



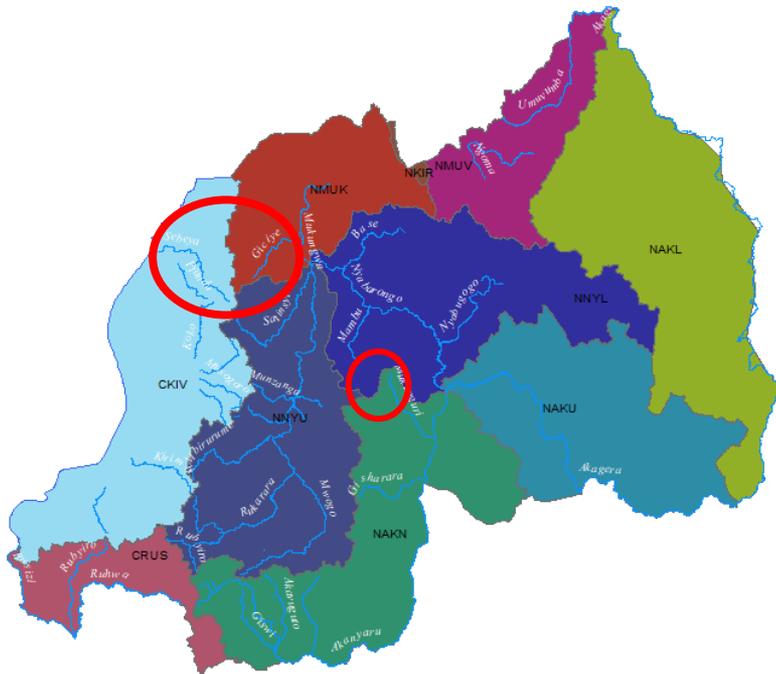
# Flood management and forecasting

Davis Bugingo



# Flood Prone Areas

## Rwanda : Catchments Level 1



### Legend

— Rivers

0 5 10 20 30 40 Kilometers

Congo River Basin in the South west

- Congo Kivu
- Congo Rusizi

Nile River basin in the North-East  
Under Nile Basin;

- Nile Nyabarongo Upper
- Nile Nyabarongo lower
- Nile Mukungwa
- Nile Akanyaru
- Nile Akagera Upper
- Nile Akagera lower
- Nile Muvumba



# Disaster zones in Rwanda



**North:** Flashflood, landslide

**Central :** Flashflood, Landslide

**South and West:** Flood, Landslide, Lightning

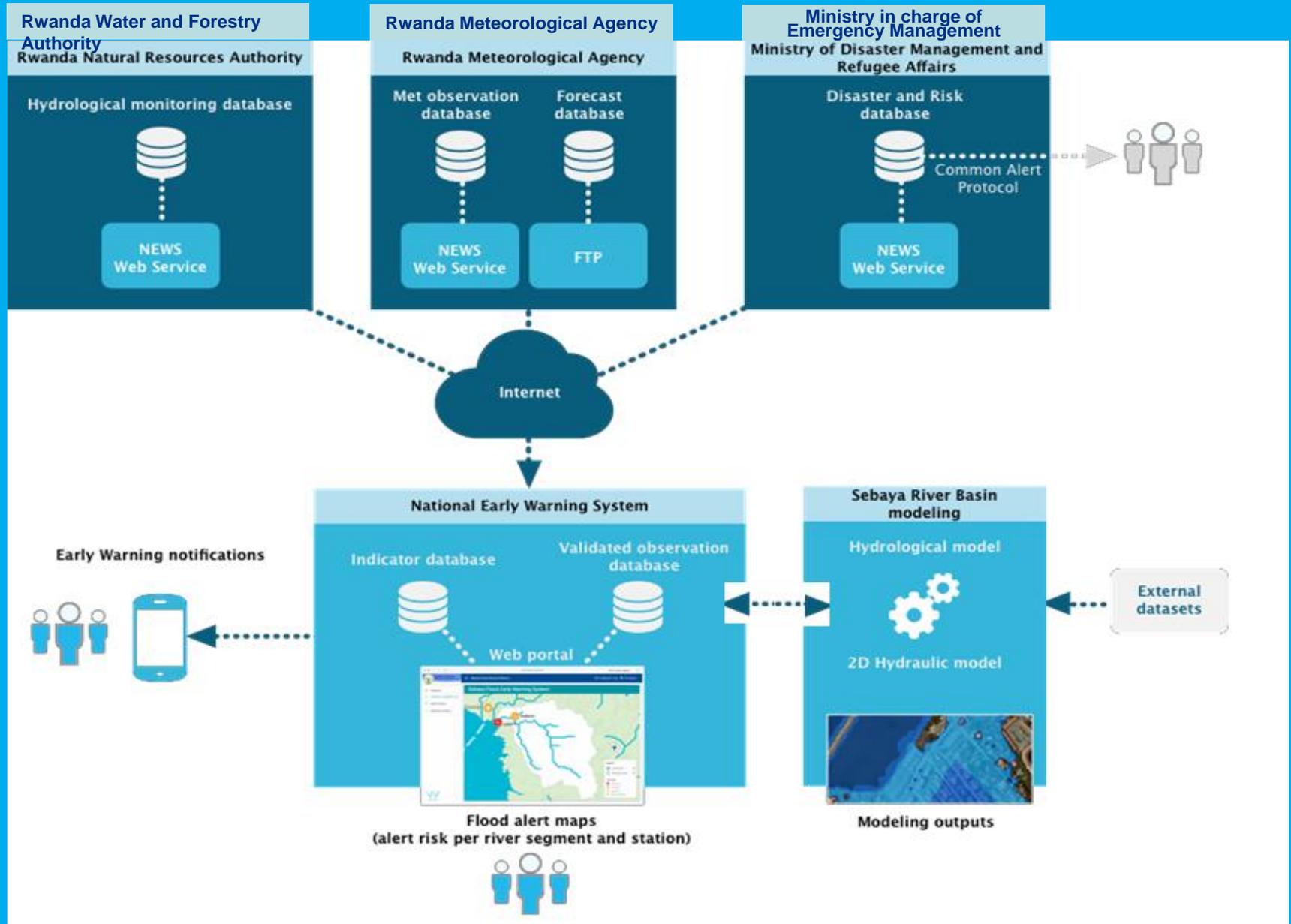
**East:** Drought, Windstorm



# What has been done in Flood Management?

- ❑ **Conducting the flood studies: Nyabugogo, Volcanoes Region, Sebeya and Masaka wetlands**
- ❑ **Implementations of some study finding (Nyabugogo Areas)**
- ❑ **Maintenance and dredging of curverts and drains in the City of Kigali**
- ❑ **Development of Flood Early Warning Sytem in Sebeya River Catchment;**

# CONTEXT: THE NEWS / FEWS FRAMEWORK



# Main challenges ahead

- Rapid urbanization and large-scale urban extension leads to accelerated runoff;
- Population growth, the need for enhanced economic activity and the construction of infrastructure apply considerable pressure on the natural system and increase the damage potential on flood plains;
- Climate change tends to intensify the hydrological cycle, potentially resulting in increase in magnitude and frequency of extreme flood events or changes in the seasonality.

