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Workshop on Drought and Desertification

Report on the Workshop and Recommendations

The following article is paraphrased from a report on a workshop held in Bet Dagan, Israel, in May 1997.

The Workshop on Drought and Desertification was held in Israel from 26 to 30 May 1997. Forty-four participants from Africa, Asia, and Europe took part in the Workshop, which was sponsored by WMO. Three foreign experts provided in-depth analysis on drought and drought preparedness—Dr. O. Brunini (Campinas, Brazil), Prof. S. Mei (CAAS, Beijing, China), and Dr. D. Wilhite (University of Nebraska, USA), in addition to the Israeli lecturers.

Presentations by lecturers and discussions were conducted under the following four main headings:

- 1. Drought and Desertification Definitions.
- 2. Drought Causes and Management Response.
- 3. Drought Monitoring and Mitigation.
- 4. Assessing Drought Impact and the Development of a Rational Policy.

The methodologies of drought assessments (meteorological, hydrological, and agricultural) over a wide range of climatic conditions were presented and discussed, and recent lessons from the 1996 drought in the United States were presented. The possibility and economic consequences of alternative agricultural systems in semiarid climates were presented and numerous case studies of drought prediction, monitoring, impact assessment, and response efforts from Africa, Asia, the Middle East, and eastern Europe were discussed.

Two practical working sessions were held to present and analyze long-term annual rainfall time series demonstrating climatological data applications for the assessment of hydrological drought. Also, the analysis of rainfall-wheat yield relationships and the possibilities of such methodologies in the assessment of agricultural drought were demonstrated.

One day was spent on a field trip to the Jordan Rift Valley (rainfall cross section 250–400 mm), with demonstrations of runoff water harvesting, water use, and irrigation efficiency. The pumping station of the Israeli National Water Carrier was visited at the Sea of Galilee and a detailed discussion took place between the participants of the Workshop and National Water Carrier authorities on water management issues and economic implications.

The participants of the Workshop made the following recommendations:

1. Drought Monitoring Centres

The meeting recognized the broad scope and depth of work already undertaken by the DMCs in Nairobi and Harare, particularly in establishing subregional data bases and developing operational methodologies and schemes for drought monitoring and forecasting. The meeting therefore calls for links between the DMCs and the RMTCs, and the DMCs and national, regional, and other international organizations, for the development and implementation of drought programmes.

2. International Organizations

Noting the role drought plays in environmental degradation, the meeting recognized the role, work, and main thrusts of organizations such as WMO, UNDP, CILSS, FAO, ICRISAT, AGRHYMET, DMCs, and INCARDA in achieving future progress in matters (particularly in the areas of climate services) of sustainable development, impact assessment of drought, and response strategies to reduce vulnerability.

The meeting noted with regret the absence of the above organizations from the Workshop. The meeting therefore strongly recommends that the organizations participate in future Workshops so as to enrich the knowledge of participants and the results of the meetings.

3. Recommendations to the National Meteorological and Hydrological Services (NMHS)

The participants of the Workshop support the measures to be taken by WMO Members in implementing the UN Convention to combat desertification by NMHS.

- (a) To strengthen and expand existing networks, and establish, where appropriate, new national and regional meteorological and hydrological observing networks, especially in areas prone to, or affected by, drought.
- (b) To maintain close contact with the heads of the national coordinating bodies concerned with combating desertification and mitigating the effects of drought, so that NHMS requirements are largely taken into account in convention-related activities.
- (c) To participate in the preparation and implementation of national and subregional action programmes and to improve existing programmes.
- (d) To encourage and intensify research work on climate-drought interactions, and develop medium- and long-range climate prediction.

4. Recommendation to the Secretary General of WMO

The participants of the Workshop request the Secretary General of WMO to publish a technical note of the Workshop to be distributed to Members, after suitable synthesis of the papers presented and editing of the material. The Workshop established an editorial board consisting of Brunini (Brazil),

Gundogdu (Turkey), Lomas (Israel), Mei (China), Wilhite (USA), and Yeves-Ruiz (WMO).

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