

DROUGHT MANAGEMENT UNDER CLIMATE CHANGE IN THE LOWER MEKONG BASIN

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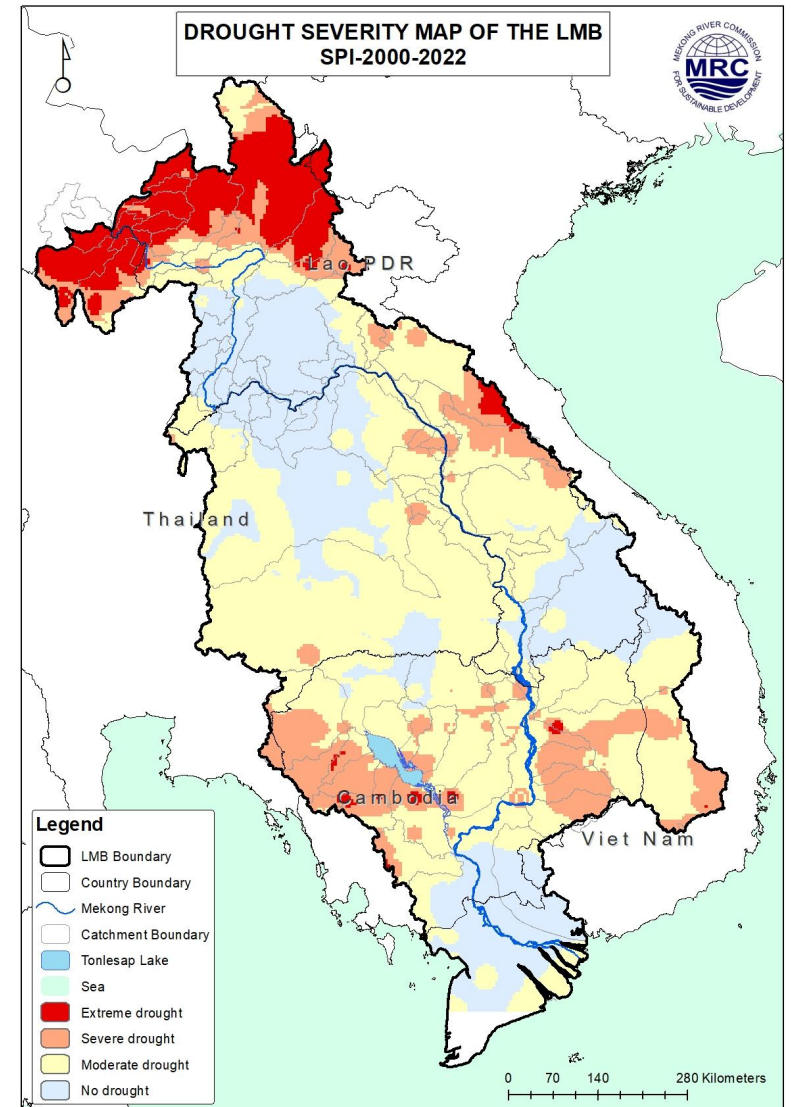


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- 2. DROUGHT MONITORING AND FORECASTING IN THE LMB**
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1. Drought Situation In The LMB

- 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)

Mekong overview

Mekong River Commission

Legend

- Capital city
- Major city
- Main river
- Water body
- Upper Mekong boundary
- Lower Mekong boundary
- CAMBODIA
- CHINA
- INDIA
- LAO PDR
- MYANMAR
- THAILAND
- VIET NAM

Map Information

Unit: degrees
 Spheroid: Everest
 Datum: Indian 1960

Prepared by BOP2, 2011
 Email: mrc@mrcmekong.org
 Website: <http://www.mrcmekong.org>

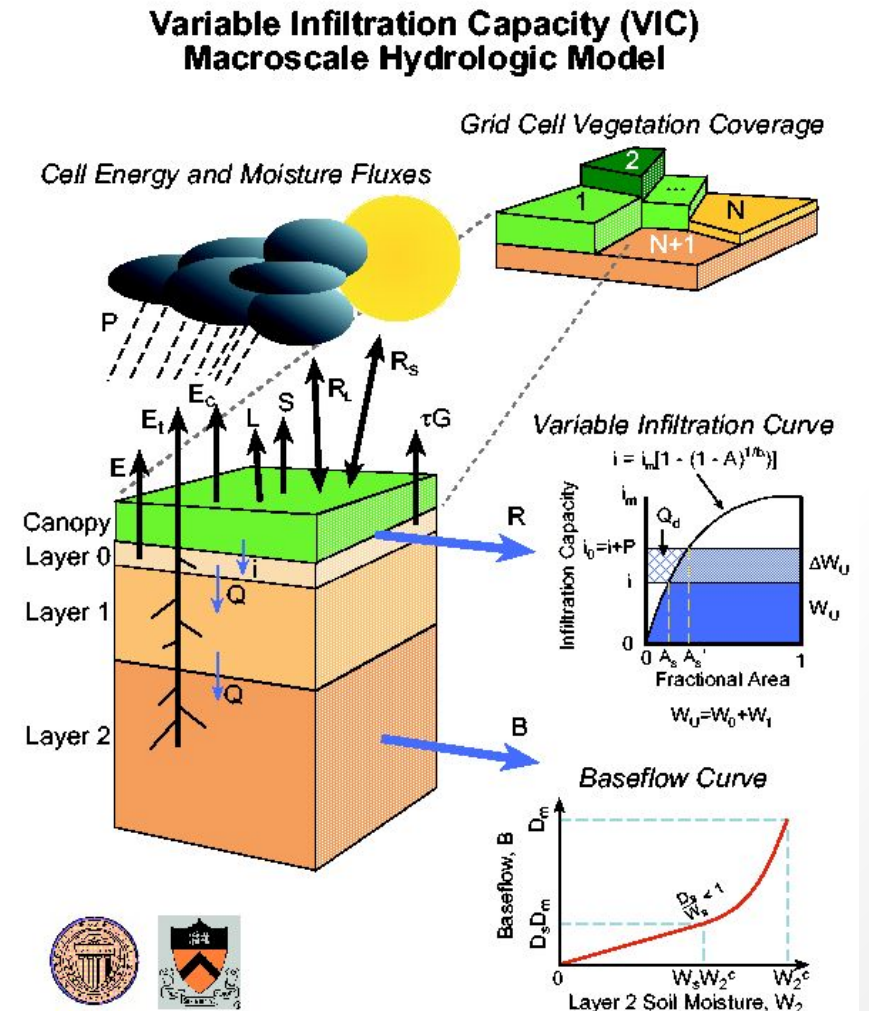
Sub-Sector	Original Source	Last Update
Country map	FAO/UNEP/WHO/WHO	2008
Major city	FAO/UNEP/WHO/WHO	2008
Major river	FAO/UNEP/WHO/WHO	2008
Water body	FAO/UNEP/WHO/WHO	2008
Upper Mekong boundary	FAO/UNEP/WHO/WHO	2008
Lower Mekong boundary	FAO/UNEP/WHO/WHO	2008
Political boundary	FAO/UNEP/WHO/WHO	2008
International boundary	FAO/UNEP/WHO/WHO	2008
Other boundary	FAO/UNEP/WHO/WHO	2008

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
 - The Standardized Precipitation Index (SPI)
 - Index of Soil Water Fraction (ISWF)
 - Combined Drought Indicator (CDI)
- Weekly and monthly drought forecasting: using
 - North American Multi-Ensemble Model (NMME)
 - Variable Infiltration Capacity (VIC)
 - SPI, SRI, SMA, and CDI forecasts



2. The MRC Drought Monitoring & Forecasting in the LMB

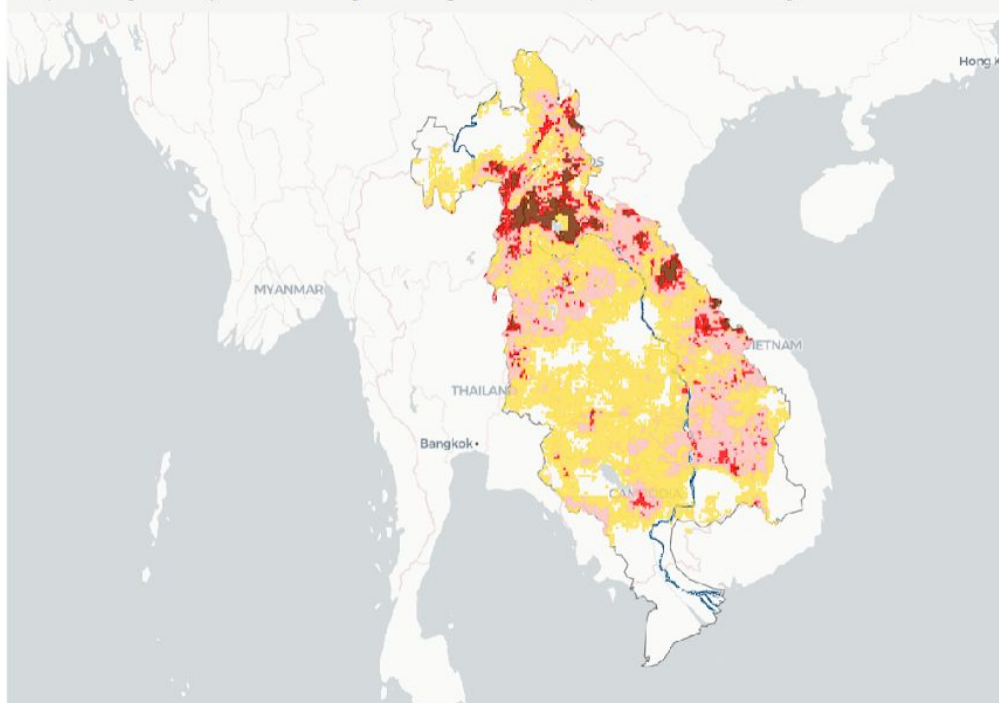
Weekly drought forecasting on MRC front page



Mekong river monitoring and forecasting

TODAY'S STATUS WEEKLY RIVER FORECAST LTA CHART FLASH FLOOD GUIDANCE **DROUGHT FORECAST** RAIN

From May 15 to 21, the LMB is forecasted to be abnormally dry over the LMB except the lower part of the region covering Mekong Delta of Viet Nam exceptional droughts are likely to hit the LMB during the forecasting week. The northern part is the driest area of the region.

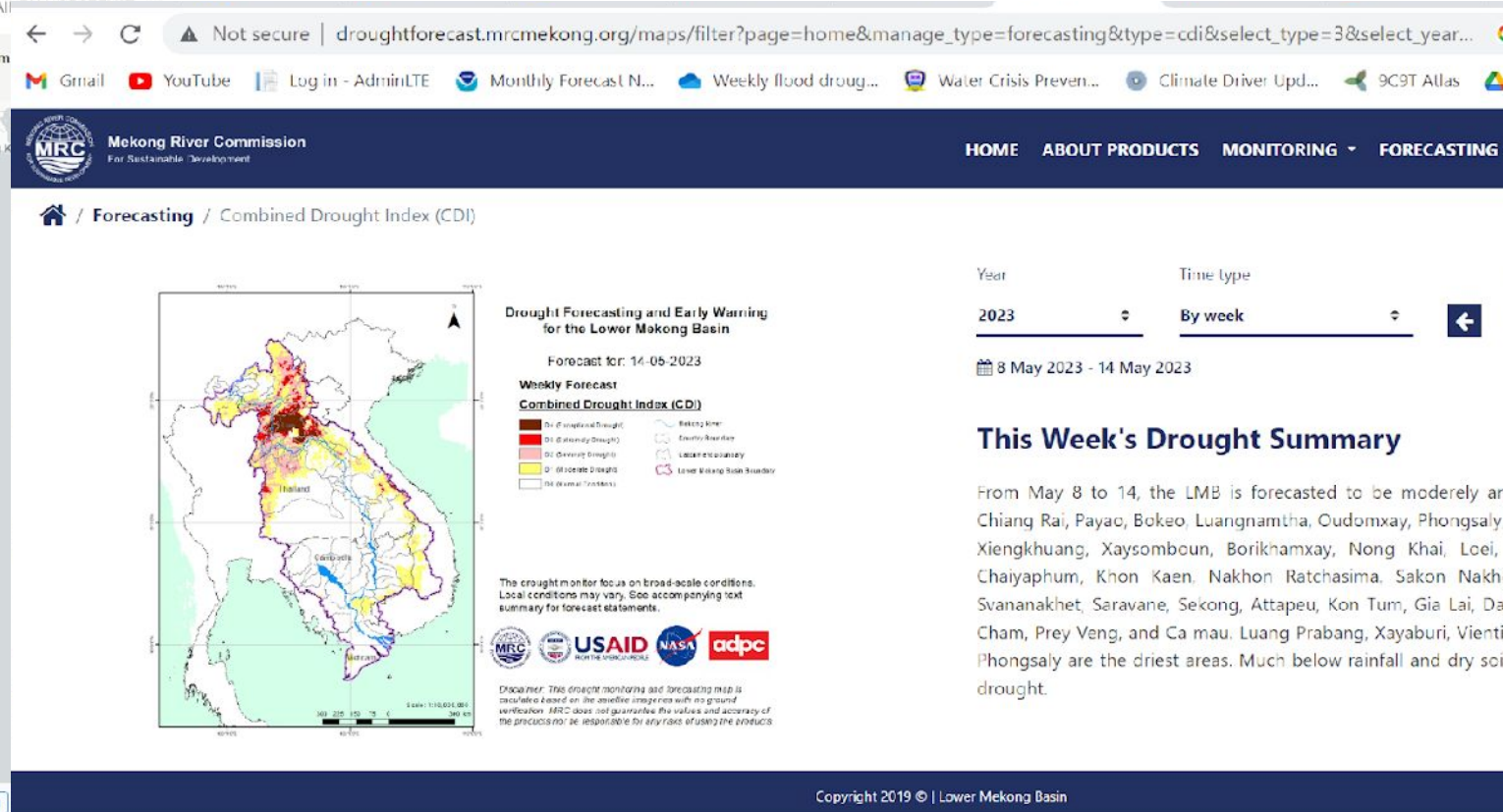


Drought Forecast website

How to read

Weekly drought forecasting on MRC DFEWS

<http://droughtforecast.mrcmekong.org/maps>



Mekong River Commission
For Sustainable Development

HOME ABOUT PRODUCTS MONITORING FORECASTING

Forecasting / Combined Drought Index (CDI)

Year: 2023 Time type: By week
8 May 2023 - 14 May 2023

This Week's Drought Summary

From May 8 to 14, the LMB is forecasted to be moderately arid over the LMB except the lower part of the region covering Mekong Delta of Viet Nam exceptional droughts are likely to hit the LMB during the forecasting week. The northern part is the driest area of the region.

Disclaimer: The drought monitoring and forecasting map is developed based on the satellite images and with no ground verification. MRC does not guarantee the values and accuracy of the products nor be responsible for any risks of using the products.

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2. The MRC Drought Monitoring & Forecasting in the LMB

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>

**Reservoir Assessment Tool
(RAT-Mekong)**

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



National training on DFEWS in Thailand



Monitoring station in Chiang Rai, Thailand

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.