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# Needs for research and systematic observation in LDC's

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# Outline

- Context
- Gaps for research and systematic observation
- Research needs and priority actions
- Needs relevant to **agriculture**

# 1 - CONTEXT

- The LDC's are **most vulnerable** to climate change (Drought, Floods, etc)
- More than **20% reduction** of rainfall
- Severe **reduction in duration** of rainfall season, particularly in Sahelian countries
- The priority of LDC's is to **adapt** on climate change
- There is a need to **reinforce** research and systematic observations in LDC's

## 2 - Gaps for research and systematic observation

- Lack of data collection networks (weather and environmental) and insufficiency of data available, including satellite data
- Insufficiency and high cost of equipment
- Lack of information and assessment on intensity and frequency of extreme events (floods, drought, rainfall etc.)
- Lack of quantification of seasonal forecasting
- Local forecasting very limited
- Absence of downscaling models
- Insufficient expertise

### 3 - Research needs and priority actions (1)

- Strengthen the **weather network to collect scientifically appropriate data**
- Build capacity of experts and **facilitate access to satellite data**
- Improve **localisation** of daily **weather forecasts** (District level, village level etc.)
- Capacity-building to elaborate weekly **forecasts**
- Quantification of **seasonal forecasting**
- Development of **downscaling models** to **improve climate change scenarios** at country level in LDC's
- Study the **intensity and frequency of extreme weather events** (floods, drought, rainfall etc.)
- Facilitate **exchange of experiences**, build capacity on **GIS**

### 3 - Research needs and priority actions (2)

- Build capacity of existing regional research centers in LDCs
- Enhance GCOS activities and other relevant observation activities
- Strengthen the linkages with existing research organizations and institutions
- Strengthen financial support for research in LDCs
- Improve early warning systems for agricultural production
- Implement communication strategy on international, regional and national level, taking into account traditional knowledge
- Facilitate technology transfer to manufacture cheaper equipment locally
- Study the relationship between climate and health for early warning system
- Study air pollution
- Encourage and promote the training of young scientists, including women

## 4 - Needs relevant to agriculture

- **Planning** agricultural activities taking into account weather information and climate change (**seasonal and weekly weather forecasting**)
- Development of **adapted crops cycle**
- Assessment of **onset** of the rainy season
- Assessment of **end** of the rainy season
- **Dates assessment** for ploughing, seeding, etc.
- **Frequency of dry period** assessment and estimation of the rainy season
- Assessment of periods for **appearance of crops diseases**
- Enhance research for development of **'cloud seeding'...**

THANK YOU