DROUGHT MANAGEMENT UNDER CLIMATE CHANGE IN THE LOWER MEKONG BASIN

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1. DROUGHT SITUATION IN THE LMB
2. DROUGHT MONITORING AND FORECASTING IN THE LMB
3. COORDINATION AND SUPPORT AMONG THE MRCS WITH MCs ON DROUGHT MANAGEMENT
4. CONCLUSION
1. Drought Situation In The LMB

- Drought frequently occurs in the LMB with more severity and higher magnitude causing serious economic impacts to agriculture, economics, environment, people’s livelihood, and other water related sectors.

- The most recent drought took place in 2010, 2015-2016, and 2029-2020.
1. Drought Situation In The LMB (Impacts In 2015-2016)

Impacts of drought on various sectors of MCs during 2015-2016
2. The MRC Drought Monitoring & Forecasting in the LMB

The MRC Drought Forecasting and Early Warning System (DFEWS):

- Weekly drought monitoring: using
  o The Standardized Precipitation Index (SPI)
  o Index of Soil Water Fraction (ISWF)
  o Combined Drought Indicator (CDI)

- Weekly and monthly drought forecasting: using
  o North American Multi-Ensemble Model (NMME)
  o Variable Infiltration Capacity (VIC)
  o SPI, SRI, SMA, and CDI forecasts
2. The MRC Drought Monitoring & Forecasting in the LMB

Weekly drought forecasting on MRC front page

Weekly drought forecasting on MRC DFEWS

http://droughtforecast.mrcmekong.org/maps
MRC also has the Reservoir Assessment tools (RAT-Mekong) which provide bi-weekly analysis of hydrological conditions of some potential reservoirs based on high-resolution satellite data.

The tools aims to assist both flood and drought management activities for MRC Member Countries.

https://portal.mrcmekong.org/map-service/rsat
3. Coordination & Support among MRCS with MCs

MRCS provides the following coordination and supports to MCs:

• Capacity building to MCs on drought monitoring and forecasting tools
• On-the-job-trainings to the MC’s Associate Flood and Drought Forecasters
• Support MCs in building new monitoring stations on drought indicators including hydro-met, salinity intrusion, groundwater, and soil moisture
3. Coordination & Support among MRCS with MCs

MRCS provides the following coordination and supports to MCs:

• Technical support to MCs on drought pilot study in the drought prone areas of MCs
• Development of drought adaptation guidelines to support the MCs on drought adaptation and mitigation.

Pilot site on rehabilitation of an agricultural pond in Kampong Cham, Cambodia
4. Conclusion

❖ The Lower Mekong Basin is one of the most vulnerable areas to climate change with more severity of flood and drought in the future.

❖ MRC needs to build more capacity to MCs on drought management and mitigation to reduce the impacts on agriculture, socio economics, environment, and people livelihood.

❖ Drought forecasting system is an extremely important element for the MRCS which needs to be enhanced from time to time to catch up with the advancement of technology in the future to be able to forecast the drought situation for early preparedness and planning.
THANK YOU

One Mekong, One Spirit.