Building a Climate-Ready Nation: Service Evolution and the Importance of Partnerships

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Department of Commerce // National Oceanic and Atmospheric Administration // 1

The Science is Clear and Compelling

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Human-induced climate change *is already* affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as **heatwaves**, **heavy precipitation**, **droughts**, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened in recent years.

Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, heavy precipitation, and, in some regions, agricultural and ecological droughts; an increase in the proportion of intense tropical cyclones; and reductions in Arctic sea ice, snow cover and permafrost.

...and is Driving US Climate Action

- Executive Orders, incl. EO 14008 Tackling the Climate Crisis at Home and Abroad
 - Leverage the Federal Government's Footprint and Buying
 Power to Lead by Example:
 - Sec 211: Every agency to develop a plan to increase the resilience of its facilities and operations to the impacts of climate change and directs relevant agencies to report on ways to expand and improve climate forecast capabilities – facilitating public access to climate-related information and assisting governments, communities, and businesses to prepare for and adapt to the impacts of climate change.



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211D Report

Opportunities for Expanding and Improving CLIMATE INFORMATION AND SERVICES FOR THE PUBLIC



REPORT TO THE NATIONAL CLIMATE TASK FORCE · OCTOBER 202



- **Recommendation 1:** Focus climate services on the challenges that pose the greatest risks and opportunities to society.
- Recommendation 2: Foster interagency coordination and strategic public-private partnerships to develop, deliver, and continually advance climate services.
- **Recommendation 3:** Enhance the usability, translation, and relevance of climate services to support use by all Americans.
- **Recommendation 4:** Strengthen core science capabilities needed to expand and improve climate services.



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Recommendations for climate services that address the greatest risks and opportunities to society?

- Inform drought preparedness and response
- Inform decision making around current and future flood risks
 - Improve coastal resilience to inundation and hazards
- Improve understanding of, and resilience to, extreme heat
- Enhance the resilience of the U.S. to wildfires

Build partnerships between providers and users.



NOAA Priorities

Science, Service and Stewardship

Climate

Advance NOAA's capabilities as a <u>primary</u> <u>authoritative source</u> for climate products and services and apply these to a diverse range of missions <u>in collaboration with a</u> <u>growing and thriving</u> <u>climate service enterprise</u>.

Balance

Undertake complementary work on <u>environmental</u> <u>stewardship and economic</u> <u>development</u> with a particular focus on the New Blue Economy.

Equity

Exhibit equity in how we build and provide services. Within NOAA, we will promote diversity, equity, inclusion and accessibility in the workforce. Externally, we will provide equitable access to our products and services.



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Climate-Ready Nation Vision Statement

A thriving Nation whose prosperity, health, security, and continued growth benefit from and depend upon a shared understanding of, and collective action to reduce, the impacts of climate change



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Climate-Ready Nation Initial Risk and Focus Areas





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Climate-Ready Nation: an evolution of expertise

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Climate Data and Products		Climate Decision Support				
Enabling Capacities / In	Analysis / Application		Enabling Capacities / Input	Transmission / Translation	Application	Evaluation
 Observations via satellites, weather radars, buoys, ships, aircraft, water level stations, etc. Data archives/ curation IT Infrastructure 	 Research / Development Academia, science centers, modeling centers, industry partners Federal scientists, regional labs 	 Baselines climatologies Extremes and trends Outlooks Projections Viewers/ Mapping 	 Expertise partnership with governments*, the private sector, federal agencies, and the public. Funding Opportunities Convening Capacity Research (Natural and Social science) Geospatial Capacity Communication, Outreach, Education 	 Knowledge transfer Training Climate reports/ assessments with future predictions and projections 	 Place-based application of climate science to support decision making (long-term and short-term) Utilized by stakeholders (private sector, governments*, general public, etc.) 	 End-user engagement Assess, update, and improve tools/services to maximize usefulness and usability Evaluation of user need to better inform data collection
			/milestones along this Flood, Heat, Coastal, nd Mitigation.			



Partnerships are Essential

- Targeting service delivery to state and local leaders, including leaders in communities,
- Engaging with Tribal communities and leaders, recognizing the value of traditional knowledge and, simultaneously, that climate change poses particular threats to indigenous populations
- Working with businesses and the private sector to enable a robust public-private service delivery enterprise;
- Working with academic institutions and NGOs, across the US;
- Supporting other members of the Federal government in climateproofing their investments; and
- Empowering the public to take action in their own lives.



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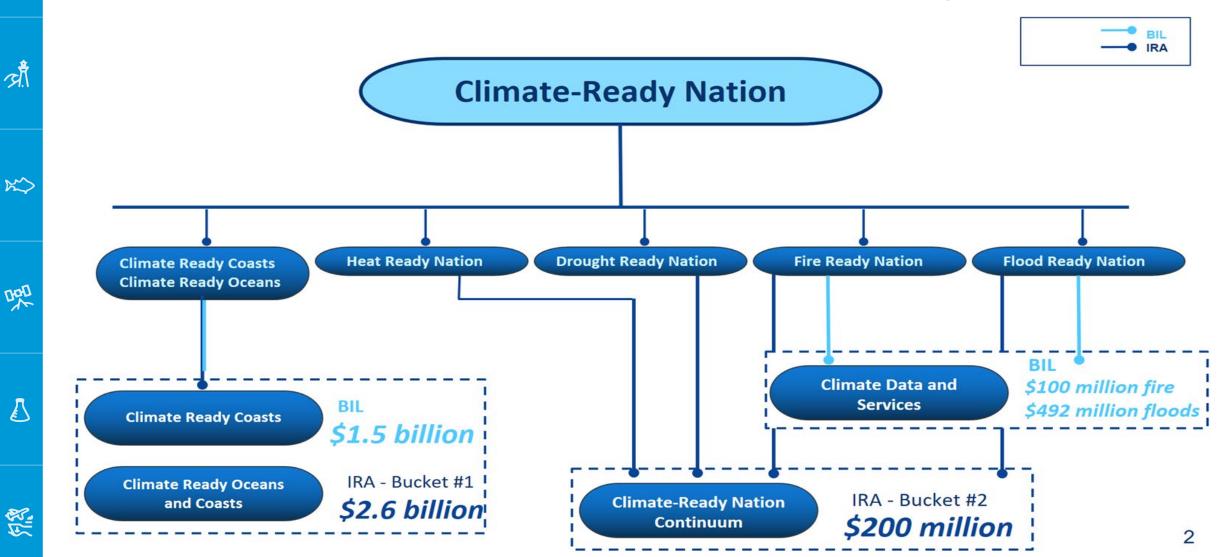
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An Unprecedented Opportunity





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The ultimate goal is to grow a Climate Service Enterprise that provides reliable, fit-for-purpose information and support to decision makers at all levels of society to build resilience to climate change.



Thank You!





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