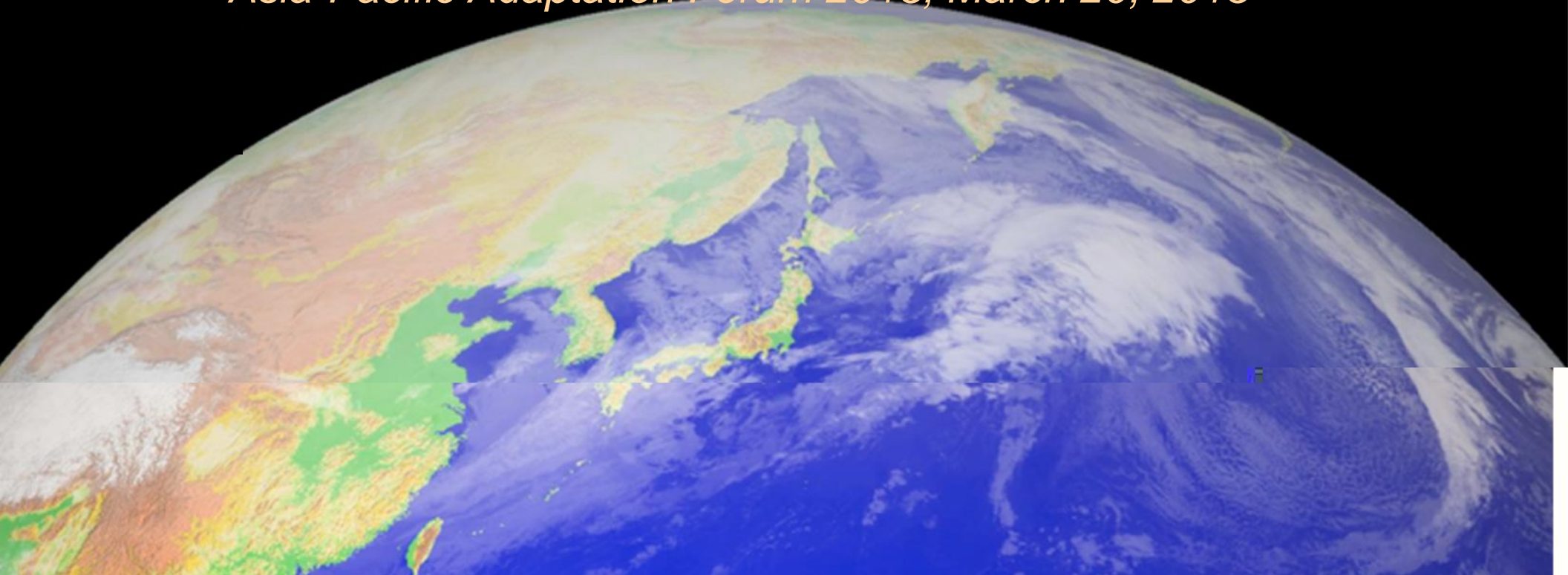


to Climate Change

and translate sound climate science to serve local adaptation needs, to promote sustainability and to reduce human system vulnerability to regional and local climate change.

Caspar Ammann, NCAR

Asia-Pacific Adaptation Forum 2013, March 20, 2013



Key Objectives:

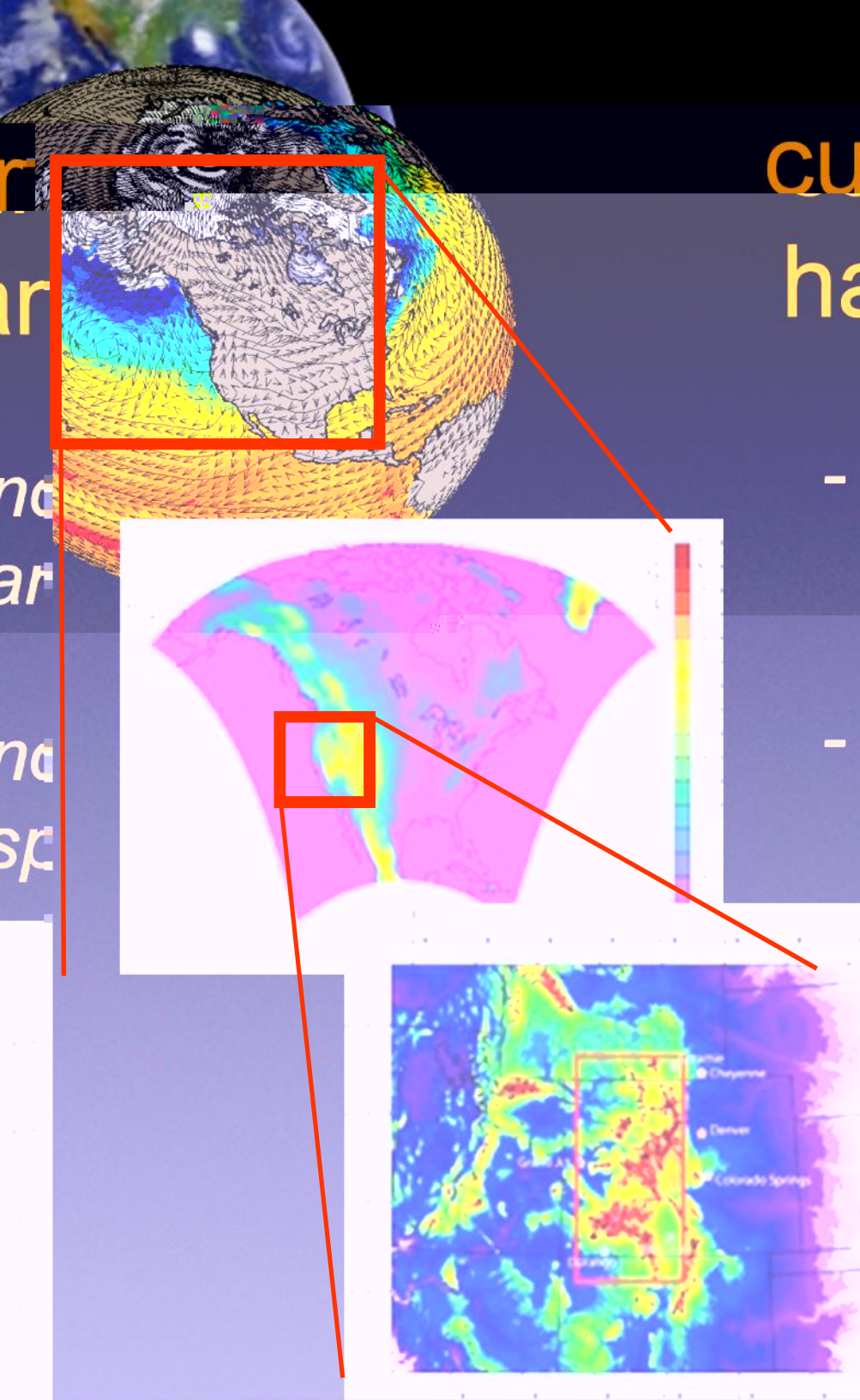
1: Usable data access and data transparency
standardized evaluation: Application indices and me

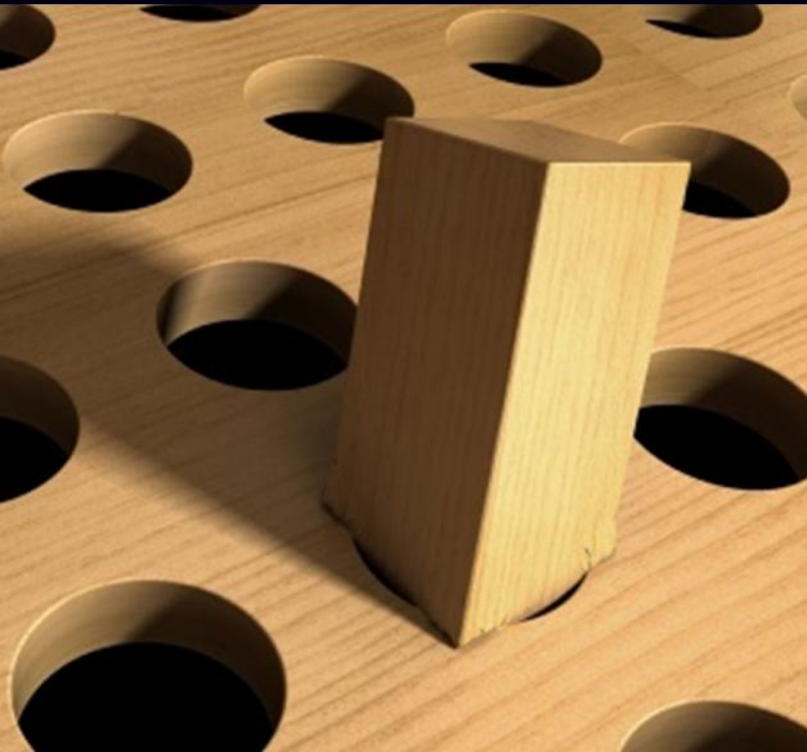
Is there an App for



current approach:
hiding down data, but:

- *no link for users to the science and knowledge of each stage*
- *no insight for scientists to the specific needs of applications*





Current “App”

- **Data** accessibility, in application oriented, useful form (format, resolution)
- **Information about the data** evaluation across the production “chain” vs observations, ens
- **Translation of Scientific Knowledge** for exploration of impacts of change, guidance
- **Community of Practice** that collaboratively develops data requirements and scenarios



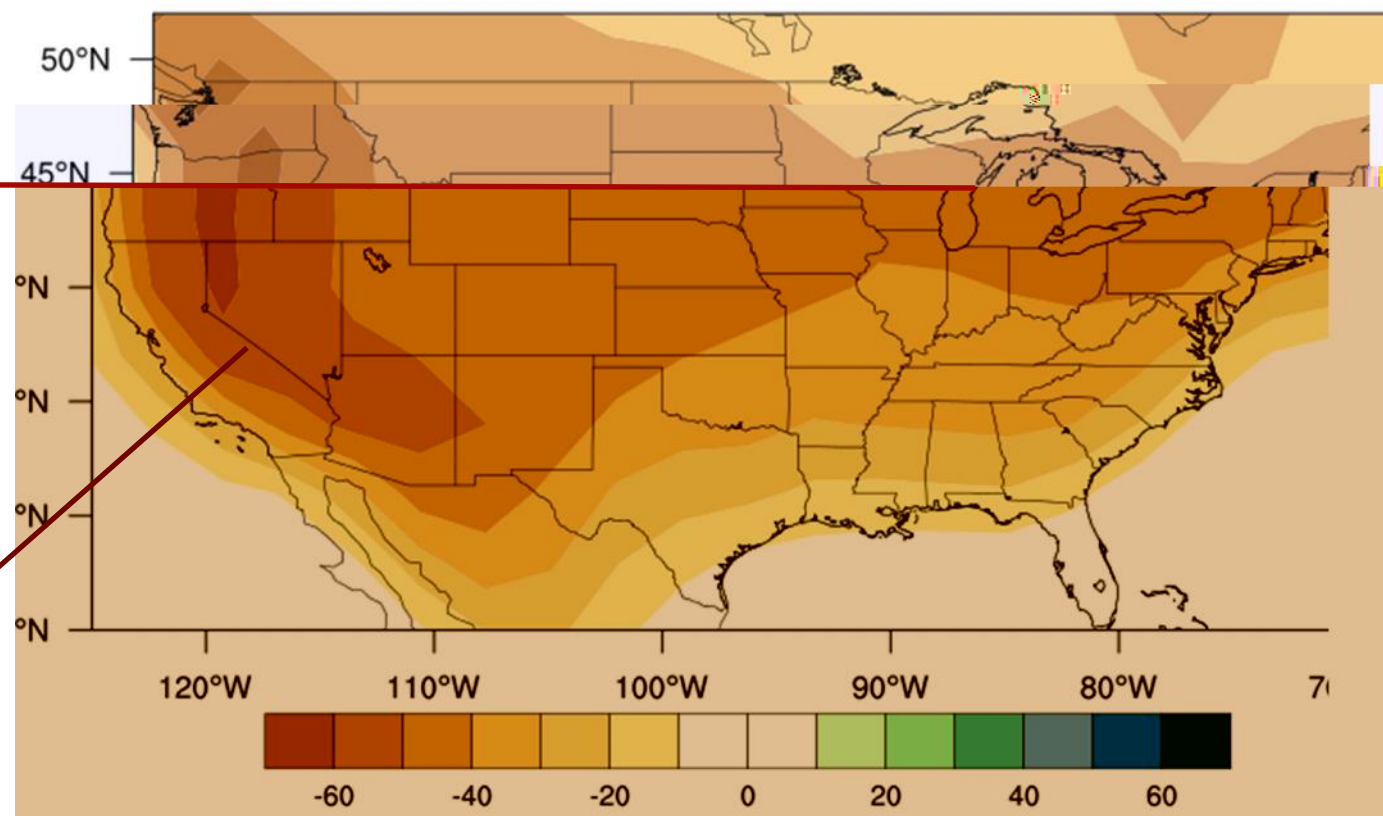
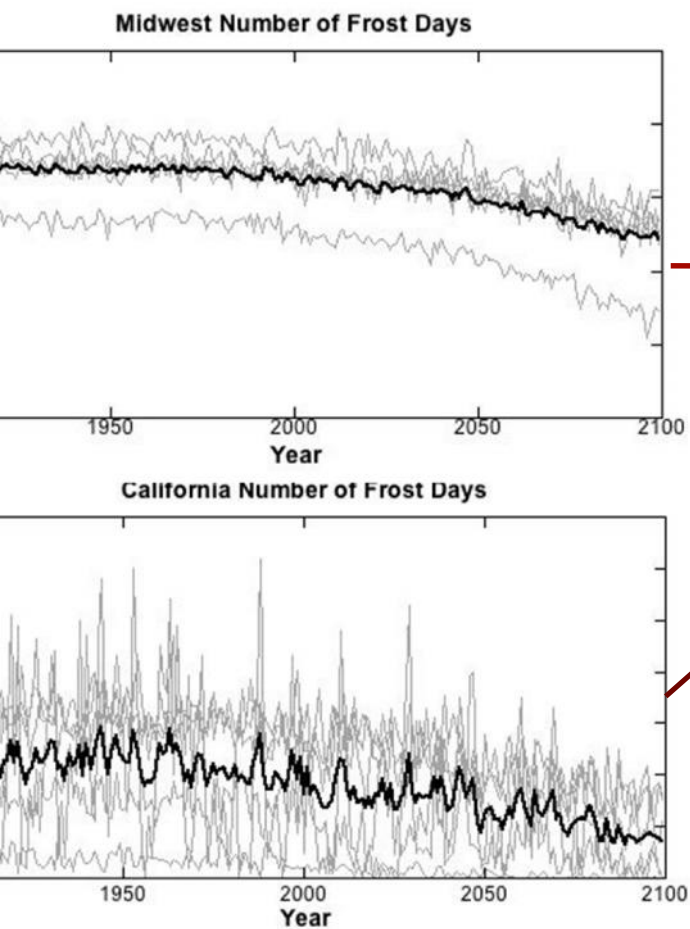
Gorakhpur : Monsoon

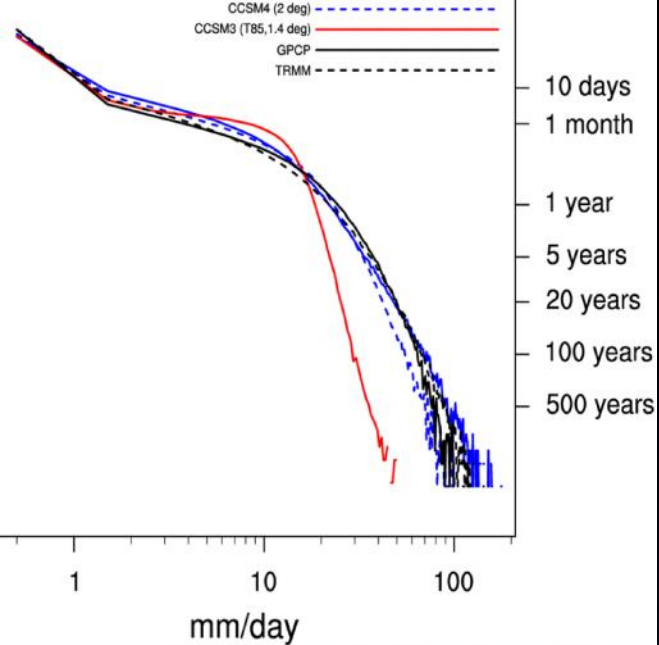


Nebraska : Drought



Fig.: Change in Number of Frost Days across mode

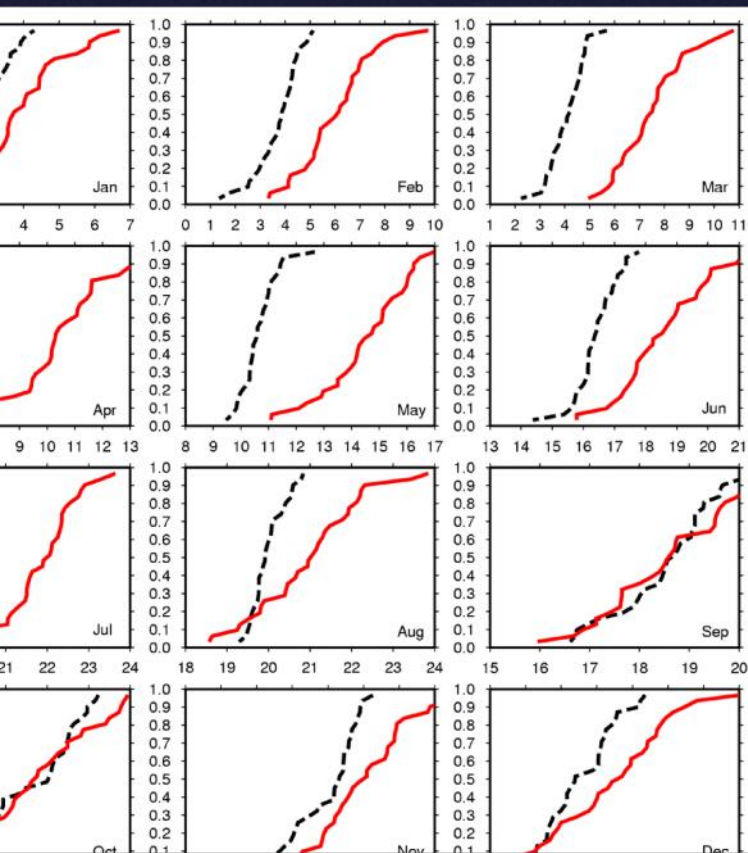




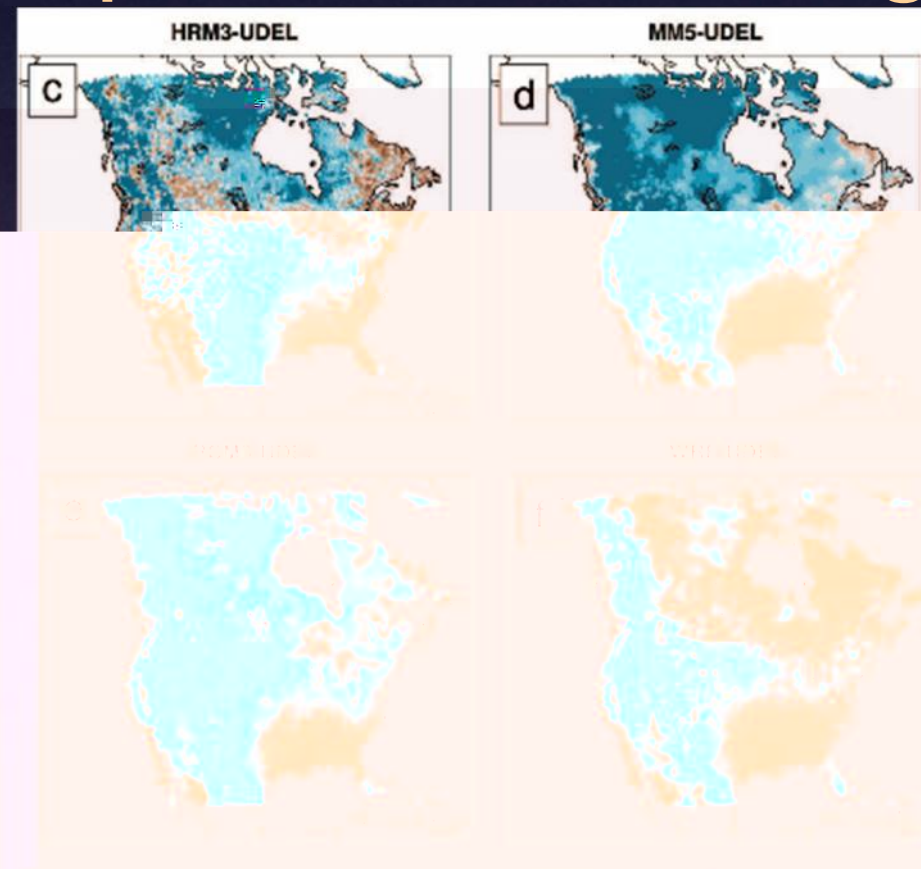
Need for Translation and Guidance



Extremes



Experimental Design



Helping Gorakhpur: “Climbing Everest”



Step 1: Define climate vulnerabilities

Step 2: Base-camp: Get all obs. / other data

Step 3: Thumbu: Identify relationships

Step 4: South-Col: Test models, scenarios

Step 5: Summit: Integrated impact analysis

Step 6: Get back safely: Translate, guide



Scenario Library

Infrastructure for Data

Product Dissemination
(Weather and climate
services)

Plan/Coordinate Scenarios
for various needs

Observational Reference



Sri Lanka

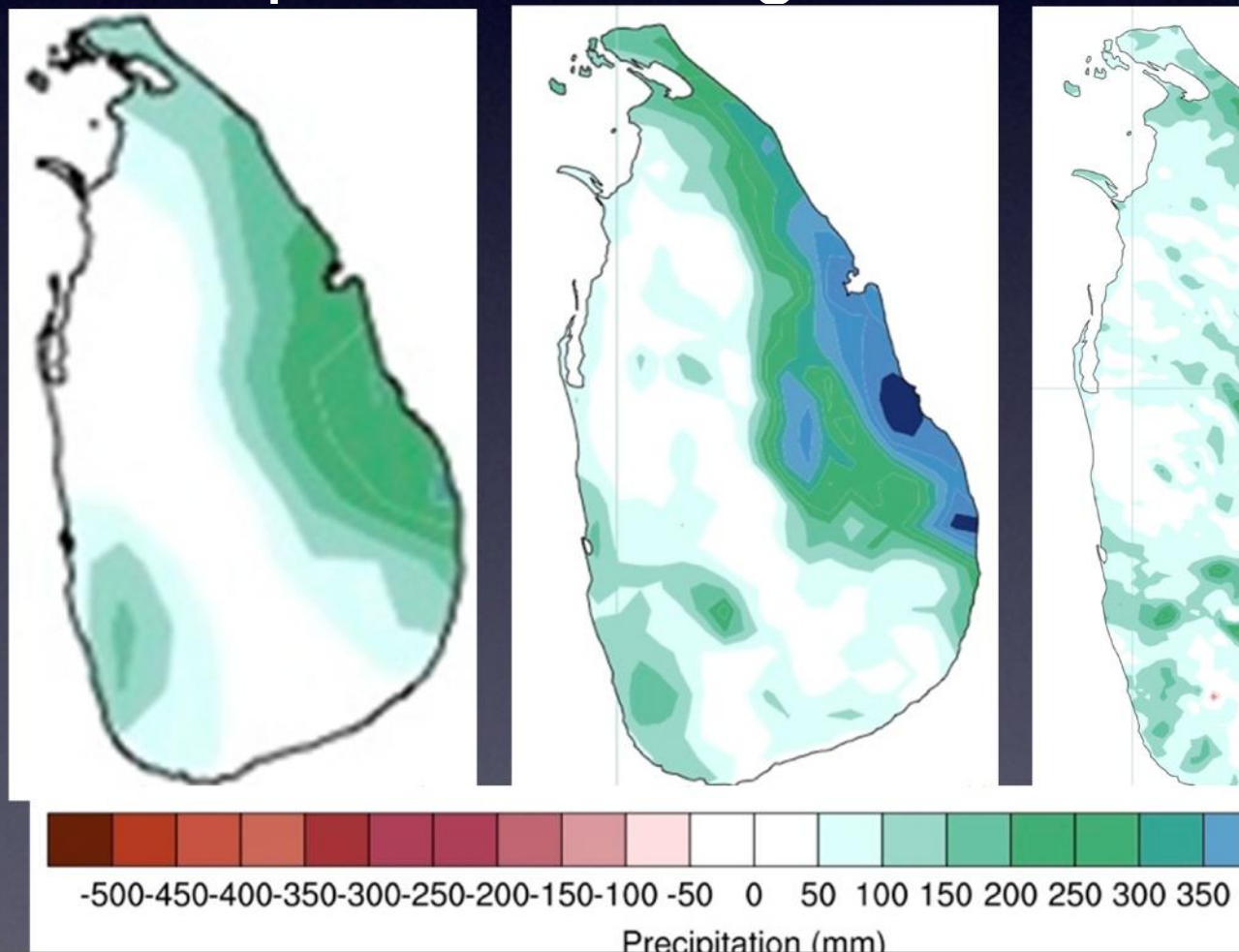
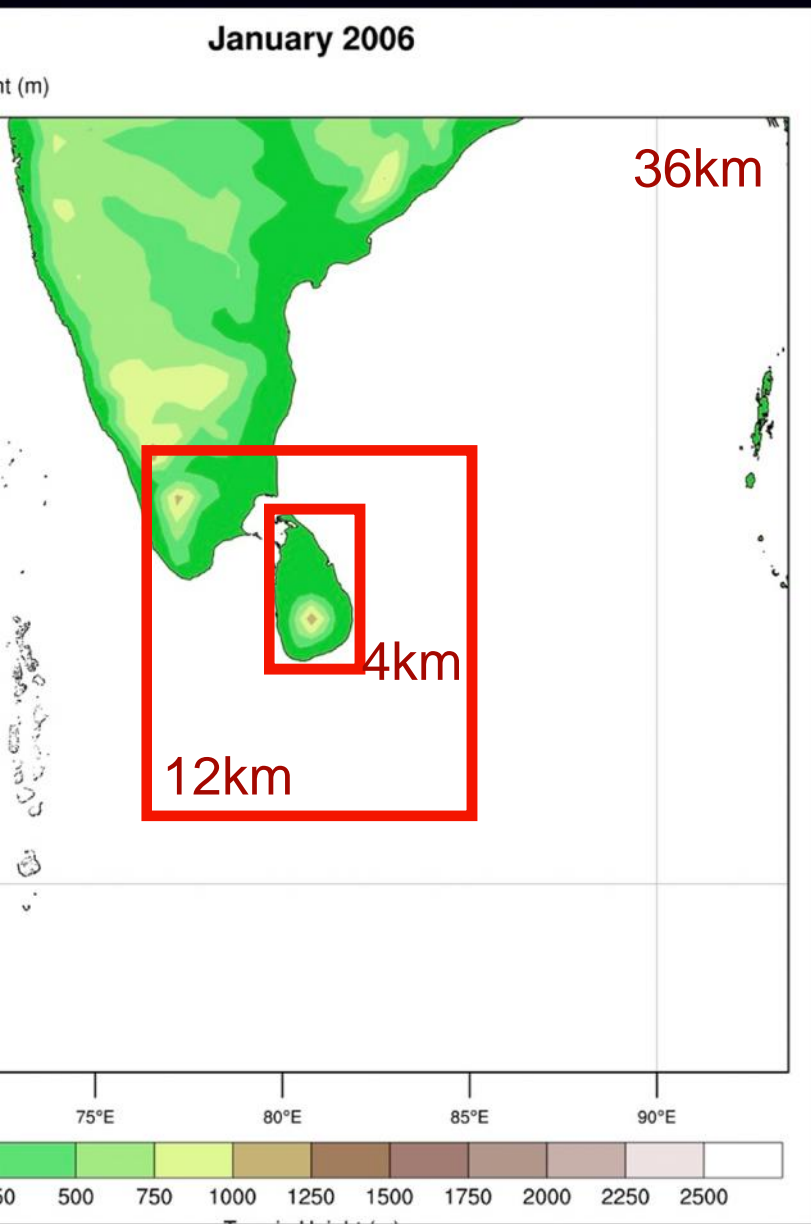
(University of Nebraska, Lincoln with United Nations University and NCAR)

WRF nested in CCSM4 (CMIP-5)

36km with nested 12km and 4km

Control : 2006, Change : 2050 (ongoing)

Precipitation Change 2050s vs 2006



Librarian Functions to Enable Communities of Practice

Scenario Library

Infrastructure for Data

Product Dissemination
(Indices)

Plan/Coordinate
Scenarios for various
Needs

Observational Reference

Translation/Librarian

Embedding local application knowledge

- **Data: User-Oriented Products**
Indices: identification, design, development
- **Data Evaluation Capability**
quality control, characteristics, and user guidance on uncertainties and use
- **Translation/Adaptation Guidance**
Explain Data in Adaptation Context
- **Community of Practice**
identify data requirements, design scenarios



Coordination

Establishing Climate Services

Bridging science to local needs

“The timely production and delivery of useful climate data, information and knowledge to decision makers”

(NRC, 2001)

“Give me information in such a way that I can make decisions local level. What does this mean for me in the next N years”

- Jargon-free, clear,
- actionable,
- expose the uncertainties
- Science-brokers/translators are important
(Pew Report “Lost in Translation”)

“Official” climate products & processes allow planners to make major, climate-informed, infrastructure decisions



**collaboratively putting
the different pieces
together.**

Thanks!