Managing Water Extremes

WMO/GWP Associated Programme on Flood Management (APFM) – est. 2001
WMO/GWP Integrated Drought Management Programme (IDMP) – est. 2013

- APFM and IDMP provide a technical resource for water management extremes through:
  - Expert Advice (Joint Technical Support Unit of GWP and WMO in Geneva)
  - Guidelines and Tools
  - Project Preparation support
  - Capacity Development
  - Over 20 partners in each programme
IDMP Background

IDMP was launched by WMO and GWP in 2013 at the High-Level Meeting on National Drought Policies (HMNDP) to support implementation of the HMNDP outcomes

[Excerpt of HMNDP final declaration, emphasis added]

- Develop proactive drought impact mitigation, preventive and planning measures, risk management, fostering of science, appropriate technology and innovation, public outreach and resource management as key elements of effective national drought policy
- Promote greater collaboration to enhance the quality of local/national/regional/global observation networks and delivery systems
- Improve public awareness of drought risk and preparedness for drought
- Consider, where possible [...] risk reduction, risk sharing and risk transfer tools in drought management plans
- Link drought management plans to local/national development policies
The cycle of disaster management

Source: National Drought Mitigation Center, University of Nebraska-Lincoln
Components

IDM at Regional and National Level

Knowledge and Awareness

Innovative Practices

Capacity Development

Governance and Partner Engagement
Integrated Drought Management Helpdesk

- ASK: Get in touch and ask for advice on integrated drought management
- FIND: Find knowledge resources on integrated drought management
- CONNECT: Learn about the activities of the IDMP and connect to them

www.droughtmanagement.info

Bundle Expertise, Spirit of Collaboration, Provide Entry Points
Importance of a Drought Monitoring System

- Allows for *early* drought detection
- Improves response (*proactive*)
- "Triggers" actions within a drought plan
- A critical *mitigation* action
- *Foundation* of a drought plan
Components of a Drought Monitoring System

- Timely data and timely acquisition
- Synthesis/analysis of data used to “trigger” set actions within a plan
- Efficient dissemination network (web, media, extension, etc.)
Potential Monitoring System Products and Reports

- **Historical analysis** (climatology, impacts, magnitude, frequency)

- **Operational assessment** (cooperative data, SPI and other indices, automated networks, satellite and soil moisture data, media and official requests)

- **Predictions/Projections** (drought indices, soil moisture, streamflow, seasonal forecasts, etc)
Components of a Drought Early Warning and Information System

- Monitoring AND Forecasting
- Tools for decision makers
- Drought risk assessment and planning
- Education and awareness
Roving seminars for farmers

• Raised the awareness of the farming community of the current advances in the provision of weather and climate information for facilitating operational decisions on farm.

• Helped the personnel from the Meteorological Services and the Agricultural Extension Agencies to design more improved products for use by farmers (and get data in return)
Planned drought mitigation and response options

Time during normal conditions

Consider I-1 is SPI

Consider Level 2; SPI = -1.25
(Moderate drought)

Level 2
Action 1
Action 2
Action 3

Consider Action 1: Ban watering lawns
Consider Action 2: Dig extra wells for livestock and wildlife in area
Consider Action 3: Reduce irrigation of annual crops by 50%
Drought Management Library

IDMP
Integrated Drought Management Programme

www.droughtmanagement.info/library
Guidelines and Tools

Please click on the headings below to find IDMP guidelines, concepts, outcomes of expert meetings and the key documents of the High Level Meeting on National Drought Policy.

Guidelines


[English, Arabic]


[English, Arabic, French, Russian, Spanish]

www.droughtmanagement.info/find/guidelines-tools
Adapting of 10-step process by Don Wilhite (National Drought Mitigation Center at the University of Nebraska-Lincoln)

Response to need articulated at High-level Meeting on National Drought Policy (HMNDP)

Building on existing risk management capacities

Template that can be adapted to regional/national realities and needs – example IDMP CEE
Handbook is a resource to cover most commonly used drought indicators/indices

A starting point to describe and characterize the most common indicators and indices and their applications

Does not recommend a ”best” set of indicators and indices, given research requirements for appropriate application in location in question

In final stages of publication – will be available online within the next months.
Activities

Regional activities
National activities
WMO and GWP

www.droughtmanagement.info/idmp-activities/
Central and Eastern Europe (2013): Bulgaria, Czech Republic, Hungary, Lithuania, Moldova, Poland, Romania, Slovakia, Slovenia, Ukraine


West Africa (2014): First in Burkina Faso, Niger and Mali, and then share lessons learned with other neighbouring countries through the WMO partners, GWP Country Water Partnerships and other partners.

South Asia Drought Monitoring System (2014): with IWMI in Afghanistan, Bhutan, Bangladesh, Nepal, India, Pakistan and Sri Lanka

Central America (2013): Regional workshop leading to training on SPI and assessment of current drought.

South America (2015): Regional workshop in Bolivia leading to follow-up activities with partners on drought management planning and monitoring.
Case studies on Natural Small Water Retention Measures and their application in Poland, Slovakia, Hungary, and Slovenia recently released by IDMP CEE

National Drought Management Policies in Brazil, Mexico, Morocco and USA

Currently under development are cases in
- Brazil
- Ethiopia
- India
- Kenya
- Philippines
- Uganda

Case Studies
Under development to highlight actions that put an integrated approach to drought management into action
For further information on IDMP

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IDMP
Integrated Drought Management Programme
WMO initiatives on hydrological observation and monitoring
Resolutions by the World Meteorological Congress

- **Resolution 40 (Cg-XII 1995)** — WMO policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities

- **Resolution 25 (Cg-XIII 1999)** — Exchange of hydrological data and products:

  “[Congress] adopts a stand of committing to broadening and enhancing, whenever possible, the free and unrestricted international exchange of hydrological data and products, in consonance with the requirements for WMO’s scientific and technical programmes”
World Hydrological Cycle Observing System

A WMO global framework programme aiming at:

• improving the basic observation activities and data management
• strengthening international cooperation and data exchange
WHOS - WMO Hydrological Observing System

WHOS is a portal to the online holdings of National Hydrological Services (NHS) around the world that publish their historical (OBS) and/or real-time (RT) data without restrictions or cost.
WMO provision of standards and guidance

- Technical Regulations
- Guide to hydrological practices
- Manual on Stream Gauging
WMO Global Hydrometry Support Facility (GHSF)
Thank you
Спасибо
Дякую
Mulţumesc