

**adaptive capacity**

an ability of people to mitigate or reduce the potential for harm, or their vulnerability to various hazards that can cause them harm, by taking action to reduce exposure or sensitivity, both before and after the hazardous event

**adaptive management**

approach to water resource management that emphasizes stakeholder participation in decisions; commitment to environmentally sound, socially just outcomes; reliance upon drainage basins as planning units; program management via spatial and managerial flexibility, collaboration, participation, and sound, peer-reviewed science; and embracing ecological, economic, and equity considerations

**boundary object**

a prototype, model or other artifact through which collaboration can occur across different kinds of boundaries

**boundary organizations**

entities that perform translation and mediation functions between producers (*i.e.*, scientists) and users (*i.e.*, policy makers) of information which include: convening forums to discuss information needs, providing training, assessing problems in communication, and tailoring information for specific applications; individuals within these organizations who lead these activities are often termed “integrators”

**boundary spanning**

the effort to translate tools to a variety of audiences –it is usually an organization or group of people that translates scientific or difficult language to audiences so that they can use it in the future (for planning, *etc.*)

**conjunctive use**

the conjoint use of surface and groundwater supplies within a region to supply various uses and permit comprehensive management of both sources; this requires co-management of a stream or system of streams and an aquifer system to meet several objectives such as conserving water supplies, preventing saltwater intrusion into aquifers, and preventing contamination resulting from one supply source polluting another

**decision maker**

a vast assortment of elected and appointed local, state, and national agency officials, as well as public and private sector managers with policy-making responsibilities in various water management areas

**decision-support experiments**

practical exercises where scientists and decision makers explicitly set out to use decision–support tools–such as climate forecasts, hydrological forecasts, *etc.*–to aid in making decisions in order to address the impacts of climate variability and change upon various water issues

**deterministic forecast**

a single-valued prediction for a weather phenomenon

**disaggregation**

similar to downscaling, but in the temporal dimension; *e.g.*, seasonal climate forecasts may need to be translated into daily or subdaily temperature and precipitation inputs for a given application

**downscaling**

the process of bridging the spatial scale gap between the climate forecast resolution and the application’s climate input resolution, if they are not the same; if the climate forecasts are from climate models, for instance, they are likely to be at a grid resolution of several hundred km, whereas the application may require climate information at a point (*e.g.*, station location)

**dynamical forecasts**

physics-based forecasts that are developed from conservation equations

**ensemble streamflow prediction (ESP)**

a method for prediction that uses an ensemble of historical meteorological sequences as model inputs (*e.g.*, temperature and precipitation) to simulate hydrology in the future (or forecast) period

**hindcasts**

the simulated forecasts for periods in the past using present day tools and monitoring systems; hindcasts are often used to evaluate the potential skill of present day forecast systems

**integrated water resource planning**

efforts to manage water by balancing supply and demand considerations through identifying feasible alternatives that meet the test of least cost without sacrificing other policy goals—such as depleted aquifer recharge, seasonal groundwater recharge, conservation, growth management strategies, and wastewater reuse

**knowledge-to-action networks**

the interaction among scientists and decision makers that results in decision-support system development; it begins with basic research, continues through development of information products, and concludes with end use application of information products; what makes this process a “system” is that scientists and users discuss what is needed as well as what can be provided; learn from one another’s perspectives; and try to understand one another’s roles and professional constraints

**Loading Dock model**

issuing forecasts with little notion of whether they will be used by other organizations—they are organizations that provide information to the public—but provide what they think are relevant for decision making without consulting the user to see if the information is useful

**objective hybrid forecasts**

forecast that uses some combination of objective forecast tools (typically, a combination of dynamical and statistical approaches)

**physical vulnerability**

the hazard posed to, for example, water resources and water resource systems by exposure to harmful natural or harmful technological events such as pollution, flooding, sea-level rise, or temperature change

**predictand**

a target variable used in statistics-based methods of forecasting

**probabilistic forecast**

a forecast that summarizes the results in terms of statistics of the forecast ensemble and presents the probabilistic forecast in terms of selected statistics, like probabilities of being more or less than normal

**sensitivity**

the degree to which people and the things they value can be harmed by exposure to a hazardous event; all other factors being equal, a water system with old infrastructure will be more sensitive to a flood or drought than one with state-of-the-art infrastructure

**social vulnerability**

the social factors (*e.g.*, level of income, knowledge, institutional capacity, disaster experience) that affect a system’s sensitivity to exposure to a hazardous event, and that also influences its capacity to respond and adapt to exposure

**statistical forecasts**

objective forecasts based on empirically determined relationships between observed predictors and predictands

**subjective consensus forecasts**

forecasts in which expert judgment is subjectively applied to modify or combine outputs from other forecast approaches

**water year or hydrologic year**

October 1st through September 30th; this reflects the natural cycle in many hydrologic parameters such as the seasonal cycle of evaporative demand, and of the snow accumulation, melt, and runoff periods in many parts of the United States

## ACRONYMS AND ABBREVIATIONS

<b>ACCAP</b>	Alaska Center for Climate Assessment and Policy	<b>NGOs</b>	non-governmental organizations
<b>ACF</b>	Apalachicola–Chattahoochee–Flint river basin compact	<b>NIFC</b>	National Interagency Fire Center, Boise, Idaho
<b>AHPS</b>	Advanced Hydrologic Prediction System	<b>NRC</b>	National Research Council
<b>AMO</b>	Atlantic Multidecadal Oscillation	<b>NSAW</b>	National Seasonal Assessment Workshop
<b>CALFED</b>	California Bay–Delta Program	<b>NWS</b>	National Weather Service
<b>CDWR</b>	California Department of Water Resources	<b>NYCDEP</b>	New York City Department of Environmental Protection
<b>CEFA</b>	Center for Ecological and Fire Applications	<b>OASIS</b>	A systems model used for reconstructing daily river flows
<b>CFS</b>	Climate Forecast System (see NCEP)	<b>ORNL</b>	Oak Ridge National Laboratory
<b>CLIMAS</b>	Climate Assessment for the Southwest Project	<b>PDO</b>	Pacific Decadal Oscillation
<b>CVP</b>	Central Valley (California) Project	<b>PET</b>	potential evapotranspiration
<b>DO</b>	dissolved oxygen	<b>RGWM</b>	Regional Groundwater Model
<b>DOE</b>	U.S. Department of Energy	<b>RISAs</b>	Regional Integrated Science Assessment teams
<b>DOI</b>	U.S. Department of the Interior	<b>SARP</b>	Sectoral Applications Research Program
<b>DRBC</b>	Delaware River Basin Commission	<b>SECC</b>	Southeast Climate Consortium
<b>DSS</b>	decision support system	<b>SFWMD</b>	South Florida Water Management District
<b>ENSO</b>	El Niño–Southern Oscillation	<b>SI</b>	Seasonal to Interannual
<b>ESA</b>	Endangered Species Act	<b>SPU</b>	Seattle Public Utilities
<b>ESP</b>	Ensemble Streamflow Prediction	<b>SRBC</b>	Susquehanna River Basin Commission
<b>FEMA</b>	Federal Emergency Management Agency	<b>SST</b>	sea surface temperature
<b>FERC</b>	Federal Energy Regulatory Commission	<b>SWE</b>	snow water equivalent
<b>GCM</b>	General Circulation Model	<b>SWP</b>	State Water Project (California)
<b>ICLEI</b>	International Council of Local Environmental Initiatives	<b>TOGA</b>	Tropical Ocean–Global Atmosphere
<b>ICPRB</b>	Interstate Commission on the Potomac River Basin	<b>TRACS</b>	Transition of Research Applications to Climate Services program
<b>INFORM</b>	Integrated Forecast and Reservoir Management project	<b>TVA</b>	Tennessee Valley Authority
<b>IJC</b>	International Joint Commission	<b>USACE</b>	U.S. Army Corps of Engineers
<b>IPCC</b>	United Nations Intergovernmental Panel on Climate Change	<b>USGS</b>	U.S. Geological Survey
<b>IWRP</b>	integrated water resource planning	<b>WMA</b>	Washington (D.C.) Metropolitan Area
<b>KAF</b>	thousand acre feet	<b>WRC</b>	U.S. Water Resources Council
<b>NCEP</b>	National Center for Environmental Predictions	<b>WSE</b>	Water Supply and Environment —a regulation schedule for Lake Okeechobee
<b>GFS</b>	Global Forecast System (see NCEP)		
<b>MDBA</b>	Murray–Darling Basin Agreement		
<b>MLR</b>	Multiple Linear Regression		
<b>MOS</b>	Model Output Statistics		
<b>NCRFC</b>	North Central River Forecast Center		

