

A new, free, web-based tool to support decision making under uncertainty

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Flood and Drought Management Tools



Flood and Drought Portal



HOME

Last Update: 2018-11-14

User: ndr2

Workgroup: Public

Area: Chao Phraya

About the DataPortal

The Flood & Drought portal is developed as part of the Flood and Drought Management Tools project. For more information on the project please visit the project homepage at: <http://fdmt.iwlearn.org/en>

The Flood & Drought portal provides access to a number of apps supporting decision makers at basin and local level. The aim is to support existing planning processes as WDA/SAP and IWRM at basin scale and Water Safety Planning at local scale through the technical apps. The apps could be used individually or in connection.

Please visit the [user guide](#) for more indepth information on the use of the apps and their intended support for the different stages within basin and local level planning.

Knowledge portal with discussion forum and upcoming online courses: **Select the "Knowledge portal" in the ? menu or use the link - [KnowledgePortal](#)**

For video tutorials and overview: [YouTube](#)

For technical exercises (pdf files) : [Dropbox](#)

For technical questions please contact:



ISSUE ANALYSIS

Causal Chain analysis and WRIAM. Understand and prioritise the causes behind issues.



WATER INDICATOR

Identify water related indicators to support management and decision-making.



DATA AND INFORMATION

Access to near real-time data. Flood and drought indices. Climate forecast and climate change data.



DROUGHT ASSESSMENT

Locate and identify hazards, estimate impacts and provide risk assessment.



CROP APPLICATION

Visualise crop calendar, estimate crop water requirement and crop yield.



FLOOD ASSESSMENT

Locate and identify hazards, estimate impacts and provide risk assessment.



BASIN PLANNING

Create and evaluate basin plans. Linkage to water resource model.



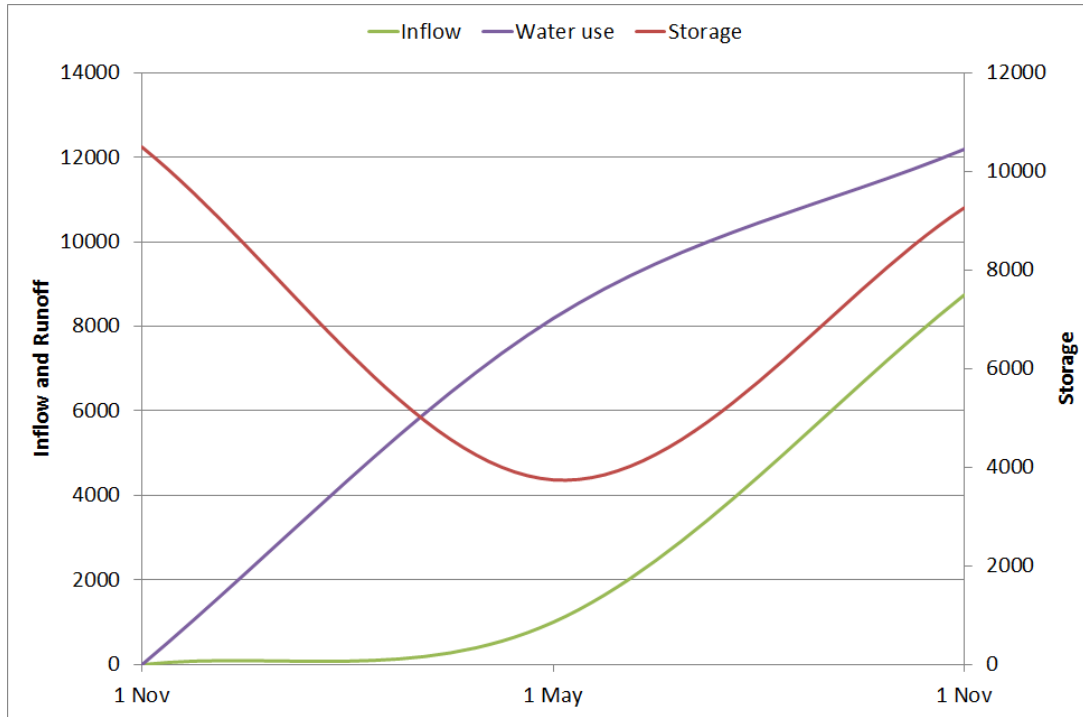
WATER SAFETY PLANNING

Support water safety planning

<http://www.flooddroughtmonitor.com>



Seasonal planning, Chao Phraya basin, Thailand



← Dry season → → Wet season →

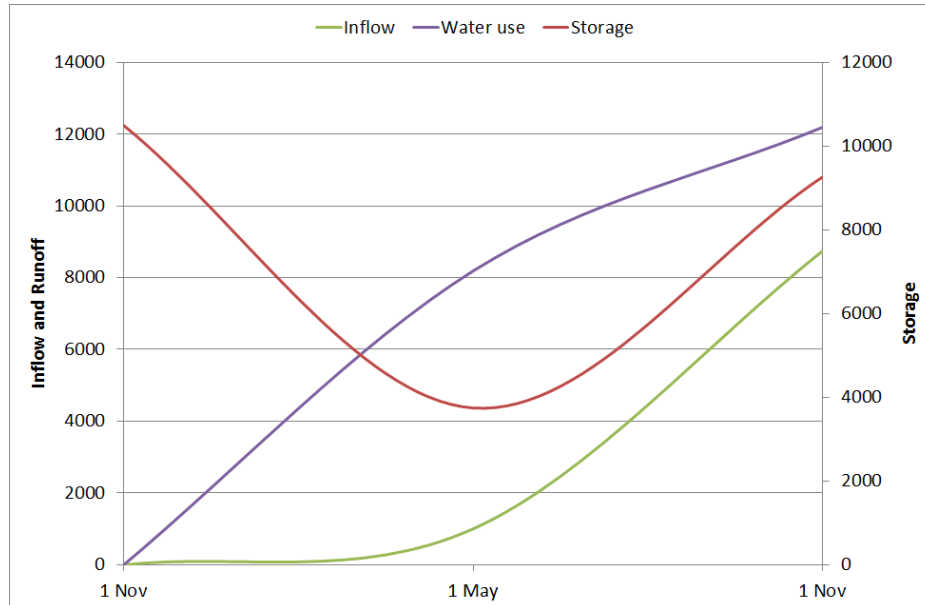


Decisions (Levers)

- **On 1 November, the following decisions are made:**
 - Total size of dry season irrigated area
 - Size of incentives to farmers for growing upland crops

Objectives (Measures)

- Maximize benefits to farmers for this dry season
- Minimize risk of low storage at the end of the next wet season



Uncertainties (X)

- **Rainfall**
- **Actual dry season planted area**
- **Price of rice**
- **Price of upland crops (wheat)**

Uncertainty ensemble

- Rainfall (50)
- Actual irrigated area (10)
- Rice price (5)
- Wheat price (5)
- 12,500 ensemble members

Models and assumptions (Relationships)

- Rainfall-runoff model
- Irrigation model
 - Rice demands
 - Wheat yields
- River basin model
 - End of wet season storage
- Subsidy effectiveness model

Demo

- <http://www.flooddroughtmonitor.com>

Questions

- <http://www.flooddroughtmonitor.com>
- ndr@dhigroup.com