World Meteorological Organization

Working together in weather, climate and water

WMO

Utilizing Drought Information for Policy and Decision Making:

Session IV Wrap-Up

Mannava V.K. Sivakumar

Presentation

- International Initiatives to address Policy Issues
- Regional Perspectives on Utilizing Drought Information
- National Perspectives on addressing Drought Management, Drought Vulnerability and Policy
- Using Drought Information at Local Level
- Conclusions and Recommendations

International Initiatives to address Policy Issues

- WMO, United Nations Convention to Combat Desertification (UNCCD) and the Food and Agriculture Organization (FAO) organized the High Level Meeting on National Drought Policy (HMNDP) from 11 to 15 March 2013, in Geneva, in cooperation with other UN Agencies, International Organizations, NOAA and USAID
- A Compendium on National Drought Policy, a Science Document, a Policy Document and a draft HMNDP Declaration were developed ahead of the meeting and circulated to all national governments around the world.

Adoption of HMNDP Final Declaration

- Under the chairmanship of HE Prime Minister of Niger the Final Declaration on National Drought Policies which calls on all governments to develop and implement national drought management policies consistent with their development objectives was reviewed. The declaration also provided detailed scientific and policy guidance on how this would be achieved.

- The declaration urged WMO, UNCCD and FAO, other related UN agencies, and programmes, as well as other concerned parties, to assist governments, especially the developing countries, in this task. The Declaration was adopted by exclamation by all the participants

Regional Perspectives on Utilizing Drought Information

- Drought Adaptation in Asian Monsoon Regions (Dr Rajib Shaw).

- Regional Cooperation for better Drought Management in the Greater Mekong Subregion (Dr Javed Hussain Mir).

Droughts in Asian Monsoon Region

- Impacts of droughts are more prominent on agriculture, rural livelihoods sectors
- Drought gets less priority in national Disaster Risk Reduction policy
- Last Mile Communication is often a major problem
- Drought Policy is a low priority in many countries, and there are no separate drought policies
- Awareness of policy makers, local authorities and communities is lacking
- Areas with no irrigation system are the most affected

SIP Approach in Asian Monsoon Region

- SIP is derived from three dimensions namely Socio-economic, Institutional and Physical. SIP consists of 11 primary indicators and 55 secondary indicators.
- With regard to drought resilience issue, SIP approach was developed to determine different SIP aspects of a targeted area and provides an overview of drought resilience of that area.
- Local communities can contribute to the process of drought early warning and forecasting through their traditional knowledge and report to forecasting center and by providing information on what their field observations, the Moon, the Sun and the dry-up progress of their fields
- There are several Local Level Drought Proofing Options

Regional Cooperation for better Drought Management in the Greater Mekong Subregion (GMS)

- GMS countries are Cambodia, the People's Republic of China (PRC, specifically Yunnan Province and Guangxi Zhuang Autonomous Region), Lao People's Democratic Republic (Lao PDR), Myanmar, Thailand, and Viet Nam.
- Drought an important challenge to the GMS regional growth
- Drought events in the Mekong Basin have occurred several times in recent years (MRC data)
- The regional activity on “Applying Remote Sensing Technology for Drought Management in the Greater Mekong Subregion” is part of ADB Technical Assistance Project, TA-6521-REG, “Accelerating the Implementation of the Core Agriculture Support Program (CASP)” to support regional food security in GMS
- Project started in November 2012 with the support of Japan Aerospace Exploration Agency (JAXA) as a technical advisor

Regional Cooperation for better Drought Management in the Greater Mekong Subregion (2)

- Regional Knowledge base on Climate Change Adaptation Planning is based on three pillars : data, knowledge of risks and adaptation.

- Under data, a regional knowledge base has been developed. It includes: interactive climate data; analytical framework, guideline, and tools

- In terms of knowledge of risks, the focus is on capacity building in climate vulnerability assessment, through trainings for GMS practitioners and learning-by-doing assessments in rural communities.

- Lastly, the adaptation stage translates into investment in climate resilience, either through the plot-testing of adaptation option or up-scaling through ADB and other investments

Regional Cooperation for better Drought Management in the Greater Mekong Subregion (3)

- Findings at the WGA and WGE level gets then taken up in planning and decision making at the policy maker levels and for this, the GMS senior official meetings, ministerial conference and GMS summit are essential fora.

- The Lao PDR will host the 19th Ministerial Conference of the Six Greater Mekong Sub-region (GMS) Nations in Vientiane on 10-11 December.

- The 19th GMS Ministerial Conference will discuss the investment of GMS countries in ten areas including transportation, energy, agriculture, the environment, human resource development, urban development, tourism, trade, special economic zones and information technology.

- All these discussions translate into a regional investment framework, and this is where we can see the results of pilot testing on a small scale and capacity development.

National Perspectives on addressing Drought Management, Drought Vulnerability and Policy

- Drought Management in Thailand (Dr Royol Chitradon).
- Drought Mitigation National Plan in Mexico: PRONACOSE (Dr Rene Lobato-Sanchez).
- Drought Vulnerability and Policy in Korea (Dr ByoungJae Lee).

Drought Management in Thailand

- Facts and challenges for Thailand's water resource management
  - Low impacts of climate change, Increasing trend of rainfall, More frequent extreme events, Infow variability of large reservoirs
- Prioritizing framework for Adaptation Technologies
  - Strategic Target: Water Security
  - Macrolevel ie., National or basin level (Government) and Microlevel (Community)

Drought Management in Thailand (2)

- Community Level

  - S&T for Community Water Resource Management

  - Community Water Resource Management following King's Initiative (Agroforestry, New Theory, Brackish Water)

Drought Mitigation National Plan in Mexico: PRONACOSE

- Facts on Mexico's Vulnerability to Droughts

  - Variability in Monthly and Annual Rainfall

  - El Niño during summer has come with severe droughts in most part of Mexico

  - Long periods of drought in Northern Mexico coincide with a combination of +AMO, – PDO

Drought Mitigation National Plan in Mexico: PRONACOSE (2)

- President Peña-Nieto Announces a National Plan for Drought Mitigation Impacts
  - Drought Monitoring and Early Warning Systems
  - General Agreement on onset and end of drought (Authorities act to guarantee water for human consumption)
  - Programs (Timed to foresee, prevent and act: basin and local levels)
  - Inter-ministerial commission created permanently by Law to address droughts and floods and focus on risk analysis for the implementation of prevention and mitigation actions due to cope with climate extremes.

Drought Vulnerability and Policy in Korea

- Status of Water Resources and Problems with Drought Policies in Korea
- Assessment of Drought Vulnerability in Korea due to Climate Change
- Effective Drought Policy Measures to Combat Climate Change

Effective Drought Policy Measures to Combat Climate Change in Korea

- Reasonable Policy Measures Considering Characteristics of Regional Drought Vulnerability
- Integrated drought policy measures using spatial planning through urban planning and developing
- Effective Policy Measures through Re-establishing Agricultural Water
- Comprehensive Countermeasures through Establishing Basin Comprehensive Water Resources

Using Drought Information at Local Level

- Drought Measures for Effective Decision Making in South Carolina (Dr Greg Carbone)

- Successfully using Drought Information in Northern California (Ms Ane Deister)

Drought Measures for Effective Decision Making in South Carolina

- **Information transfer**
  - **Drought Monitor, Drought Indices, Defining Drought Impacts**
- **Linkages and coordination**
  - **South Carolina Drought Response Committee**
- **Beyond reactive**
  - **Drought Act and Regulations, Drought Response Plans and Ordinances, Community of Practice**

Regional Scale Drought Measures for Effective Decision Making

- **Financial issues**
  - Support for a comprehensive impact reporting and monitoring system
  - Citizen Science Engagement Efforts

Successfully using Drought Information in Northern California

- **Climate Change/Drought Challenges for Decision Makers**
  - Scientific, Social/Psychological, Attention Span
- **Facilitated Decision Making Process**
  - Relate solid, technical information to decision makers' "jurisdiction"
  - Address non-technical social pressures
  - Explain community impact
  - Validate regional approach

Blending Conceptual and Quantitative Info for Success

- Decision makers and public as **resources**
- El Dorado County CA politics – don't engage
- Two-year drought preparedness program
  - Year 1: Data
  - Year 2: Agreement data usage, results
- Elected boards – all voices heard, valued
- Environment, agriculture, and business focus
- Generational learning – be aware!

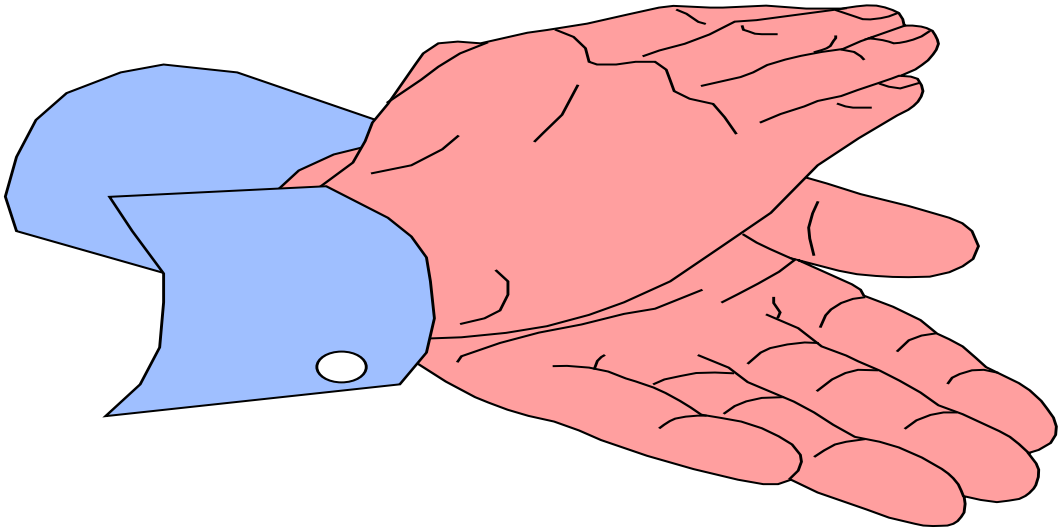
Major Conclusion from Session IV: Need for Improved Services to Users

- Provide drought information in such a way as to assist decision-making by individuals and organisations.
- The service component involves appropriate engagement, an effective access mechanism and responsiveness to user-needs.
- Users and providers need to interact better.
- There is a need for a much higher level of involvement of users in all aspects of drought risk management, information delivery and use.

Conclusions and Recommendations from Session IV

- Create **national drought policies** based on the principles of risk reduction
- Improve **drought awareness**
- Develop/improve monitoring, early warning and **information delivery** systems
- Improve **decision support** tools
- Complete **risk assessments** of vulnerable sectors, population groups, regions
- Improve understanding and quantification of **drought impacts vs. mitigation costs**
- Develop and implement **drought preparedness plans**

Thank You



WORLD METEOROLOGICAL ORGANIZATION