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Droughts in the 21st Century and Beyond

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Droughts in the 21st Century and Beyond

Symposium on Data-Driven Approaches to Droughts (DDAD2011), June 21-22, 2011

Drought: Science



- Characterization
- Mechanisms
- Modeling
- Prediction and Forecasting

Drought Monitoring



- Measurement
- Mapping
 - Space
 - Time
- Data sharing
- Updating

Quantification of Effects



- Economic
 - Agricultural productivity loss, shift in energy generation sources
 - e.g. current drought in Texas – Loss \$1.2 – 1.5 billion
- Ecosystems
 - May lead to the loss of certain species (flora and fauna)
- Health
 - Lack of drinking water
 - Sanitation
 - Food production
 - Change in bacterial and viral activities
- Social
 - Social unrest , chain reaction...
- Political
 - Long-term planning
 - Change in political culture
 - Transboundary conflicts

Communication



- Translation of effects into common, easy to understand language and numerical identifiers
- Uncertainty quantification and communication
 - Can the end user interpret the scientific uncertainty bands?
- Policy and decision making
- Bringing all stakeholders aboard

Strategies for Reducing Impacts



Integrated Water Resources Management

