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MULTI COUNTRY PROGRAMME ON CLIMATE INFORMATION FOR RESILIENT DEVELOPMENT AND ADAPTATION TO CLIMATE CHANGE IN AFRICA (CIRDA)

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Roundtable on Strengthening Development of Weather, Climate and Hydrology Related Early
Warning Systems in Africa

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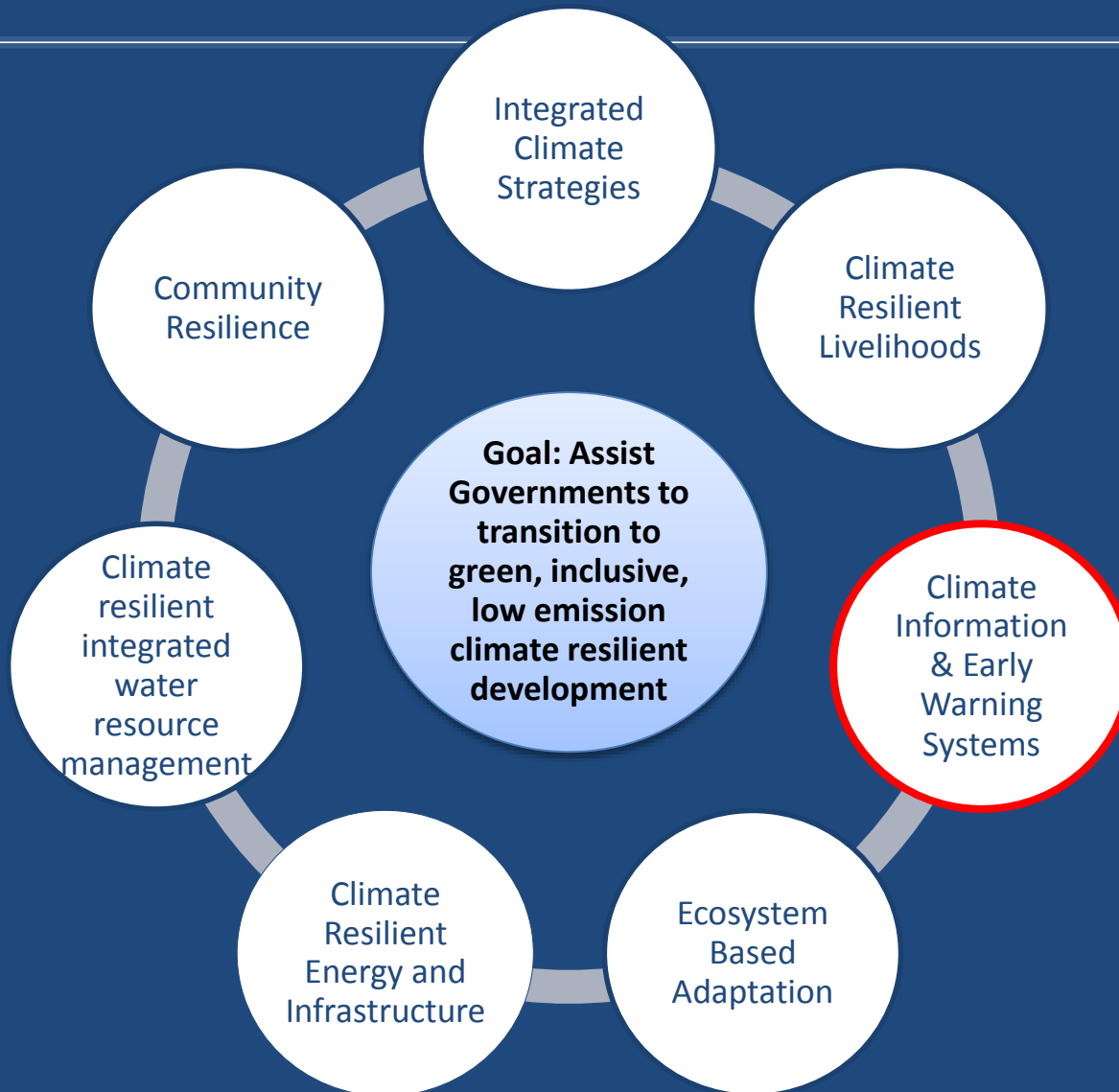
UNDP Supported Portfolio on Adaptation

Among UN agencies, UNDP implements the **largest share of projects** supporting concrete adaptation actions in developing countries

- Total project portfolio: over **\$USD 750 million (Grants)**
- Leveraged more than **\$2 b** in co-financing
- Projects/programs in 90 countries on climate change adaptation
- **Supporting Least Developed Countries- A priority**



UNDP Programming Portfolio: UNDP-GEF Signature Programmes



UNDP-GEF Signature Programmes: CI and EWS

Supporting the development of CI and EWS to countries respond to both short-term/rapid onset climatic hazards, as well as long-term/slow onset change

Rapid transfer and deployment of weather, climate observation and prediction technology

Strengthen human and financial systems

Improve the way information is used for planning, including risk knowledge, monitoring and predicting, disseminating information and responding to warnings





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Why Invest in Climate Information for Resilience and Adaptation



Climate data is essential for planning adaptation to climate change – and therefore contributes to economic growth, human health, and poverty reduction

- Data must be: accurate, comprehensive, timely, and consistently maintained
- Identify and analyze current and future climate risks
- Assess climate vulnerabilities
- Identify adaptation options in all development sectors
- Develop and implement longer-term national adaptation plans
- Integrate climate into national, subnational and sectoral planning
- Allow vulnerable communities and stakeholders, including farmers and businesses, to make informed decisions, achieve resilient development, and adapt to climate change
- Provide key information for Early Warning Systems

UNDP-GEF SUPPORTED CLIMATE INFORMATION AND EARLY WARNING SYSTEMS PROJECTS / PROGRAMMES

As of November 2013



FUND SOURCE

- AF
- LDCF
- SCCF
- SPA

FOCUS AREAS

HAZARDS

- D Drought
- EX Extreme Events
- FL Flood

SECTORS

- A Agriculture
- C Coastal
- F Forestry
- H Health

TYPES OF INTERVENTION

- C Communicating EWS information
- Y Community or public engagement
- Y EWS infrastructure establishment (soft & hard)
- M Mainstreaming (national, local plans, budgets, etc)
- M EWS infrastructure maintenance
- P Private sector partnerships
- R Risk knowledge and information generation and/or monitoring
- S Skills training (i.e. forecasting)

Albania	S	DRC	C A C M R	Mozambique	D	Suriname	FL
Angola	FL D C	Equatorial Guinea	Y	Myanmar	C	Swaziland	A Y
Armenia	M	Eritrea	Y	Nepal	FL	Tanzania	C M M S
Azerbaijan	FL Y	Ethiopia	D FL C M R S	Pakistan	FL Y	Timor Leste	Y
Bangladesh	EX Y	Fiji	D FL C S	Papua New Guinea	C FL	Tunisia	FL R
Benin	C M S	Gambia	C Y I R	Philippines	M	Tuvalu	FL C Y S
Bhutan	FL Y M	Georgia	M	Rwanda	Y S	Uganda	Y M M S
Burkina Faso	C M S	Guinea	M	Samoa	A F C H R S	Uzbekistan	D I
Burundi	C R	Guinea-Bissau	M R	Sao Tome & Principe	P C M R S	Vanuatu	C
Cape Verde	M	Honduras	FL	Sudan	D R S	Zambia	C M M S
Colombia	Y	Liberia	C FL A H P M			Zimbabwe	D
Cook Islands	R	Malawi	C M M R S			Global Health	M R
		Mauritius	C Y R			Global NAPS	M

CIRDA: Where and What

11 countries-

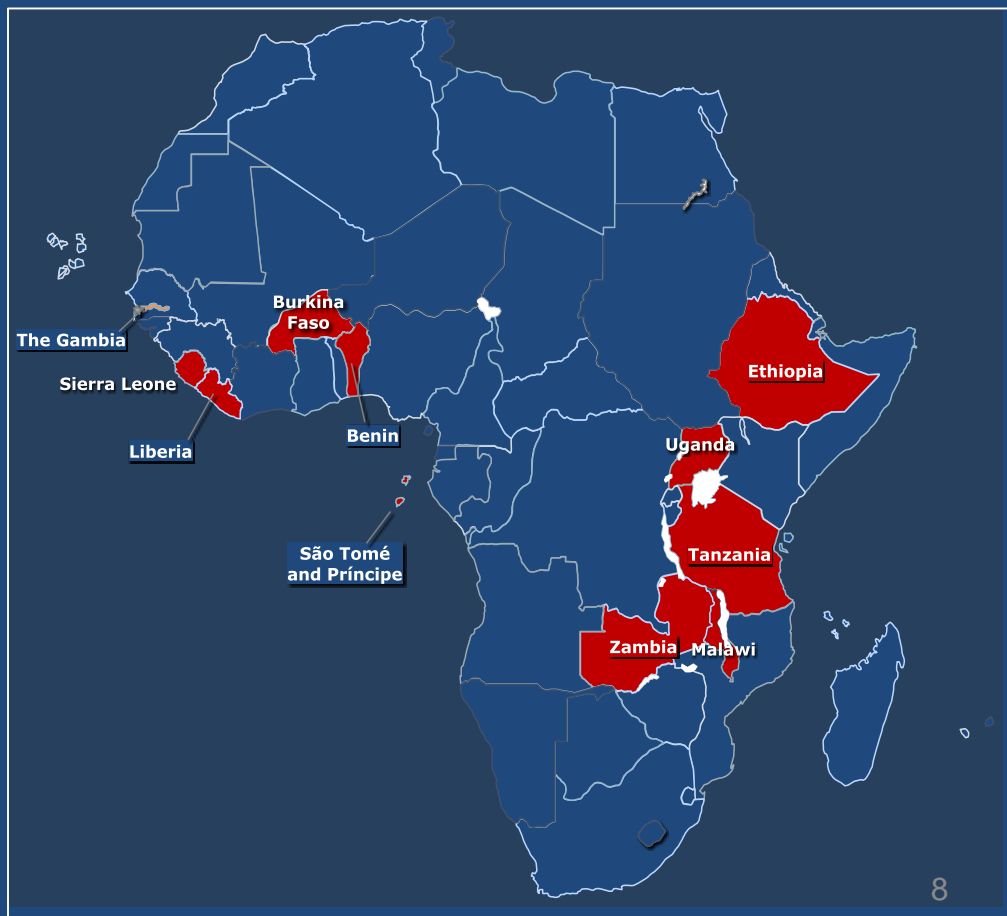
Benin, Burkina Faso, Ethiopia, Liberia, Malawi, Sao Tome and Principe, Sierra Leone, Uganda, Tanzania and Zambia (Gambia is joining now)

Programme Cost

- USD 50 Million for National Projects
- USD 4 Million for Multi Country Component

UNDP-GEF Support will target on

- **Access to data and tech transfer**
- **Data interpretation**
- **Identify and reach end users**
- **Mainstream/integrate data into development planning (NAPs)**
- **Formally include a role for the private sector**



CIRDA National Projects in Africa

Tackling a variety of hazards (mostly drought, floods and coastal), sectors and approaches, CI/EWS activities are part of a package of measures

Benin

- Weather and seasonal forecasts
- Insurance and cotton farming sectors
- Institutional coordination committee

Burkina Faso

- Open access portal for agencies
- Develop PPP for communications

Ethiopia

- Installing met/hydro equip at sites
- Upgrade satellite monitoring equip

Liberia

- Building human capacity
- Training for O&M

Malawi

- Revenue streams for DCCMS
- Standardise SOPs for communications

Sao Tome and Principe

- Community EWS at 5 sites
- Flash flooding and coastal storms

Sierra Leone

- Establish community radio in 3 pilot areas
- Capacity building of the met department

Tanzania

- Crowd sourced hazard feedback system
- Sustainable financing plan
- CC planning for Liwale and Meru districts

Uganda

- Integrating data from DoM and DWRM
- SMS and SOPs for Mt Elgon and Teso

Zambia

- SMS systems Chipata, Gwembe, Sesheke
- DMMU, MAL, DWA, ZESCO coordination

General Challenges

- Limited operational budgets directed to NHMS
- Insufficient coverage to monitor the current state of the climate and hydrology, map risks and detect long-term trends;
- Technologies can be inappropriate for the country or maybe too big of step for the NHMS (difficult and expensive to maintain, not adapted to national needs or realities)
- Lack of supporting technical infrastructure within the NHMS and the nation
- Limited human resources and difficulty retaining qualified staff
- Lack of a long-term sustainability plan for the climate information system
- Limited capacity to interpret, package and communicate information in a manner appropriate to different sectors
- Use of conflicting information
- Lack of institutional coordination and information exchange
- Absence of regional cooperation

Specific Challenges

Meteorological Systems

- Observations often related by phone
- Automatic stations may not always be practical (limited GPRS coverage)
- Incompatibility of equipment from different manufacturers
- Calibration of equipment lacking
- Radar only covers small regions and is costly
- Satellite receiving equipment in disrepair or data is inaccessible

Institutional

- Data collectors receive limited incentives to report data regularly
- Limited facilities for receiving and archiving data
- Limited national capacity for implementation
- Limited budgets for hiring new staff

Dissemination

- SMS systems require operational budgets
- Centralised facilities for issuing warnings not always functional
- Forecasts not useful (not adapted to specific sectors)
- Inappropriate media to communicate

CIRDA Opportunities

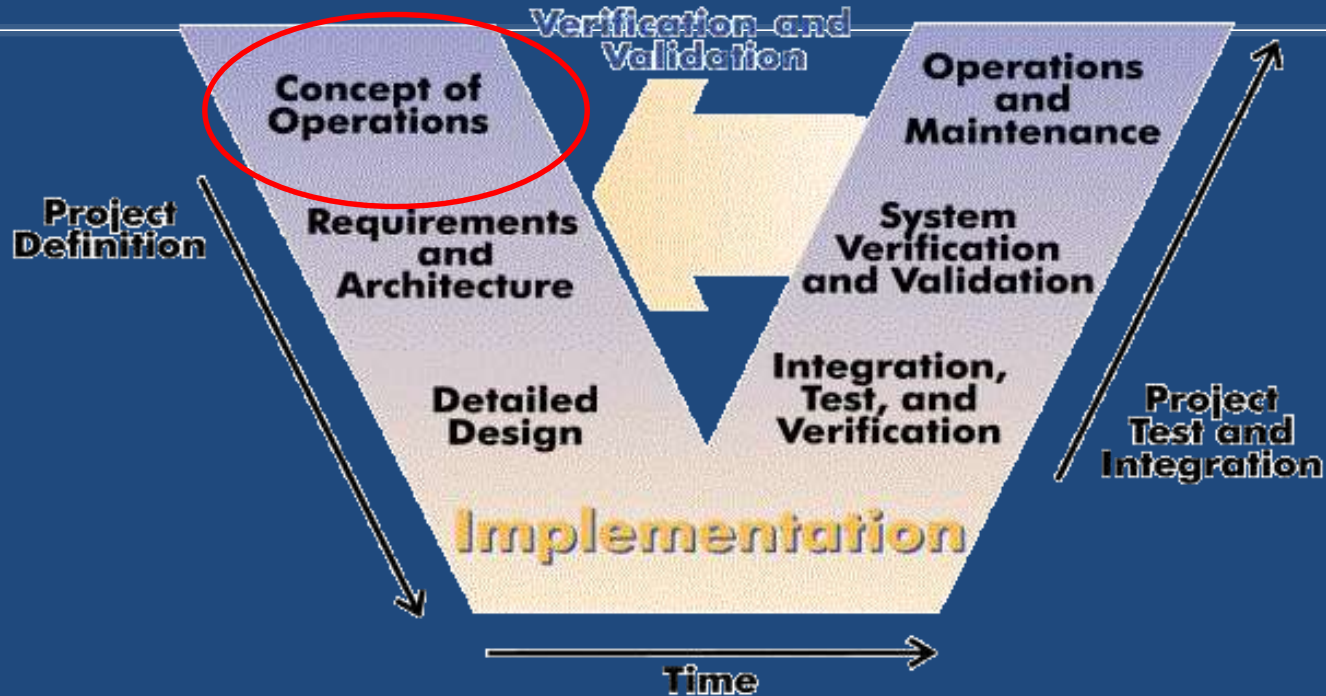
- Cooperation and support (regional and multi-country) – climate information should not be limited by national boundaries
- Identify multiple steps to be taken – from the generation of data to its utilization by the end-users (including co-generation of information)
- Explore opportunities created by innovative technologies (soft and hard) and new means of communication (e.g. cell phones)
- Multi-stakeholders involvement – governments lead but they cannot do it alone
 - The private sector has technologies, expertise, and resources to respond to climate risks – PPPs generate revenue and make climate systems more sustainable
 - Civil society works at a community level and is key to adaptation

Climate Information for Resilient Development and Adaptation to Climate Change in Africa CIRDA (Multi-Country)

WHAT => CIRDA is a support programme that strengthens the capacity of African vulnerable countries to access, disseminate and use reliable climate information for resilient development and adaptation



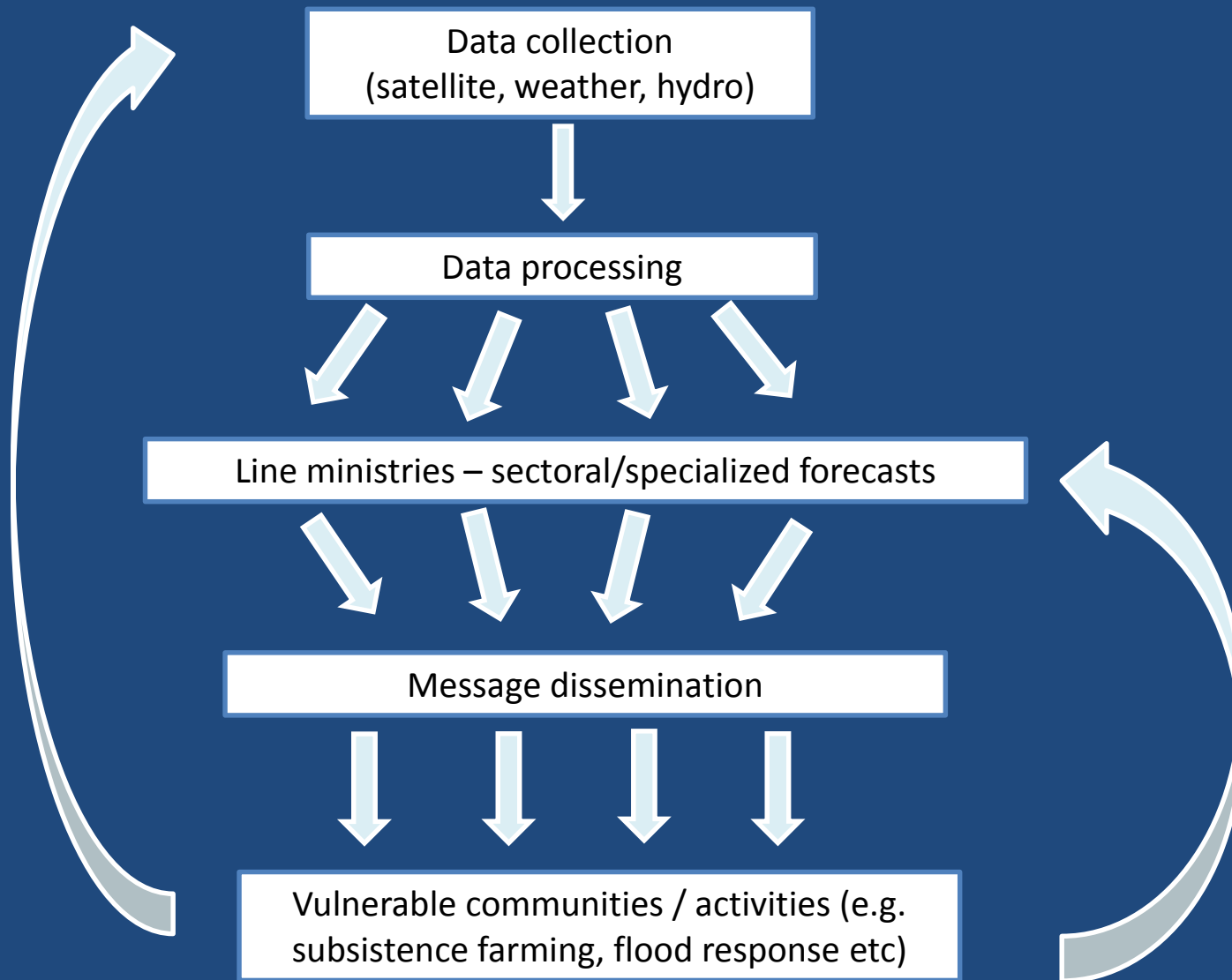
CIRDA Programme Approach



Develop the “Concept of Operations”

Specify exactly what data are required to provide the desired outcome (expressed in terms of meteorological and climatological products and services delivered to end users)

Concept of Operations



Step 1: Identify End Users and Needs

Governments need to incorporate climate information into planning decisions

Farmers need CI tailored to local crops and conditions

Vulnerable local communities (EWS)

Utilities require both weather and climate data for managing power generation (especially hydro) and forecasting demand

Water intensive industries depend on water supply and competition from urban consumption; impacts are direct (drought, groundwater depletion) and indirect (Coca Cola)

Financial sector is becoming aware of investment risks

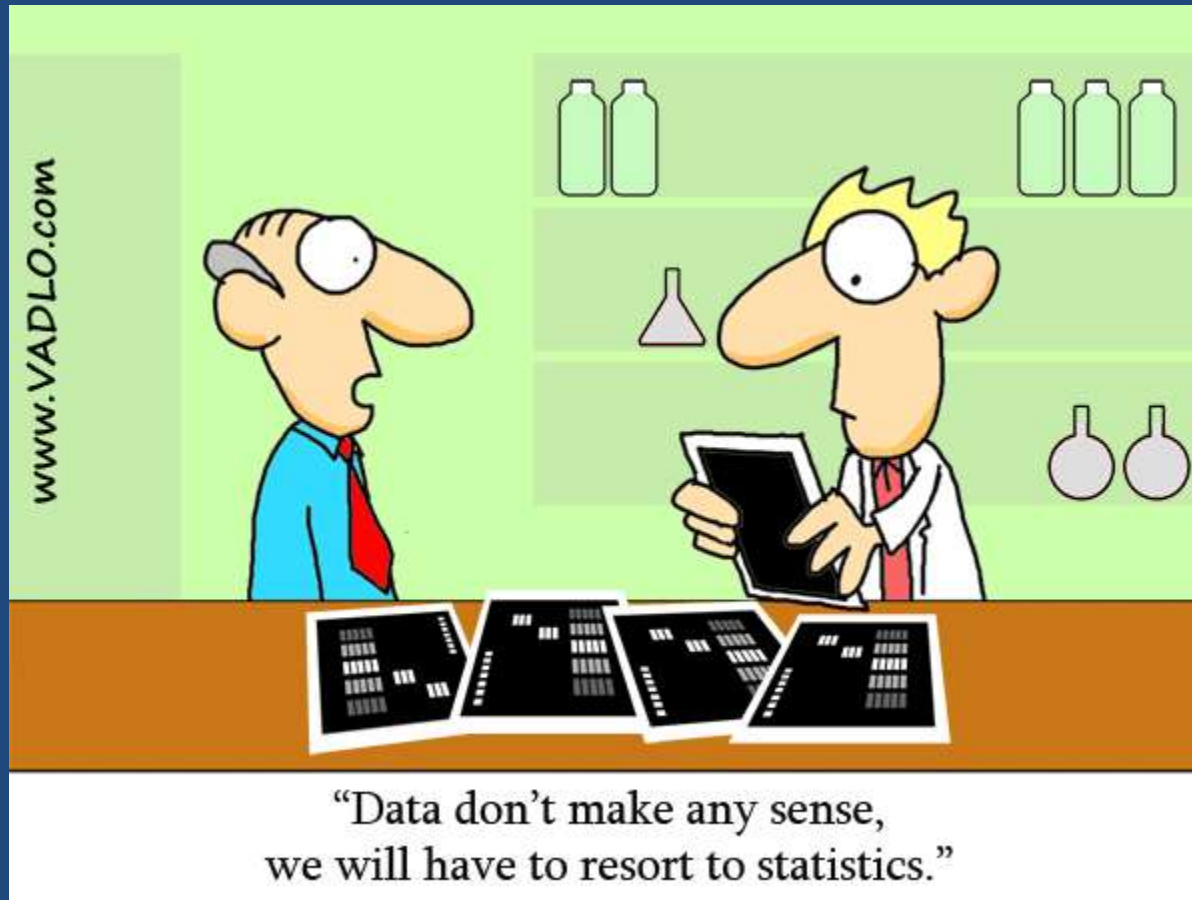
Insurance companies are particularly aware of the importance of climate modelling when making business decisions

Aviation has specific requirements for airports; private and small commercial aircraft depend on good weather reports

Step 2: Identify the right means for Communication



Step 3. Data Interpretation



Collecting data is not enough. Interpretation and analysis is key to package the information so end-users can use it

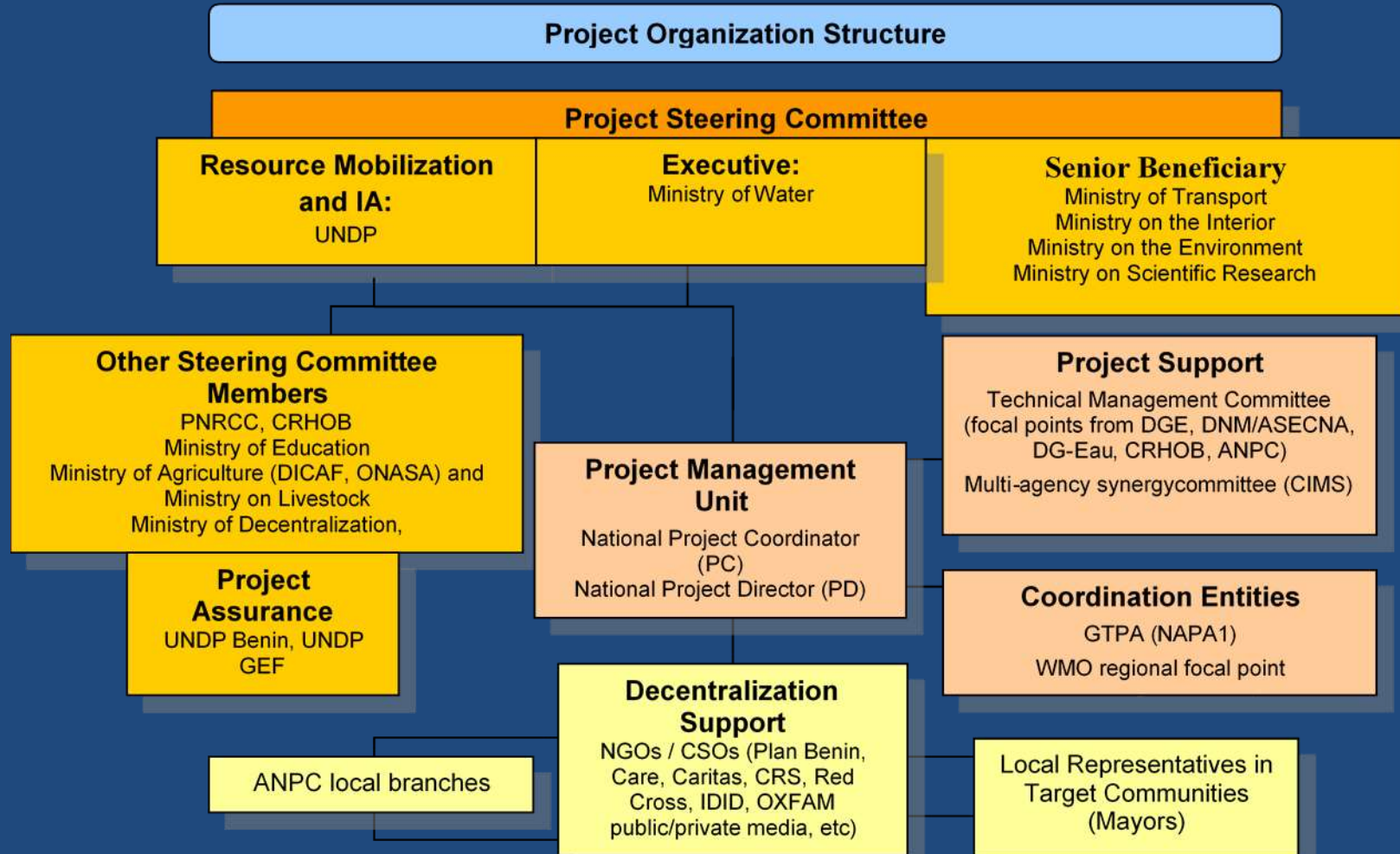
Step 4: Appropriate Technologies and Innovative Solutions

Potential of non-traditional approaches (University of Oklahoma)

1. Leveraging cellular phone systems to address coverage
 - Cell tower sites provide communications, power, security, trained technical support staff, profit-driven incentive to stay up, and potential revenue stream
 - Can create partnerships for dissemination of climate information to end users
2. Explore new generation of sensing systems that apply novel technological approaches to meteorological observations (lightning location, signal attenuating systems and crowd sourced cell phone observations- barometric readings)
3. Software and soft tech to collect and process data and communicate info



Example national project management structure - Benin



Public-Private Partnerships Support Weather and CIS

- Experience in African LDCs with PPPs for infrastructure, power generation, and telecommunication
 - Hospitals in Nigeria and Lesotho
 - Port infrastructure in Benin and Madagascar
 - Privatization of telecoms in Uganda and Kenya
- Expertise, capital, and, when appropriate, a profit-driven approach to delivery of public services
- PPPs do NOT require a loss of national ownership
- Particularly useful in a time of rapid evolution in technologies
- Developed countries have experience with partial privatization of weather and climate services – 20 to 40% of budgets
- Technical and financial support sometimes available from IFIs/donors

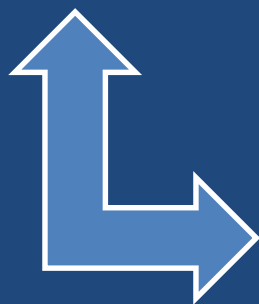
Look to an Integrated Approach to Adaptation

CC mainstreaming:

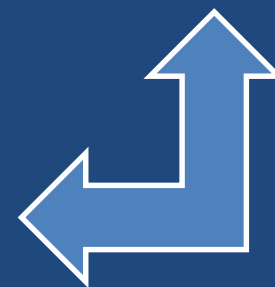
- national and sectoral policies
- **MET Services, Climate Early Warning and Info Systems**
- Institutional capacity building



Implementation of
Adaptation
on-the-ground measures



Knowledge management



- Building of capacity of MET services to provide tailored climate info services
- Building of capacity of sectoral users at different levels to interpret and apply climate information (policy makers, planners, technical officers and practitioners)
- Supporting policy mainstreaming and community-based adaptation interventions



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THANK YOU

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