

FLOOD & DROUGHT MANAGEMENT TOOLS



***HOW CAN I BETTER PLAN FOR
FLOODS AND DROUGHTS?***

Contacts:

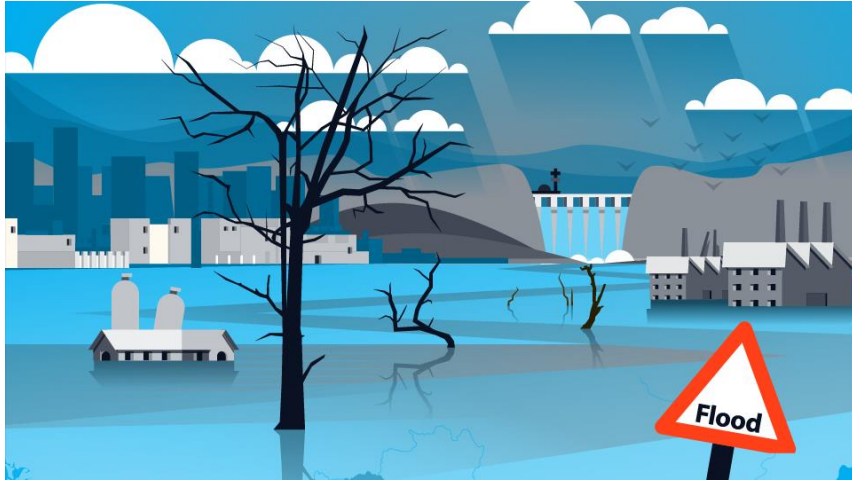
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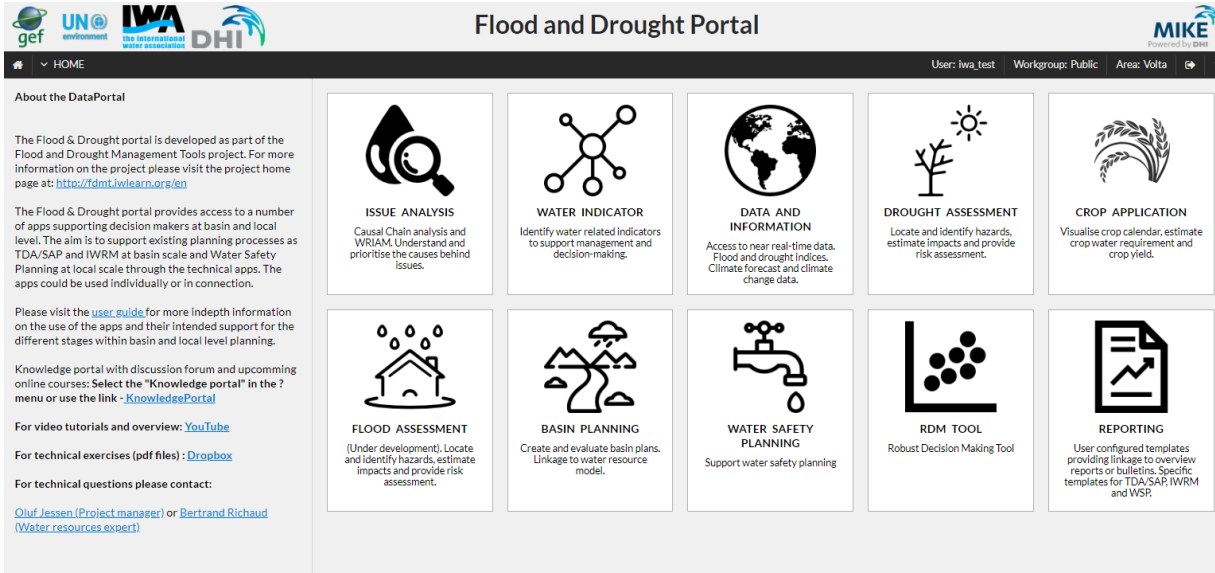


About the Flood and Drought Management Tools project - Why?

Increasing frequency, unpredictability and severity of flood and drought events.
A need for adaptive planning and management of water resources at basin and local level



About the Flood and Drought Management Tools project - How?



The screenshot shows the 'Flood and Drought Portal' website. At the top, there are logos for gef, UN environment, IWA, and DHI. The main header includes 'Flood and Drought Portal' and 'MIKE Powered by DHI'. Below the header, there is a navigation bar with 'HOME', 'User: Iwa_test', 'Workgroup: Public', and 'Area: Volta'. The main content area is divided into two columns. The left column contains text about the portal, including a description, a list of supported apps, a user guide link, a knowledge portal link, and video tutorials. The right column features a grid of ten tool icons with their respective titles and brief descriptions: ISSUE ANALYSIS, WATER INDICATOR, DATA AND INFORMATION, DROUGHT ASSESSMENT, CROP APPLICATION, FLOOD ASSESSMENT, BASIN PLANNING, WATER SAFETY PLANNING, RDM TOOL, and REPORTING.

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 home page at: <http://fdmt.livemore.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 TDA/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:

[Oluf Jessen \(Project manager\)](#) or [Bertrand Richaud \(Water resources expert\)](#)

 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 (Under development), 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	 RDM TOOL Robust Decision Making Tool	 REPORTING User configured templates providing linkage to overview reports or bulletins. Specific templates for TDA/SAP, IWRM and WSP.

www.flooddroughtmonitor.com

- Developed **web-based tools to support planning and decisions to address flood and drought risks from transboundary basin level to water utilities**
- **Freely available to all users**

Support for basin and water utility planning

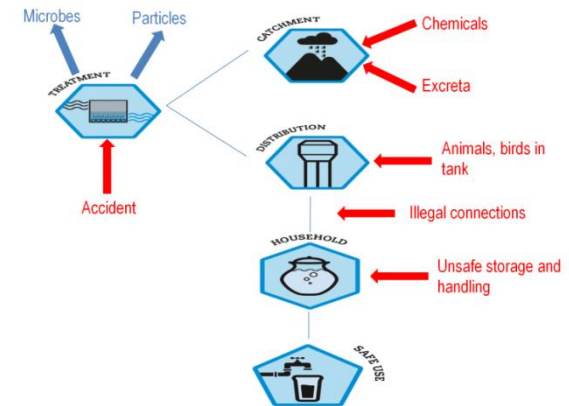


Transboundary Diagnostic Analysis / Strategic Action

Programmes – Tools developed by the Global Environment Facility to assess the state of transboundary basins, and prioritise actions to address key threats.

Integrated Water Resources Management – A process of planning that integrates the management of water, land and other related resources for improved sustainability.

Water Safety Plans – A comprehensive risk assessment that address health related risks and provide an analysis of all steps in the water supply from catchment to consumer.



Urban Water Safety Planning – WHO, Regional Office for South-East Asia 2015

About the Flood and Drought Management Tools project – Who?

Implemented by UN Environment; Executed by DHI and IWA over 4 years. End users are water resource agencies/basin organisations and water utilities.



About the Flood and Drought Management Tools project – Where?

Global applicability, portal and its applications have been developed and tested with stakeholders across 3 pilot basins



*Danube and Nile Basin
as learning basins*

Table

Rainfall (TRMM) - All focus area - Monthly accumulated values

Time	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.	Min.	Max.
2000			28.4	94.9	153.6	163.9	158.0	211.9	228.9	193.2	7.8	0.2	124.1	0.2	228.9
2001	3.5	1.4	72.3	44.9	169.9	161.0	189.5	254.8	222.2	159.0	20.4	3.2	108.5	1.4	254.8
2002	7.5	4.5	19.1	54.7	193.2	174.5	143.5	295.0	291.5	205.9	84.5	46.5	126.7	4.5	295.0
2003	1.0	18.7	77.1	49.6	92.7	200.5	224.4	185.2	294.0	89.1	1.1	1.4	102.9	1.0	294.0
2004	6.7	7.1	8.9	44.7	207.3	210.0	232.7	149.9	302.0	33.7	12.5	0.4	101.3	0.4	302.0
2005	1.7	5.5	21.2	84.7	161.8	195.0	234.7	219.4	320.5	111.5	113.4	10.4	123.3	1.7	320.5
2006	0.4	12.0	46.4	93.3	178.0	181.8	216.3	284.8	252.3	158.7	6.4	0.6	119.2	0.4	284.8
2007	1.2	6.4	20.4	75.0	205.1	232.4	174.3	250.1	258.8	197.0	6.7	0.1	119.0	0.1	258.8
2008	2.0	6.1	33.9	111.1	139.7	225.6	215.2	247.9	307.9	239.7	71.5	14.9	134.6	2.0	307.9
2009	0.3	7.0	78.1	77.2	186.5	220.5	194.7	257.7	254.6	184.2	10.3	0.3	122.6	0.3	257.7
2010	12.7	4.0	13.0	34.9	112.6	217.3	290.7	360.6	324.7	207.6	0.8	12.5	132.6	0.8	360.6
2011	0.9	24.8	60.8	104.5	220.8	234.9	279.4	295.6	357.4	128.9	3.4	2.8	142.9	0.9	357.4
2012	6.5	12.1	36.9	62.0	196.5	135.5	246.8	246.8	330.9	115.7	104.5	8.0	125.2	6.5	330.9
2013	11.8	9.5	19.4	51.0	141.6	240.0	231.3	268.6	299.7	125.2	36.7	11.6	120.5	9.5	299.7
2014	0.1	0.4	22.6	100.1	172.8	146.6	198.1	311.4	282.2	114.4	90.1	0.9	120.0	0.1	311.4
2015	4.0	9.9	82.2	48.9	114.1	132.2	230.0	232.1	226.3	136.8	56.2	18.7	107.6	4.0	232.1

DATA AND INFORMATION

Data x Document

Select Status GIS layer

Rainfall (TRMM)

- Rainfall (TRMM)
- Historical ensemble (TRMM)
- Monthly mean (TRMM)
- SPI 1 month
- Rainfall deviation 30-day (TRMM)
- Effective drought Index (EDI)
- Effective flood Index (EFI)

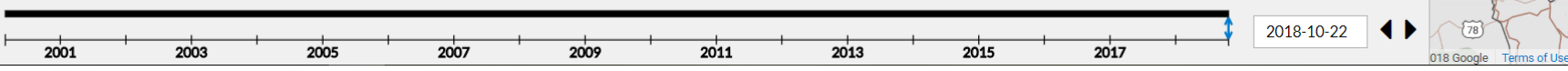
Tool

- Time series
- Time series (monthly)
- Table
- Raster file

Area

All focus area

Download Table





Hydro and Agro Informatics Institute

Ministry of Science and Technology
Thailand



Using the Flood and Drought Management Tools in Thailand

Ticha Lolupiman
Model Developer

Hydro and Agro Informatics Institute, Thailand

What are your symptoms?
How can we help cure you?



Volta



Lake Victoria



Chao Phraya

To get started with the tools right now, register for free by visiting
www.floaddroughtmonitor.com

For more information, contact

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ozj@dhigroup.com

IWA, Katharine Cross
katharine.cross@iwahq.org

Or learn more at

fdmt.iwlearn.org



Discussion Questions

General questions:

- What are your main concerns in relation to climate change/variability?
- How do you address your present challenges?
- How do you address expected future concerns in your planning?
- Do you see some of the applications of the F&D portal as potential tools for your present or future work?

Some specific questions related to HAI experience:

- Are you missing any regular report about the climatic/drought situation in your basin?
- Are you missing access to near real-time climate and drought related information?