



National Drought Mitigation Center

Delivering Drought Information Services to the World

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Introduction

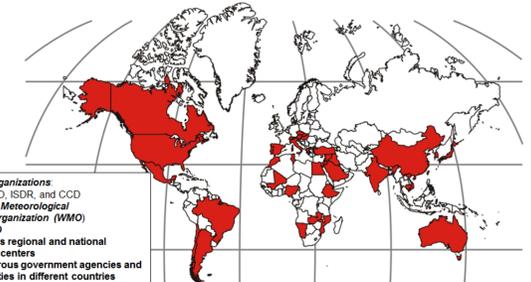
Since its inception in 1995 at the University of Nebraska-Lincoln, the National Drought Mitigation Center (NDMC) has worked to lessen societal vulnerability to drought through a risk-based management approach. The NDMC interacts with local, state, tribal, and international governments; federal agencies; and non-governmental organizations. The fact that droughts (unlike most hazards) typically evolve slowly, last for months or years, and cover thousands of square miles across multiple political boundaries and economic sectors can make it a daunting task to monitor, plan for, and identify appropriate mitigation strategies. In response, the NDMC has developed and maintains a number of operational drought-related tools to improve drought monitoring and early warning, as well as characterize the impact of this natural hazard. These tools include the U.S. Drought Monitor (USDM), North American Drought Monitor (NADM), Vegetation Drought Response Index (VegDRI), Vegetation Outlook (VegOut), Drought Atlas, and Drought Impact Reporter (DIR). Although most of these tools are currently implemented for only the United States, many countries have collaborated with the NDMC to begin the transfer of several of these tools to other parts of the world. The GIScience Program Area is a rapidly growing area within the NDMC as the Center is increasingly working with scientists throughout the world to develop and apply innovative new satellite-based tools for operational drought monitoring and early warning both in the United States and internationally. Collectively from this work over the past 17 years, the NDMC has developed an extensive set of drought monitoring tools and acquired a rich collection of lessons learned related to delivering drought information services worldwide.

NDMC Objectives: An End-to-End Approach via a Research-Applications-Operations-Outreach Continuum

- **Improve the science** of drought monitoring, planning, and mitigation
- Build **awareness** of drought and its **impacts** on society and the environment, and how human actions affect our vulnerability to drought
- **Focus the attention** of policy makers on the importance of drought policy and planning in the wise stewardship of natural resources **through a risk management approach**



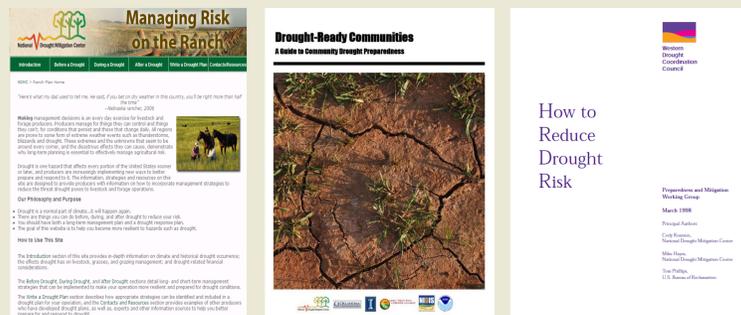
NDMC International Activities



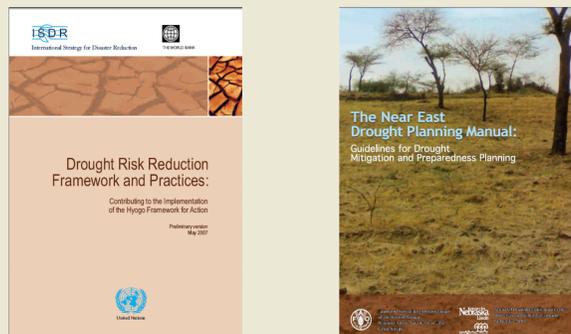
- **UN organizations:** FAO, ISDR, and CCD
 - **World Meteorological Organization (WMO)**
 - **USAID**
 - **Various regional and national drought centers**
 - **Numerous government agencies and universities in different countries**
- Activities 2005-2011**
 Australia • Austria • Brazil • Cambodia • Canada • Chile • China • Czech Republic • Egypt • Ethiopia • European Union • India • Iraq • Italy • Japan • Jordan • Mali • Mexico • Morocco • Mozambique • Namibia • Netherlands • Saudi Arabia • Slovakia • Slovenia • South Korea • Spain • Switzerland • Syria • Tunisia • Turkey • United States • Vietnam • Zambia

NDMC International Activities (NDMC, 2011)

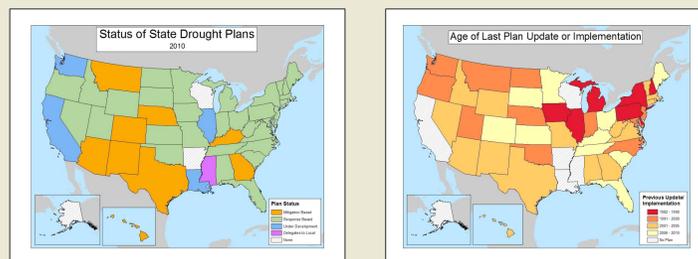
Planning Resources and Guides



Guides and resources are available for planning at all levels

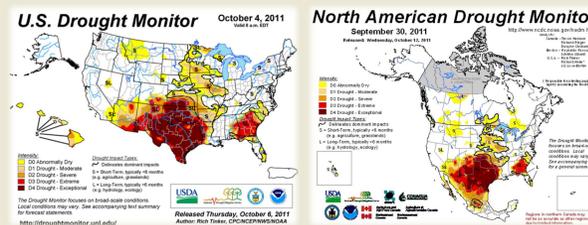


International drought planning guides

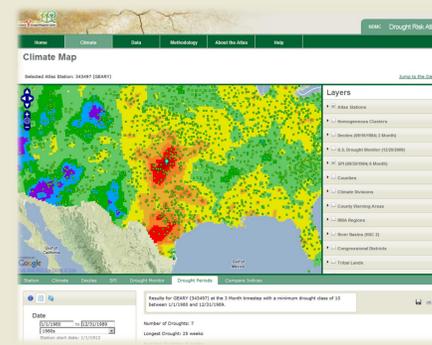


In collaboration with and support of NIDIS and the Engaging Preparedness Community Working Group, the NDMC has built and maintains a drought planning database

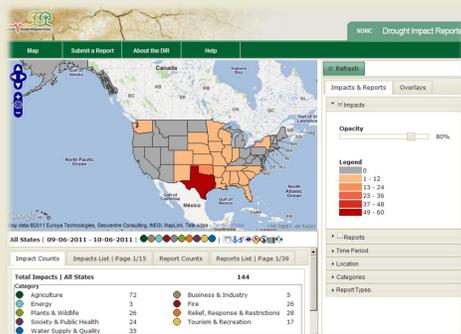
Monitoring and Impact Tools



The U.S. Drought Monitor: droughtmonitor.unl.edu

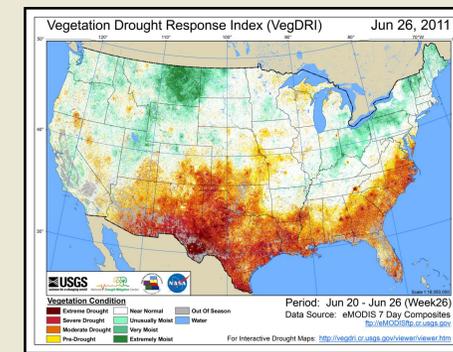


The Drought Atlas

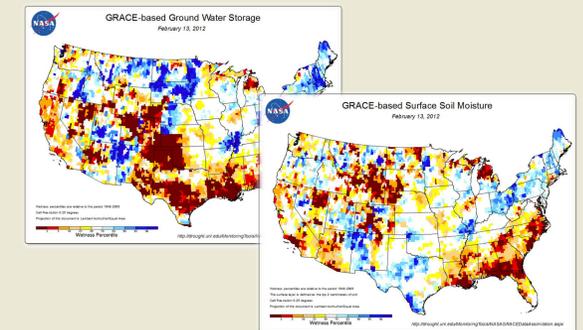


The Drought Impact Reporter: droughtreporter.unl.edu

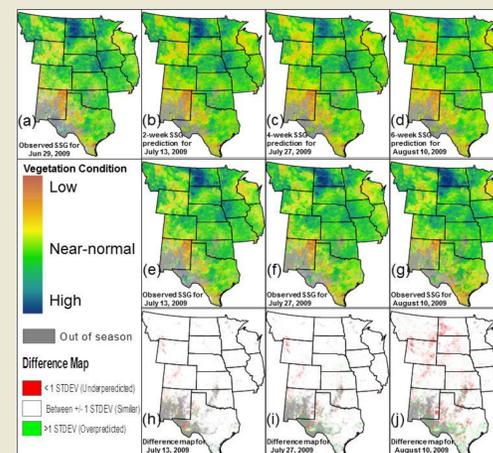
Remote Sensing Applications for Drought Monitoring



The Vegetation Drought Response Index (VegDRI): vegdrv.unl.edu



GRACE-Based Terrestrial Water Storage products



The Vegetation Outlook (VegOut): Predicting future vegetation greenness patterns

GIScience Training & Collaboration with International Scientists

- Canada
- China
- Czech Republic
- Ethiopia
- India
- Japan
- Slovakia
- Turkey

Other Remote Sensing Applications

- Ecological impacts
- Evapotranspiration
- Land-surface phenology
- Irrigation Mapping
- Vegetation Health Condition
- Soil Moisture
- Ground Water