Why is it important to monitor droughts?

Droughts are one of the more costly natural hazards on a year-to-year basis; their impacts are significant and widespread, affecting many economic sectors and people at any one time.

Planet
Environmentally conscious

Profit
Fiscally sound

People
Socially progressive

A normal part of the climate, droughts can affect any global climate regime, even rainforests. The onset of droughts is slower than floods (that typically occur rapidly), and the hazard footprint for droughts is larger.

Drought risks to urban centers, industry and energy production

Declining GDP
Drought events can constrain economic growth and can be associated with a decline in GDP.

Electricity supply disruption
Droughts can impact electricity supply, due to reduced water availability for hydropower generation and for cooling of thermoelectric (e.g. nuclear, fossil-, biomass-fuelled) power generation.

Water supply disruption
Reduced water availability to different sectors leading to environmental, health, social and economic impacts.

Drought risks to waterways and fisheries

Risks to water transport and industry
Drought can affect water levels and flows resulting in reduced access to waterway transport, and the associated economic impacts from this disruption.

Risks to aquatic life
Drought and algal blooms in rivers and lakes reduces oxygen levels, leading to fish populations dying off, and closure of fisheries.

Drought risks to agriculture and livestock

Livestock starvation and death
Lower crop yields and reduced access to water leaves livestock vulnerable and at risk.

Soil salinization
Soil salinization is a common problem in areas with low rainfall. Combined with poor drainage it can lead to permanent soil fertility loss.

Crop failure
Insufficient water availability can mean that crops will not survive leading to poor harvests. This can affect health through lack of nutrition, local livelihoods, and the wider economy.

Drought can be easily monitored because its slow onset allows time to observe changes in precipitation, temperature and the status of surface water and groundwater supplies in a region.

The Flood and Drought Portal provides the technical applications to help prepare and respond to droughts:

Drought Assessment tool enables an assessment of drought related hazards, the associated impact and the risk towards different vulnerable areas or sectors.

Data and information tool gives access to/provides global satellite data including current and forecasted climate information such as rainfall, temperature and evapotranspiration.

Water indicator tool is a library of indicators with information on the data needed and how to apply – e.g. to measure issues such as drought hazards.

Issue analysis tool helps utilities identify the causes behind an helps users identify the causes behind an environmental issue affecting the water resource.

Crop application helps utilities identify the causes behind an helps users identify the causes behind an environmental issue affecting the water resource.

Understanding how to use and integrate climate information helps decision makers understand the impacts of drought, and inform adjustments to policies and investments in infrastructure to improve resilience.

With insights on drought risk from the Flood and Drought Portal, basin organisations and their stakeholders can plan to secure and share water resources.

Land, water and urban area managers can better prepare for water related risks by integrating information on flood and drought events into planning and analysis processes.

Metropolitan and urban facilities
Allocate water across sectors based on priorities and availability.

Government infrastructure
Investment in green and grey infrastructure for improved water storage.

Restoring pastures and balancing land and water resources.

Managing livestock production within the landscape, relocating herds, nomadic migrations and use of special reserved areas.

Adapting farming practice
Shifting to drought resilient crops, and where feasible enhancing irrigation schemes.

The Flood and Drought Portal supports decision makers responsible for water management in basins by providing information about drought events and likely future scenarios into the planning processes.

River bank and wetland rehabilitation and protection combined with recovering the water holding capacity of soils through tree planting.

Shift to drought resistant crops and agricultural practices such as increasing irrigation efficiency with drip irrigation.

Water harvesting
Developing new sources like micro dams, ponds and wells, or reserve sources of groundwater.

Being able to better plan and prepare us for droughts will lead to more impactful investments and achievement of the targets in the Sustainable Development Goals.

6 CLEAN WATER AND SANITATION
Improved water security and safety through planning from catchment to consumer

11 SUSTAINABLE CITIES AND COMMUNITIES

15 LIFE ON LAND
Increased economic productivity through better preparedness and planning for climate impacts of flooding and droughts

9 INNOVATION AND INFRASTRUCTURE

13 CLIMATE ACTION
Improved livelihoods from increased efficiency in water supplies to industry and agriculture

17 PARTNERSHIPS FOR THE GOALS

To get started with the tools right now, register for free by visiting

www.flooddroughtmonitor.com

Learn more at **fdmt.iwlearn.org**

For more information contact:
Olaf Zeilund Jessen – DHI: ozj@dhigroup.com
Katharine Cross – IWA: katharine.cross@iwahq.org

Design: www.chris-wells.com