Lessons Learned in Implementing Support to Climate Information Systems

Multi Country Programme for Climate Information and Resilient Development and Adaptation in Africa (UNDP- CIRDA)

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Lusaka, Zambia
Information for Adaptation

Lack of actionable weather and climate information is a major cause of low adaptive capacity in Africa.

Information must be accurate, comprehensive, timely, and consistently maintained (sustainable).

Information must be communicated and tailored to end users (policy makers, communities, etc.).

**UNDP approach to climate information in Africa has been designed in response to African LDCs’ recognition that adaptation can not be achieved without reliable climate and weather information**

Availability of Synop reports received at MTNCs from RBSNs

Monitoring activities coordinated by WMO Secretariat
An end to end approach allows for all steps in an EW and CI Systems to work seamlessly and efficiently for informed decision making.
New and more cost efficient technologies can provided high quality climate and weather observations and leverage mobile communications networks.

Images from the site installation in Uganda: Sensors were installed on Mobile Telecommunications towers, guaranteed power, security an communications.

Integrated Lightning sensor with all in one AWS
- Temp / Humidity
- Pressure
- Wind Speed / Dir
- Solar radiation
- Separate Automatic Rain-gauge
Data and information can be easily shared via the cloud, opening up the possibility for product development.

Real Time Network view (Liberia)

Real Time Product view (Sierra Leone)
Cloud-based software solutions that:

• Merge data from different hydrological and meteorological observation systems (automatic & manual)

• Inclusion of satellite products reduces reliance on in-situ observation systems (O&M)
  • satellite altimetry for river level monitoring
  • satellite derived soil moisture and evapotranspiration mapping

• Hydrological early warnings
  • Agricultural droughts, Hydrological droughts, Riverine flooding

• Water allocation planning module

• Visualization, information sharing (API)
Financial and operational sustainability is a major challenge to the delivery of CI and EWS -- particularly to the poorest and most vulnerable. Partnerships with private weather companies can help.

- Private providers of weather observation/forecasting/ communication -- growing market reality.
- Multiple companies offer support to NHMSs and services to vulnerable populations -- while preserving Met Service role and authority.
- Revenue sharing opportunities from tailored weather services (eg aviation, agriculture, etc.) can support NHMSs

Partnerships will contribute more broadly to sustainable development goals and ensure long term sustainability.
Last Mile support

Reaching users with information that is accessible, actionable and relevant

- HNI 3-2-1 service in Malawi
- First steps into PPP climate information marketing efforts in Liberia, Sierra Leone, Uganda
- Workshops on private sector development, PPP’s, joint product development
- Market studies to assess potential
- Engagements with mobile providers

Climate Action Hackathon

- 2016 Zambia
- 2017 Uganda Hackathon (in cooperation with UCC)
Lessons Learned for Project Development

- **Timely, reliable, and localized weather and climate information is increasingly available**
  - a combination of low cost automated weather stations, satellite systems, and traditional equipment - can reach users through cellular and other services

- **Support for hardware procurement is necessary but not sufficient**
  - an end-to-end approach providing for maintenance, ongoing training/staff development, and “last mile” communication is essential.

- **Market studies show weather information has substantial commercial value**
  - particularly if aggregated regionally – but most African NMHSs still lack the capacity and data quality required

- **The potential for innovative public-private partnerships to deliver weather and CI services has great potential to contribute in Africa**
  - Many proven models from other parts of the world
  - a wide range of potential partners exist including private weather companies, cell phone companies, and NGOs (e.g., the “3-2-1” service from HNI)

- **Sustainability is key to ensuring long term impact and NMHS capacity to provide the ongoing services needed**
  - Revenue sharing is a partial answer to this need and public budget support for high quality weather services will be easier to obtain
  - Providing the public and private sector with timely, accurate and actionable weather, water and climate information products will help strengthen the relevance NMHS’s into the future.
Thank you

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