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Project Design Matrix Lao PDR

Bounteum SYSOUPHANTHAVONG

MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT (MONRE)

DEPARTMENT OF METEOROLOGY AND HYDROLOGY (DMH)

Background

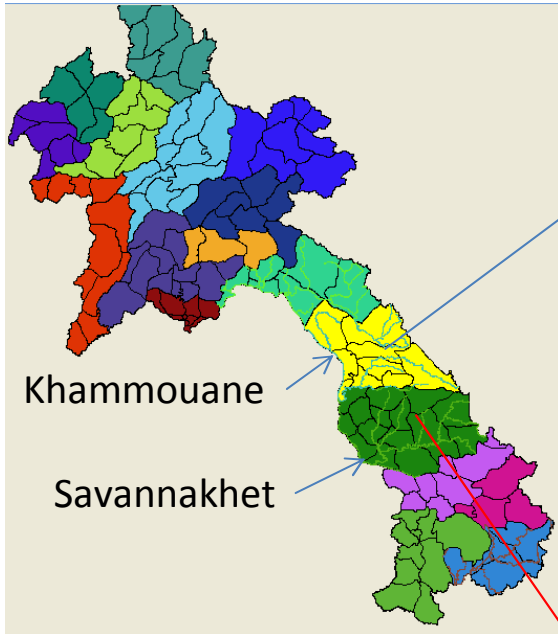


- Floods and drought are very common natural disasters;
- Floods have the greatest macro-economic impacts;
- Flood mostly affected Central and southern parts: big floods reoccurred of one every 1.5 years

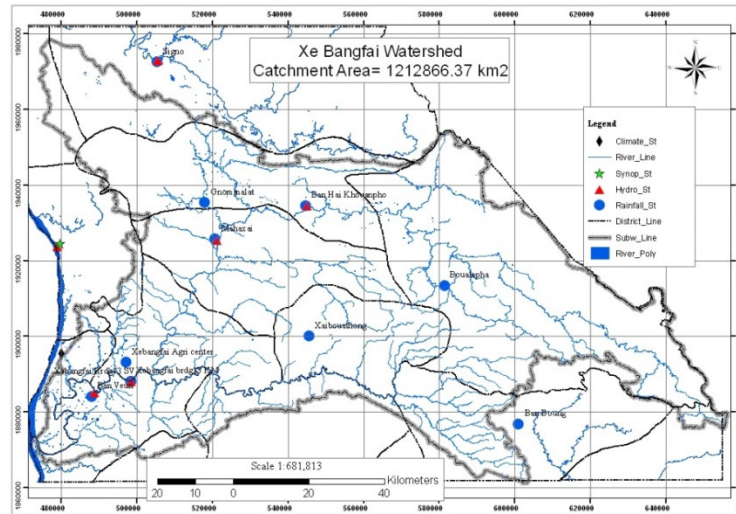
- In the past 10 years, there is some signal of climate change: increased number of hot day; decrease number of rainy day but increase intensity; tropical cyclones increase frequency and intensity

- **Goals:** Reduction of natural disaster by using meteorological and hydrological forecasts and early warning system in Lao PDR.
- **Project purpose:**
 - **2 river basins: Xebangfai and Xebanghieng**
- **Project out put**
 1. Demonstrate quantitative and qualitative improvement of weather and water cycle observations.
 2. Demonstrate flood and drought early warning capability.
 3. Assess climate change impacts on floods, droughts and water-nexus.
 4. Prototype data and information and sharing systems.
 5. Improve observational, modeling and application capacity

Project Area



Xebangfai River Basin

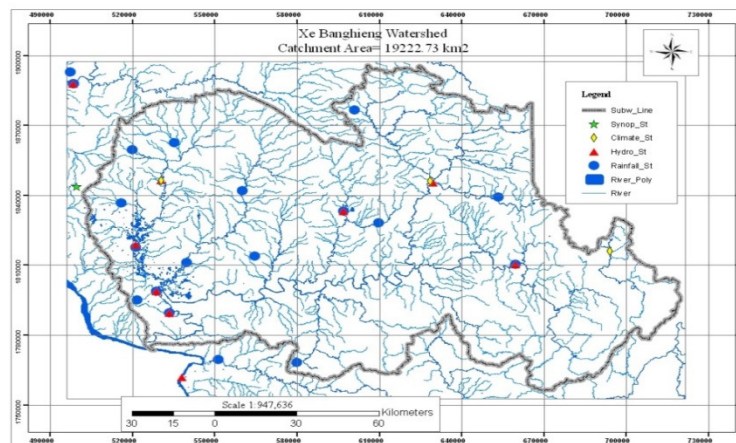


Current status

- Synoptic: 1
- Climate: 1
- Rain gauge: 10
- Hydrology: 6

Manual System

Xebanghieng River Basin



- Synoptic: 0
- Climate: 3
- Rain gauge: 19
- Hydrology: 7

Manual System



Data Exchange

Activities

- Modernize the observation networks in the Xebangfai and Xebanghieng River basins, which includes re-habilitation, new installation and re-equipping of the hydro-meteorological network (Manual → Automatic (AWS))
- Improvement data communication system (Real time);
- Improvement the hydro-meteorological monitoring and forecasting system (NWP, Hydrology models) for the Xebangfai and Xebanghieng River basins to provide timely warning for hydro-meteorological events;
- Details for piloting an end-to-end early warning system in the Xebangfai and Xebanghieng River basins, including (i) the refinement and implementation of the existing SOP and the Early Warning Strategy of DMH; (ii) operational training of national, provincial, and district officials including drills with government stakeholders and communities to strengthen response to Early Warning bulletins;
- Improvements to sector-specific services for different sectors such as agriculture, media, civil aviation, energy, transport, health, and water resources taking into account current and potential requirements for weather, climate, and hydrological information products and services;
- Validation satellite data with actual data, and strengthening the cooperation with GEO

Concept Design for Hydro-met data exchange and Early warning

NEWC

