

STRENGTHENING PLANNING, MANAGEMENT, AND ADAPTATION

Effective drought planning includes an integrated approach across management systems. This is necessary to create a comprehensive understanding of drought risk and vulnerability, which is unique to place and place-based systems and resources. This kind of systemic approach to drought planning and resilience building, provides the necessary knowledge exchange to address the inherent complexity, ambiguity and diversity of drought risk. This includes integration of monitoring data, network evaluation, and identification of priority areas based on compounding risk in certain sectors or areas that may not be otherwise identified. Increasing the diversity of actors and perceptions of conditions provides a broader portfolio for risk assessment and resilience strategies. Climate adaptive drought planning accounts for the capacities of the systems at risk and capabilities for adaptation. Additionally, climate adaptive drought planning allows for a holistic drought risk profile to drive the prioritization of drought resilience initiatives across social-ecological systems and technological assets. Ultimately, decision-makers need access to appropriate information, to identify priority areas, roles and responsibilities and informed decision-making that is proactive, and based on the best available knowledge and information. This becomes more relevant, and urgent, given the complexity that non-stationarity brings to this challenge. This approach relies on innovation, reliable data, decision-making tools, iterative learning (across scales), inclusive planning, policy support and funding for implementation. A whole system approach to building capacity and resilience depends upon trusted relationships (e.g., between service providers and end users), acknowledgement and integration of multiple knowledge systems, and information sharing across underserved communities and geographies.

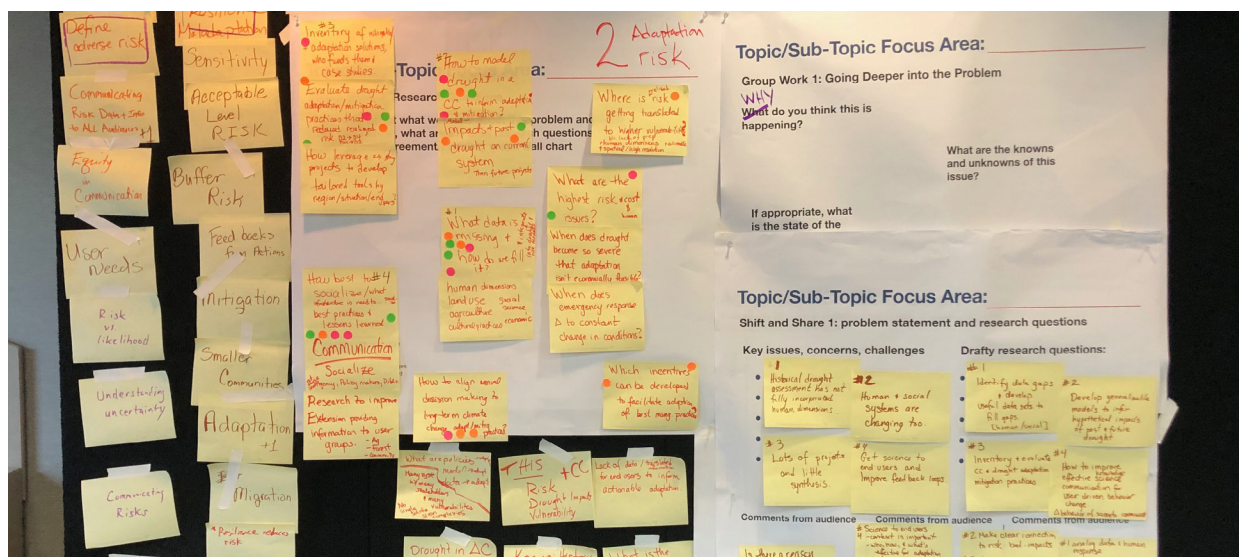
Priority Actions:

1. Ensure drought assessments support adaptive approaches to include the evaluation of actions, tools and programs to include transferability, quantified benefits, ease of application, etc.
2. Improve impact-based assessments of drought risk to inform the development of improved thresholds and triggers to support climate adapted drought planning.
3. Compile strategies for adaptation that address decision-making under uncertainty, using innovative solutions, and include information on return-on-investment and cost benefit analysis.
4. Identify sector and place-based community-specific drought indicators for drought assessment and to use as decision-making triggers and thresholds for adaptation strategies, projects and actions.
5. Assess economies of scale for drought resilience and strategies for cost effective drought resilience planning and adaptation strategies.

- Develop a better understanding of how drought characteristics (e.g., duration, rate of intensification, spatial extent) might change in the future, and how these changes will impact response and policy decisions.

Research Questions:

- What are the social-ecological system dynamics that influence drought management and response, which can either exacerbate or improve drought resilience? What effect does a non-stationary climate have on these dynamics?
- What are the effects of adaptive or maladaptive measures on future drought hazards, exposure and vulnerability? What science is needed (or existing science that could be integrated) to support improved drought risk and vulnerability assessments and identification of adaptation strategies?
- What perceptions (across sectors) to drought and aridification pose barriers and opportunities for improved drought assessment tools for climate adaptive drought planning and response?
- How does non-stationarity impact drought response triggers and thresholds and how can these be adaptive to changing conditions? What variation in drought triggers and thresholds exist between aridifying and humidifying climates? What adaptive drought management strategies need to be developed to address these variations?
- What data, information, technologies and innovations will improve accurate drought scenario analysis to best inform climate adaptation planning across sectors? What misalignments exist between timelines of climate response triggers and management actions?



Notes from breakout session during the Drought Assessment and Climate Change Technical Workshop. Photo by Sylvia Reeves