

Why climate information is an essential component of adapting to climate change and climate resilient development?



Climate Information Prize - Climate Information for Innovation & Resilience

Wednesday 6th April 2016. Safari Park Hotel, Nairobi, Kenya



Why adaptation and climate information?

- Pastoralists, farmers, rural communities are vulnerable, faced with many and increasing risks and uncertainty
- They make daily, seasonal and long term **livelihood decisions**
- Changing, **unpredictable climatic patterns and extremes** challenge livelihoods

- Climate information can be a valuable resource for communities, local governments and other service providers to:

- Make more informed, **anticipatory and flexible decisions**
- Enable effective and **timely risk management**
- Develop **adapted and diversified livelihoods options**
- Reduce vulnerability and enhance **resilience**



Adaptation, building adaptive capacity

- **Mitigation** - human intervention to reduce the sources or enhance the sinks of greenhouse gases (*IPCC AR5*).
- **Adaptation** – process of adjustment to actual or expected climate and its effects, to moderate or avoid harm or exploit beneficial opportunities (*IPCC AR5*)
- **Effective (community-based) adaptation** for climate resilient development:
 - **Adaptation choices** – strategies employed are the result of informed, locally determined and owned decision making and planning
 - **Multi-stakeholder planning** (community – county - national level, all sectors) – work together to co-develop new knowledge + options to manage diverse & changing climate risks and uncertainty
 - **Adaptive capacity** – processes & capacities for continued/ dynamic/ flexible response to short term climate variability, extreme events and long term changes aimed at building ongoing long term resilience.

What is climate information and services?

- **Climate information** – past, present (e.g. rainfall data, temperature trends) and future (e.g. seasonal forecasts) climate conditions from both local and scientific sources.
- **Climate information services** – systems for generating, translating (advisories) & communicating relevant climate information for decision making.
 - Requires sustained engagement between producers, intermediaries, users





Is **downscaled** and **'translated'** to relate to local livelihoods, knowledge and experience

Listens and responds to locally expressed needs of different groups

Is **accessible** to everyone who needs it (language, communication outreach)

The value of climate information is realised when it:

Recognises knowledge and capacity of information users to:

- Understand and **adapt** to the reality of **long term climate change**
- Understand and **use forecasts and probabilities**
- Generate seasonal and short range forecasts from **local climate knowledge**
- **Record and use climate data** – contributing to localised / downscaled information

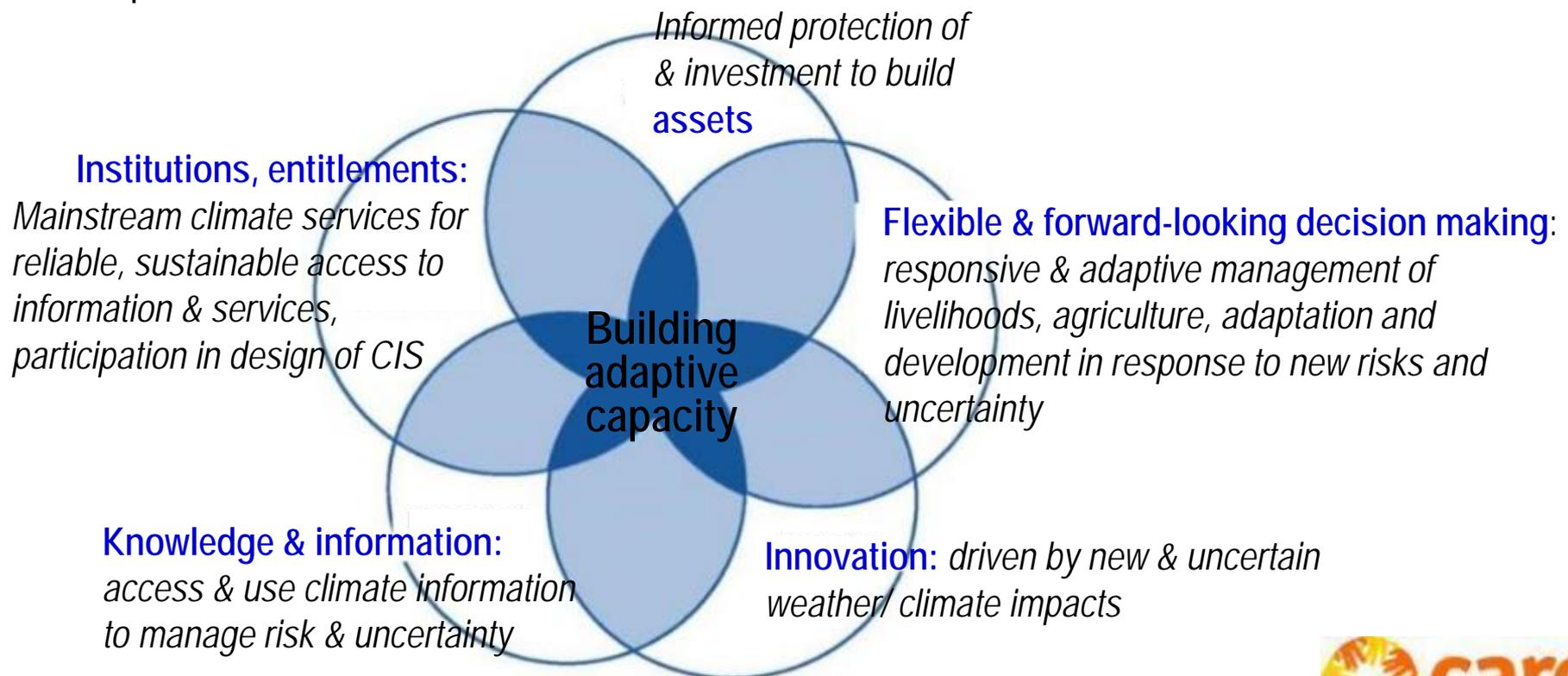
‘Translating’ forecasts for usability: County Participatory Scenario Planning (PSP)



- Multi-stakeholder platform – science (meteorology) with communities, government ministries from different sectors, NGOs, CBOs.
- Share & combine seasonal climate forecasts > local & scientific sources and discuss probability and uncertainty
- Collectively interpret seasonal forecast and probabilities > potential risks and opportunities > local livelihood, sector specific advisories.
- Advisories communicated to users through local channels.
- Enable decision making and planning - responding to seasonal climatic risk, uncertainty and opportunities.

Climate informed adaptation decision making & building adaptive capacity

- Use of climate information in decision making process to:
 - **Analyse past & future climate impacts** on lives, livelihoods, social-economics, development – adaptation planning
 - **Make informed and forward looking decisions** e.g. when/ what to plant? When vaccinate livestock? How will milk/ grain supply change in different places based on performance of season?



Using climate information for adaptation

Examples from pastoral and agro-pastoral communities in Garissa County, Kenya using advisories from PSPs:

- Forward looking decision making
- Diversification eg through irrigation
- *"Due to advisories [from PSP], Nanighi community members are now ready to take advantage of receding flood waters to grow crops like maize, cow peas, green grams".*
- *We anticipate good pasture regeneration in the flood zone. This is very useful for getting through the coming dry season.*
- *The community has learnt how to turn potential disaster into opportunity".*



Local innovations in livelihoods and risk management

- Using seasonal forecasts & advisories, agro-pastoral communities in Garissa County, are adopting agro-forestry with fruit trees to:



- **Protect their farms** from crop loss due to flooding of the nearby River Tana
- **Improve nutrition** from consumption of fruit
- **Generate income** from fruit produce which is fetching relatively higher prices in the market compared to other agricultural produce

Communication Challenges

- Who really accesses the information?
- Mobile phones, radio access is different by gender and location, radio airtime expensive
- Forecasts in English, technical language, hard to interpret, need for 'responsible' comms
- 'Translation' to practical advisories and adaptation messages and local languages – actors, innovation needed
- Systems and motivation for broad climate communications for practical use
- Feedback loops between users and providers – communication not just dissemination
- Studies ongoing
- Need for innovations!



Further work

For climate information to support continuous adaptation and resilience to climate variability & change, and related uncertainty, there is need for:

Innovative communication systems

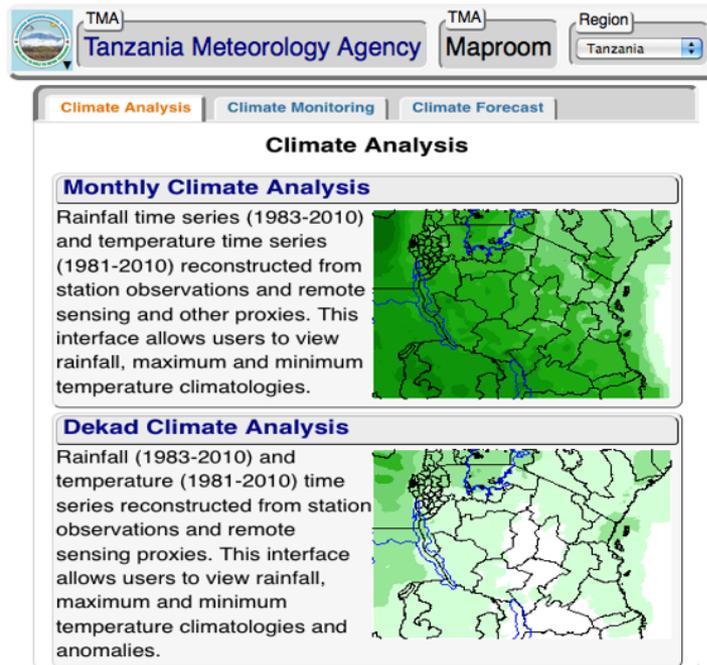
- For climate, agricultural, market & other information with thinking of differentiated access, wider reach

Systems for user feedback

- Inform generation of responsive/ tailored climate information products and uncertainties

Improved access and use

- Reliable, downscaled climate data e.g. ENACTs

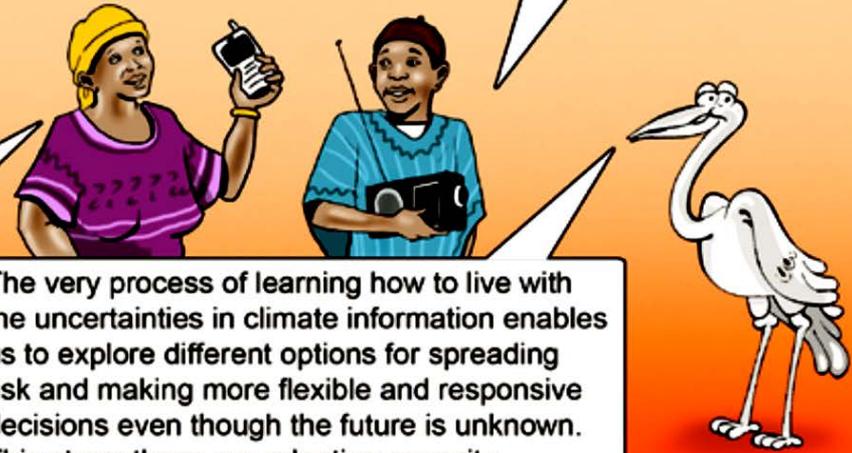


Thank You!

But how can such an uncertain forecast be useful when it did not say exactly what will happen?

The seasonal forecast helps me plan ahead knowing there is always some opportunity and some risks. I consider a variety of options, and use available updates like the weekly SMS updates and radio weather forecasts to decide on timing of day to day actions. I am also experimenting with different farming methods and getting help from the Ministry of Agriculture.

The very process of learning how to live with the uncertainties in climate information enables us to explore different options for spreading risk and making more flexible and responsive decisions even though the future is unknown. This strengthens our adaptive capacity.



Adaptation Learning Programme (ALP) <http://careclimatechange.org/our-work/alp/>

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Useful resources

Facing Uncertainty: the value of climate information for adaptation, risk reduction and resilience in Africa - <http://bit.ly/1KqxH2b>

Joto Afrika Special Issue 12 on Climate communication for adaptation: <http://bit.ly/1xdHT6M>

PSP brief: http://www.careclimatechange.org/files/adaptation/ALP_PSP_Brief.pdf

Building resilience to climate change and enhancing food security in north eastern Kenya <http://bit.ly/1yF1cJj>

ENACTS https://iri.columbia.edu/wp-content/uploads/2013/07/ENACTS7_10v2.pdf

ALP is supported by

