



## OUR NATION NEEDS A CLIMATE SERVICE...



...that will serve and provide authoritative climate information and services to assist the nation's citizens in making climate-related decisions that enhance their lives and livelihoods.

"Decision makers at all levels of government and in the private sector need reliable and timely information to understand the possible impacts and corresponding vulnerabilities that are posed by climate change so that they can plan and respond accordingly." – Western Governor Association statement to the House Committee on Science and Technology, May 3, 2007

3

## NO SINGLE AGENCY CAN ADDRESS CLIMATE CHANGE



4

## NOAA's CONTRIBUTION: BUILDING ON A STRONG FOUNDATION



NOAA's has a unique breadth of mandates and responsibilities for managing coastal and marine ecosystems, and resources and communities.



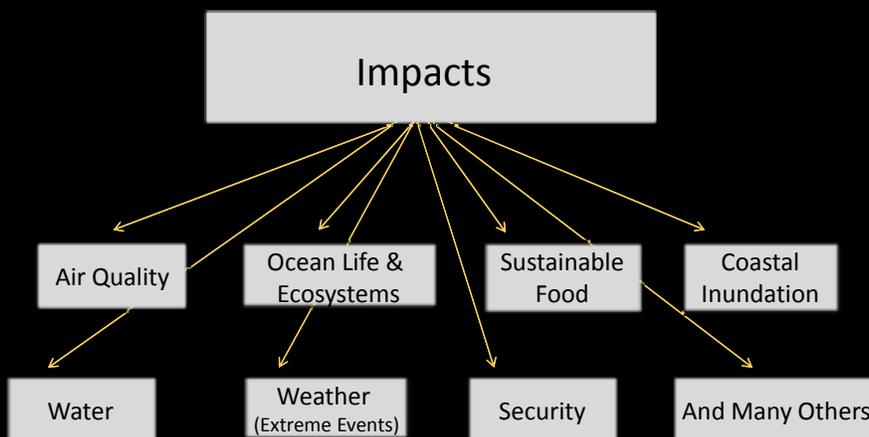
NOAA has a long history of building sustained partnerships with other federal agencies, the private sector, all levels of government, NGOs and the public.



NOAA has a commitment to and demonstrated leadership in the science programs that form the basis for a service including: observing systems; data management and delivery systems; problem focused and fundamental climate research; climate modeling, predictions and projections; and local, regional, national and international assessments of climate change.

5

## IMPACTS: WHY CLIMATE CHANGE MATTERS



6

## ADAPTATION: CRISIS, LEARNING, AND REDESIGN

### What leads to “action”?

1. Focusing events-extremes, legal decisions, *etc.*
2. Leadership and the public are engaged
3. Collaboration between research and management-integrated, scenarios, scenarios/gaming, communication, embedding information into practice, evaluation

*Courtesy R. Pulwarty*

7

## SOME DEFINITIONS

- **Product** – A general term for tangible results, technology, or information that have potential value in one or more *uses*. Examples of the former would be a data set or output from a climate model simulation; examples of the latter would be a forecast or a summary of the state of knowledge on a subject
- **Service** – Processes and routine mechanisms for the acquisition, archiving, indexing, quality assessment, synthesis, interpretation, communication and evaluation of data, knowledge, and information that contributes to the welfare of the nation-**infrastructure/governance to support ongoing partnerships**

*Services work especially well when there is recognition that resources and their effective use are inseparable*

8

## SOME SHARED LESSONS

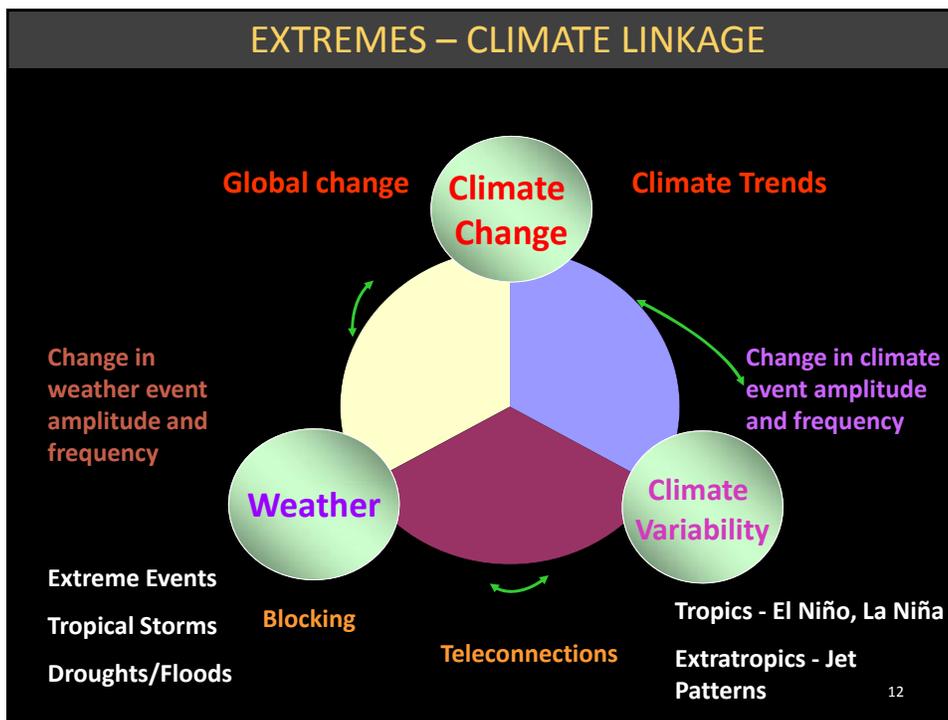
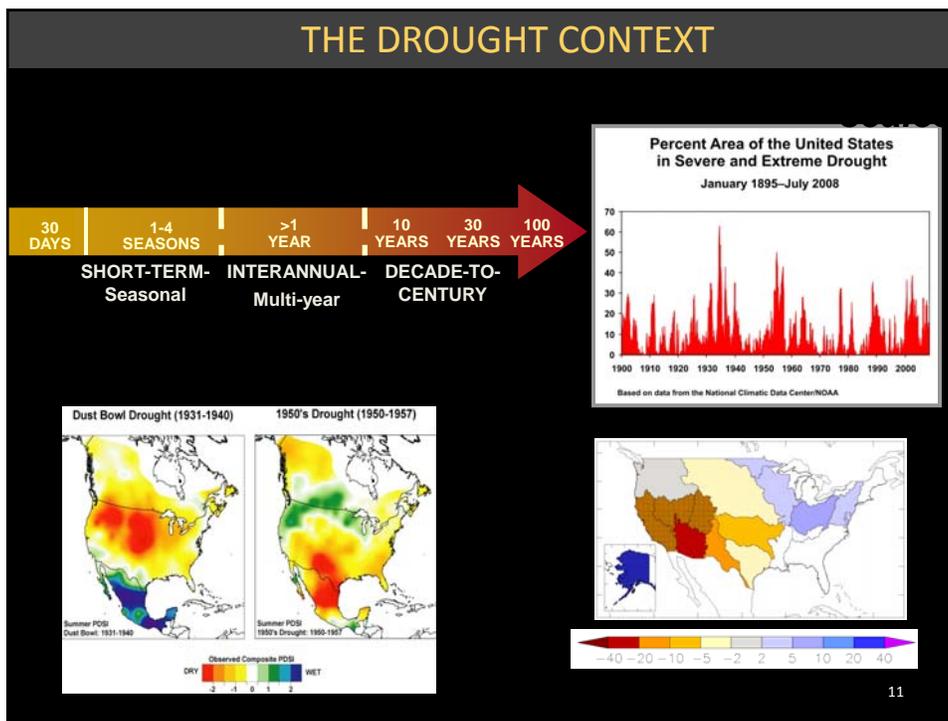
- **Focus on integrated climate-society system**
- **Early & continuous partnership with users essential:**
  - Shared learning & joint problem-solving
  - Equitable attention to groups of all sizes
  - Stable, long-term commitment needed
- **Problem-focused approach:**
  - Understand place, context, history and decision making process as well as particular circumstances of specific groups
  - Useful & usable information responsive to user needs
- **Promote climate literacy and regular communication**

9

## SOME SHARED LESSONS (Continued)

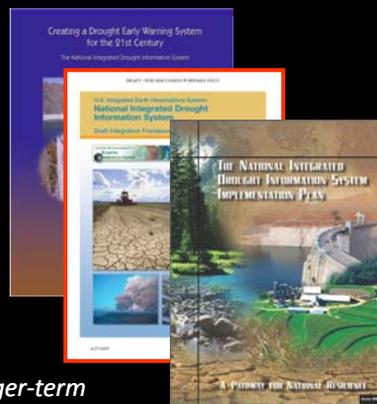
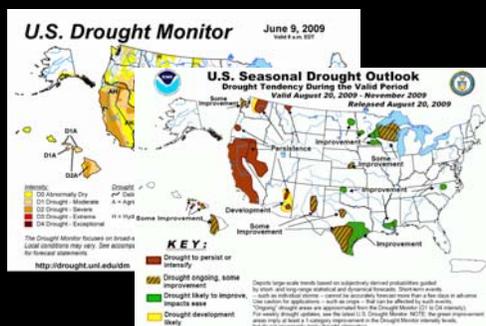
- **Products/services need to be on time and space scales relevant to decision-making:**
  - Address today's problems and plan for the future
  - Growing demand for decadal information for critical decisions such as infrastructure investments
  - Enhanced information related to extreme events, including attribution
- **Address both process and products:**
  - Continuous evaluation and adjustment
- **Build on existing systems, institutions, programs, relationships & networks**
  - Expand partnership between science & operations
  - Engage with trusted information brokers
  - Capitalize on unique assets, credibility and expertise of partner organizations

10



## NIDIS AND REGIONAL ADAPTATION

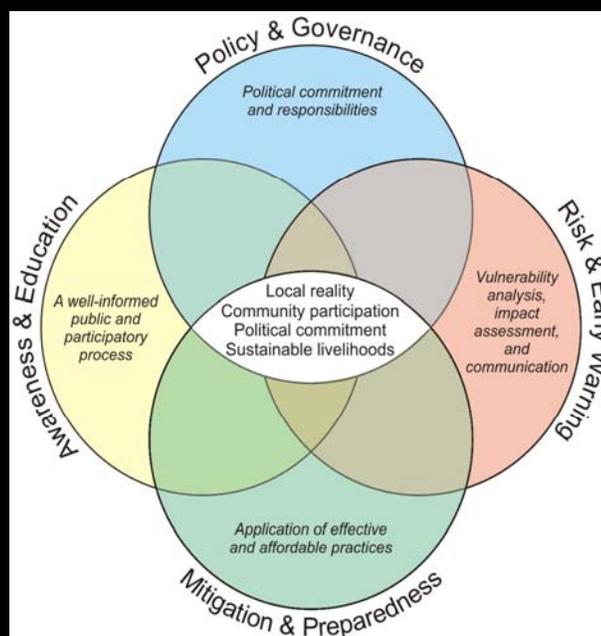
**Goal:** Enable the Nation to move from a reactive to a more proactive approach to managing drought risks and impacts (*Public Law 109-430, 2006*)



Natural variability together with near- and longer-term projections for a warmer climate make critical early warning information to support adaptation

[www.drought.gov](http://www.drought.gov)

## PRINCIPAL ELEMENTS OF CLIMATE RISK REDUCTION



**INFORMATION SERVICES IN A CHANGING CLIMATE**

**People**





**Places**



**Possibilities**





**Partnerships**

**Understanding Risk & Enhancing Resilience**

**NEXT STEPS**

An interactive process that engages federal agencies, states, partner institutions and individuals from across the spectrum of climate research, service provision, users, partners and stakeholders.

A critical issue that must be addressed in these processes is the best arrangement for federal agencies to work in partnership to maximize delivery of climate services to the nation.

*We look forward to engaging in these dialogues.*









16