

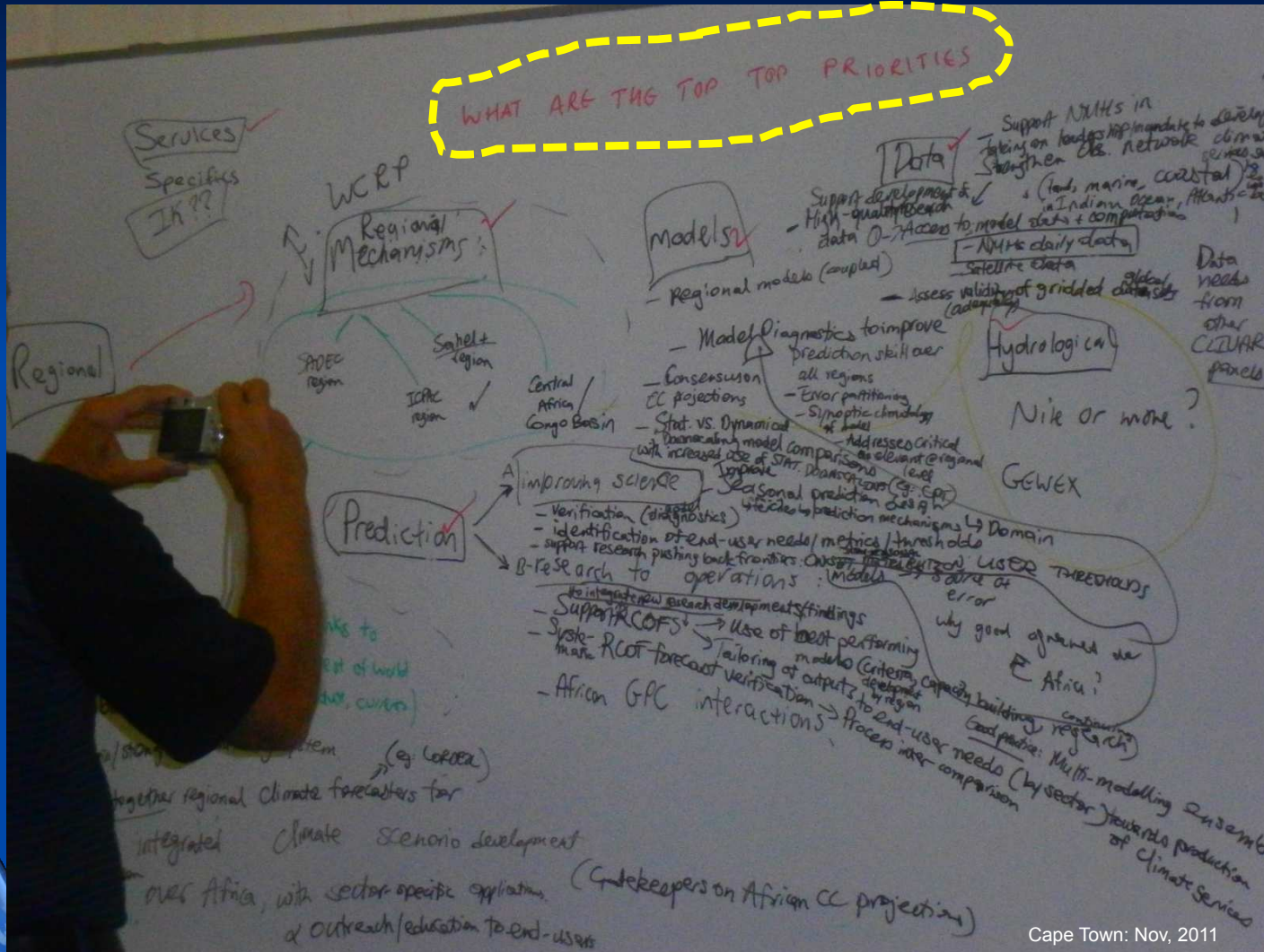
Climate Science Research Frontiers in Africa: Priorities Based on Societal Needs

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The Messy Genesis of ACC-2013



Climate information needs for end users in Africa and related climate science knowledge gaps

Decision-making process and end-user information gaps

- 1 Strategic ahead-of-season planning (1- 6month lead time)**
 - Onset, cessation timing
 - Dry/very wet spells (risks)
 - Seasonal rainfall distribution
- 2 Intra-seasonal risk monitoring and management ; intra-season operations (1wk to 40 days range)**
 - timing/duration/intensity of dry/very wet spells
- 3 Longer-term strategic planning/policy development (next 1-10 years)**
 - Trends/frequencies of rainfall/temperature over next 5-10 years
- 4 Climate change adaptation policy development/planning (next 50 years)**
 - Robust climate change projections
 - Information on the role of climate change in observed events

Climate Research Frontier

- 1 Improving Seasonal prediction**
 - Remote drivers of variability (SSTs, teleconnections, MJO, etc)
 - Local drivers of variability(land-atmosphere coupling)
- 2 Sub-seasonal prediction**

Improved understanding of sources of sub-seasonal predictability over Africa
- 3 Decadal prediction**

Drivers of decadal and multi-decadal variability (AMO, PDO)
Role of aerosols
- 4 Climate change scenarios**

Earth System Modelling
Attribution methodology
Understanding Uncertainty

Climate information needs for end users in Africa and related climate science knowledge gaps (**cross-cutting issues**)

Decision-making process and end-user information gaps

5 Assessing the current vulnerability due to recent climate events

Lack of 'impacts' datasets (e.g. crop yields, river flows, health/hospital admission statistics) to aid development and targeting of applications models

6 Decision making at local scales

Climate services not sufficiently (**geographically**) specific

7 Estimation of the impacts of climate variability and change

8 Mainstreaming climate services for all timescales

Climate Research Frontier

5 Observation system and database development

- Enhancing the observations network for both biophysical and socio-economic climate variables
- Data rescue
- Development of better targeted applications models

6 Downscaling

- understanding and improvement of the downscaling process
- quantification of benefits and uncertainties to users

7 Applications modelling

Improved understanding/ modeling of climate impacts on hydrology, food security and crop yields, health

8 Communication and climate service provider/ user interactions

- Improving availability/usability of services
- strategies for bridging the gap between service providers and end users
- bridging the divide between science and indigenous knowledge

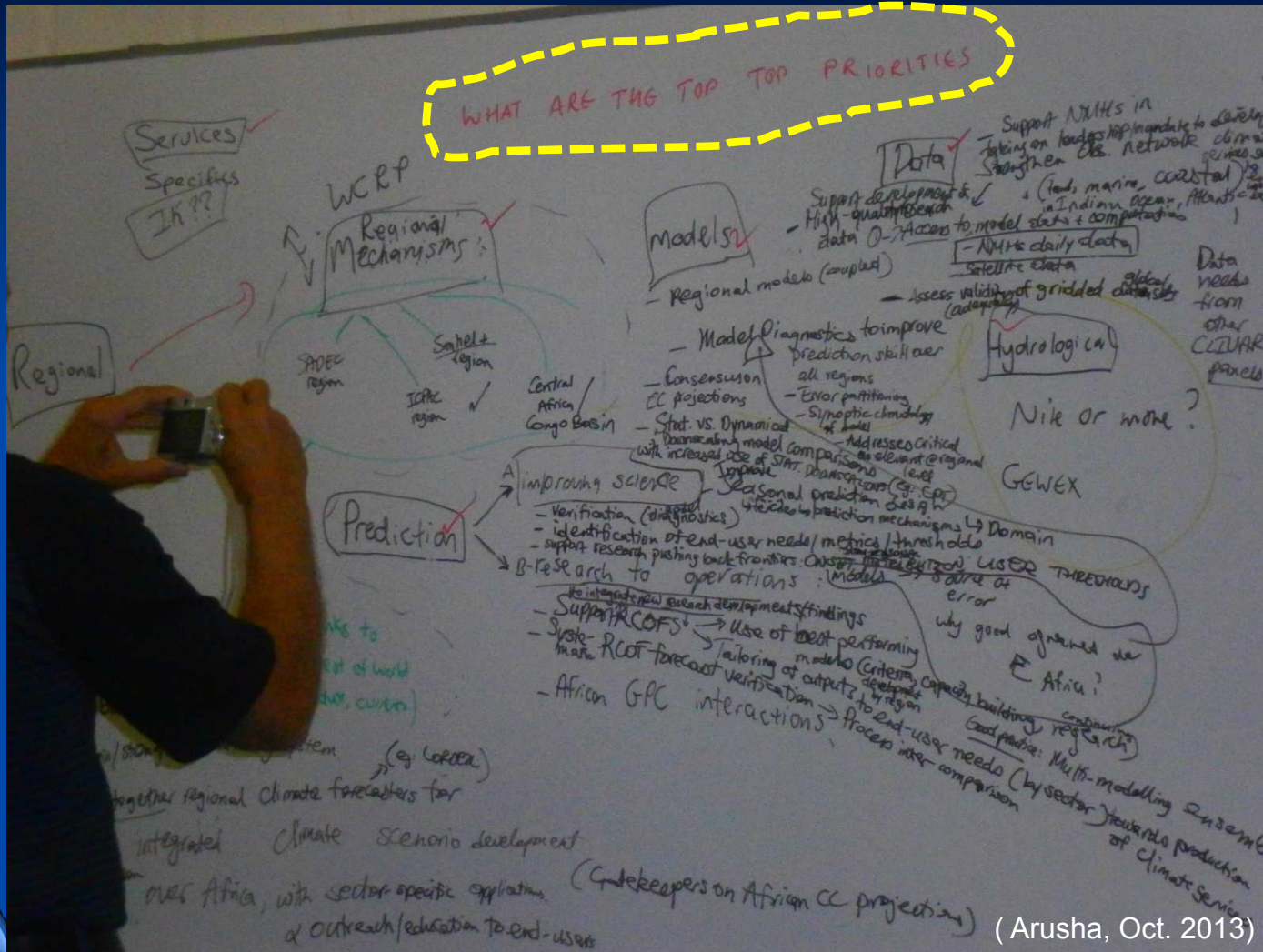
9 Building Credibility & Confidence in Predictions

Forecast Evaluation

Development of user-salient performance measures/indicators

CAPACITY DEVELOPMENT

Finally ACC-2013 can Clean Up this MESS



**THANK YOU!
ASANTE SANA!**

