

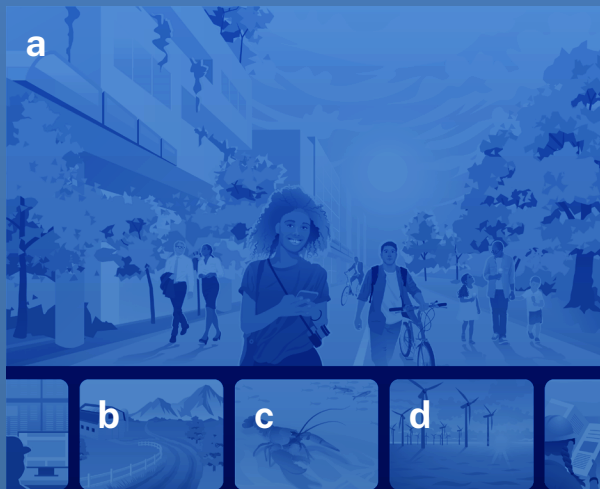
2024-2028

CLIMATE PROGRAM OFFICE

CREDITS

Writing and editing
coordinated by NOAA
Climate Program Office staff.

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design provided by
Visualizing Science LLC.



On the cover:

(a) The Climate Program Office (CPO) builds a future where all peoples, economies, and environments are resilient to climate impacts and work together to sustainably mitigate climate change; (b) CPO often collaborates with rural and Tribal communities. (c) CPO addresses urgent climate-driven societal challenges faced by our nation, including stresses on marine and freshwater ecosystems. (d) CPO builds a future where all peoples work to mitigate climate change.

Contents

Letter from the Acting Director	4
CPO Priorities	5
Vision and Mission	5
Core Values	6
Unique Role	6
Introduction	7
Goals and Strategic Objectives	12
Goal 1: Advance the science foundation for climate change adaptation, resilience, and mitigation.	12
1.1 Lead, convene, and support NOAA’s climate science agenda.	13
1.2 Improve knowledge of climate, its risks and impacts, and solutions.	13
1.3 Advance NOAA’s climate models, datasets, and applications.	13
Goal 2: Advance climate adaptation, resilience, and mitigation by enhancing partnerships and providing actionable information.	14
2.1 Facilitate inclusive approaches to guide climate science and services priorities.	15
2.2 Develop climate knowledge that is relevant and used in decision making.	15
2.3 Expand the collective impact of NOAA’s science and services.	15
Goal 3: Improve public understanding and bolster capacity to respond to climate change.	16
3.1 Build climate literacy across the Nation.	17
3.2 Engage and support a climate-ready workforce.	17
3.3 Build community capacity.	17
Goal 4: Empower our workforce to advance NOAA’s priorities.	18
4.1 Ensure staff have knowledge and resources they need to support CPO’s mission.	19
4.2 Foster an inclusive and collaborative culture in and outside of CPO.	19
4.3 Promote excellence in resource stewardship and administration.	19
Supplementary Information	20
Measures of Performance	20
Alignment with Strategic Plans	22
Legislation	24
Glossary	24
Strategic Plan Development Process and Cycle	26
References	26



Letter from the Acting Director

I am pleased to present the new NOAA Climate Program Office (CPO) Strategic Plan for 2024–2028. The Climate Program Office resides within Oceanic and Atmospheric Research (OAR), the research arm of NOAA. This CPO plan is well aligned with NOAA’s strategic plan, particularly with the goal to build a Climate-Ready Nation. CPO is ready to work in close partnership with its colleagues across OAR and NOAA’s other line offices, with outside experts, practitioners, and communities around the Nation and the world to develop and deliver the climate science and services that are needed to support resilience, adaptation, and mitigation actions in the face of a rapidly changing climate and accounting for climate variations. We will support collaborations, investigations, and actions, and provide actionable information to help all communities adapt, build resilience, and mitigate future change.

In the early 1990s, Mike Hall, who founded the Office of Global Programs, which was CPO’s predecessor, envisioned a well-rounded workforce in which climate science researchers worked collaboratively with social scientists and decision makers. The goal was to ensure that each field was guided and informed by the priority needs of the others so that, ultimately, society would benefit by receiving a steady flow of actionable climate intelligence where, when, and how it’s needed. Thirty years later, this model is more important than ever before. I’m also pleased to report that CPO’s workforce is the strongest and most capable it has ever been. Today, CPO is more racially and gender diverse as the number of minorities and women are increasing and filling leadership positions across the office, enabling us to broaden our approaches and perspectives and deliver more comprehensive and equitable outcomes and products. We are forging and leading partnerships and collaborations across NOAA, across the Federal family, and outside of government to ensure a seamless and sustainable whole-of-society approach. And we are addressing a broad range of climate science and services topics to help support NOAA’s and the Nation’s ability to confront the climate crisis.

CPO has crucial work to do in the next several years to build a Climate-Ready Nation. CPO looks forward to working with our NOAA and external partners to do our part.

A handwritten signature in black ink, appearing to read "V. Ramaswamy". The signature is fluid and cursive, written on a white background.

Venkatachalam “Ram” Ramaswamy, Ph.D.
Acting Director, Climate Program Office

CPO Priorities

Vision

All peoples, economies, and environments are resilient to climate impacts and society works together to sustainably mitigate climate change.

Mission

We advance Earth system and social science, integrated information, and services to build a Climate-Ready Nation.

Core Values

CPO upholds all of NOAA’s core values and principles, with four specific foci.

- **Commit to Diversity:** CPO promotes diversity, equity, inclusion, justice, and accessibility (DEIJA) across its work and staff through the [CPO DEIJA Strategic Plan](#).
- **Uphold Integrity:** From CPO’s rigorous competitive selection process to the research it supports, to its excellence in science communication, CPO is committed to integrity in all that we do.
- **Collaborative Innovation:** CPO builds networks, coalitions, collaborations, and equitable partnerships that converge around the best ideas to advance science, and invests in a comprehensive approach to deliver meaningful results.
- **Engage from Local to Global:** From facilitating local participatory science to international scientific campaigns, CPO engages locally, nationally, and internationally to understand the changing environment and inform the public.

Unique Role

CPO is a unique entity within NOAA that has, for over 30 years, sustained a comprehensive, integrative advancement of climate science and services, by spanning multiple science disciplines, partnering with diverse organizations, and covering multiple timescales.

Introduction

Since 1978, when CPO received its legislative mandate to advance scientific understanding of climate variability and change, and to deliver actionable information to society, the frequency and intensity of weather and climate-related extreme events have continued to rise.

For example, the annual average number of billion-dollar disasters in the United States has *quadrupled since the 1980s* with associated average annual damages increasing from about \$21 billion in the 1980s to about \$96 billion in the 2010s.¹ People who are already vulnerable due to socioeconomic inequality and marginalization are being harmed disproportionately by the impacts of climate change.^{2,3} Now, more than ever, scientific understanding and actionable climate information are needed to help protect people, property, infrastructure, and natural resources in every U.S. region, across many economic sectors, and at all levels of government.

As a program office within the Office of Oceanic and Atmospheric Research (OAR), CPO plays dual roles, driving fundamental science for NOAA’s mission and ensuring science is applied and useful across a broad national and international user base for national and global climate adaptation,

mitigation, and resilience. CPO’s programs span foundational, cross-disciplinary climate sciences, assessments, capacity building, tool development, and education. One of CPO’s core functions is to entrain extramural research expertise across these programs through a competitive grant process to support NOAA’s climate priorities. CPO collaborates closely with partners in NOAA and with the broader academic, Federal, Tribal, international, and private sector communities. CPO partners with NOAA’s laboratories and programs within OAR to complement, extend, and accelerate their studies. CPO also works with other Line Offices to enhance and expand NOAA services across weather, oceans, fisheries, and climate. CPO further builds networks, coalitions, and collaborations, converges around the best ideas, and provides support to accelerate emerging innovation across the climate enterprise of public and private institutions, researchers, practitioners, and consumers. Undertaking a range of

climate science and services initiatives, CPO helps our Nation and the world address climate-related challenges and pursue solution-focused opportunities.

CPO's definition of climate services is comprehensive. It encompasses the development of actionable climate science to inform decision making, as well as partnerships for sustained engagement and to build understanding of the social and policy contexts within which climate-relevant decisions are made.

Furthermore, it includes the capacity building required to ensure information is effectively and equitably used. Over the next five years, CPO's continued investments in climate science and services will be critical to informing decisions for adaptation, resilience, and mitigation. Progress on climate solutions requires sustained, long-term investments in both scientific research and continuous engagement with partners. To date, CPO investments in climate research capabilities have accelerated development of models and climate

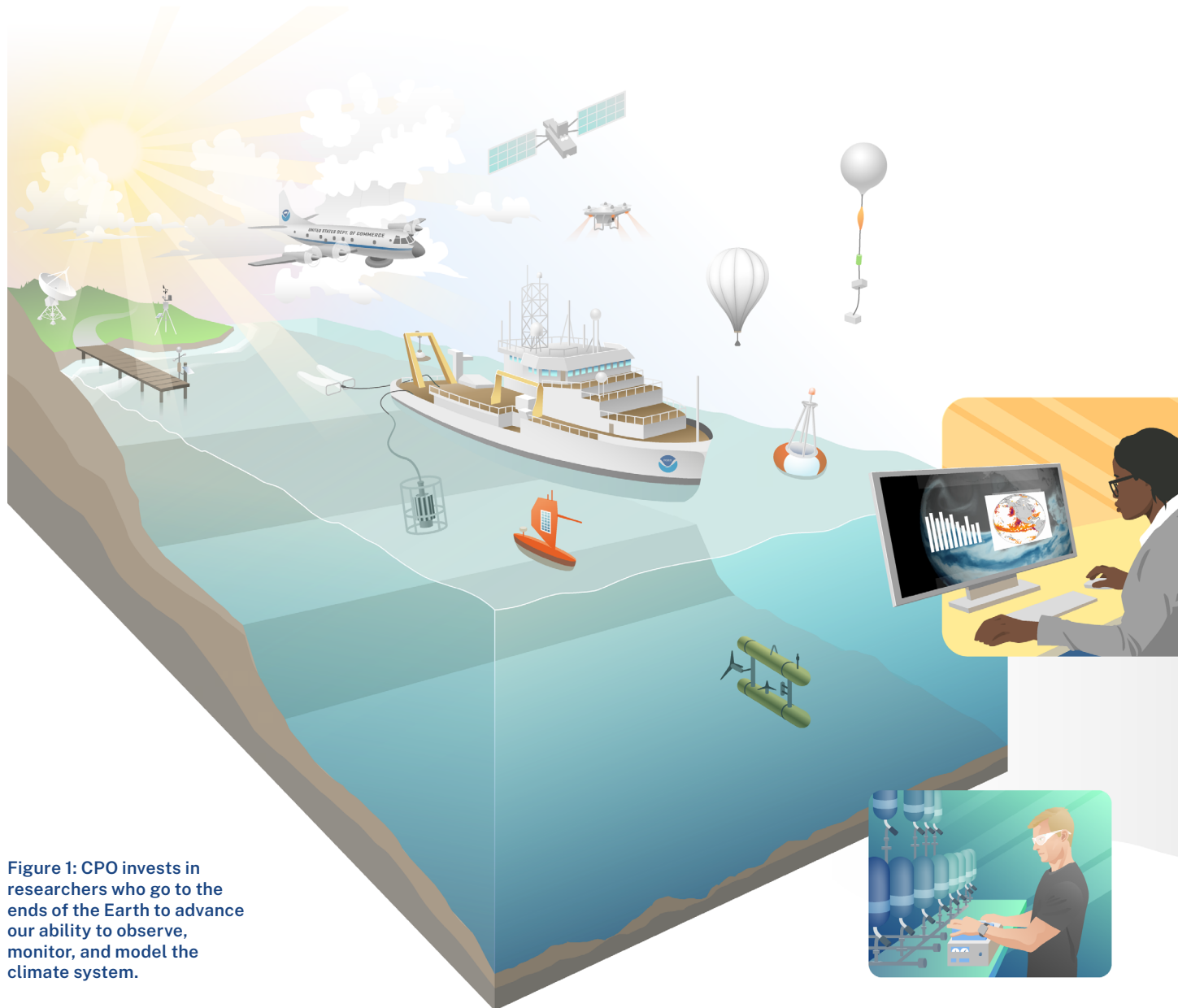


Figure 1: CPO invests in researchers who go to the ends of the Earth to advance our ability to observe, monitor, and model the climate system.

services, and enhanced the workforce in climate adaptation and resilience for NOAA, the US science enterprise, and the Nation.

Building on CPO’s decades-long history, this strategic plan describes four major goals to advance national and global climate adaptation, mitigation, and resilience:

1. Advance the science foundation;
2. Enhance partnerships and provide actionable information;
3. Improve public understanding and bolster capacity; and
4. Empower our workforce to advance NOAA’s priorities.

We will evolve our science funding programs to meet urgent challenges, and incubate innovative advancements in Earth system and social sciences. We will provide critical leadership, scientific expertise and technical support for world-class assessment reports, including the National Climate Assessment. We will enhance and expand our Integrated Information Systems for drought and heat to deliver timely science-based information that can reduce the impacts and costs of these climate-driven challenges. We will more broadly address urgent climate-driven societal challenges faced by our Nation— including water availability and quality, marine and freshwater ecosystems, coastal changes and inundation, and cascading hazards from drought and extreme heat, including wildfire, and air quality issues.

Figure 1 (cont.): CPO invests in the best and brightest researchers to advance climate science and services to address key questions and support society’s ability to plan and build resilience.

We will foster science and innovation that provide the relevant scientific understanding and policy guidance to implement low-carbon climate adaptation, and resilience and mitigation goals. This supports the Nation’s path to net-zero greenhouse gas emissions, and to sustaining a healthy environment and economic prosperity. We will continue to leverage NOAA’s educational programs to grow a climate-literate society with the next generation of climate leaders that understands climate risks, the need for action, and the range of options available to address climate risks and mitigate future climate change. This includes the training programs needed to create high quality jobs and to prepare the workforce needed to build a Climate-Ready Nation.

goals of NOAA’s vision to build a Climate-Ready Nation, NOAA’s Office of Oceanic and Atmospheric Research (OAR) *Strategic Plan*, and the *Decadal Strategic Plan* of the U.S. Global Change Research Program. The plan’s high-level goals emphasize a comprehensive approach to climate challenges and opportunities that will guide CPO’s implementation of activities to advance climate adaptation, resilience, and mitigation. Fully realizing our goals and achieving projected outcomes is subject to future budget availability. CPO will use this plan to guide the future development and resourcing of its priorities over the next five years. As the engine that powers NOAA’s innovations in climate science and services, CPO will execute its plan through its organizational strengths and greatest asset—our people. Equity, integrity, and exceptional business practices will continue to underpin everything we do.

This five-year CPO 2024–2028 *Strategic Plan* aligns with the mission and strategic

Figure 2: CPO collaborates with many partners inside and outside NOAA.

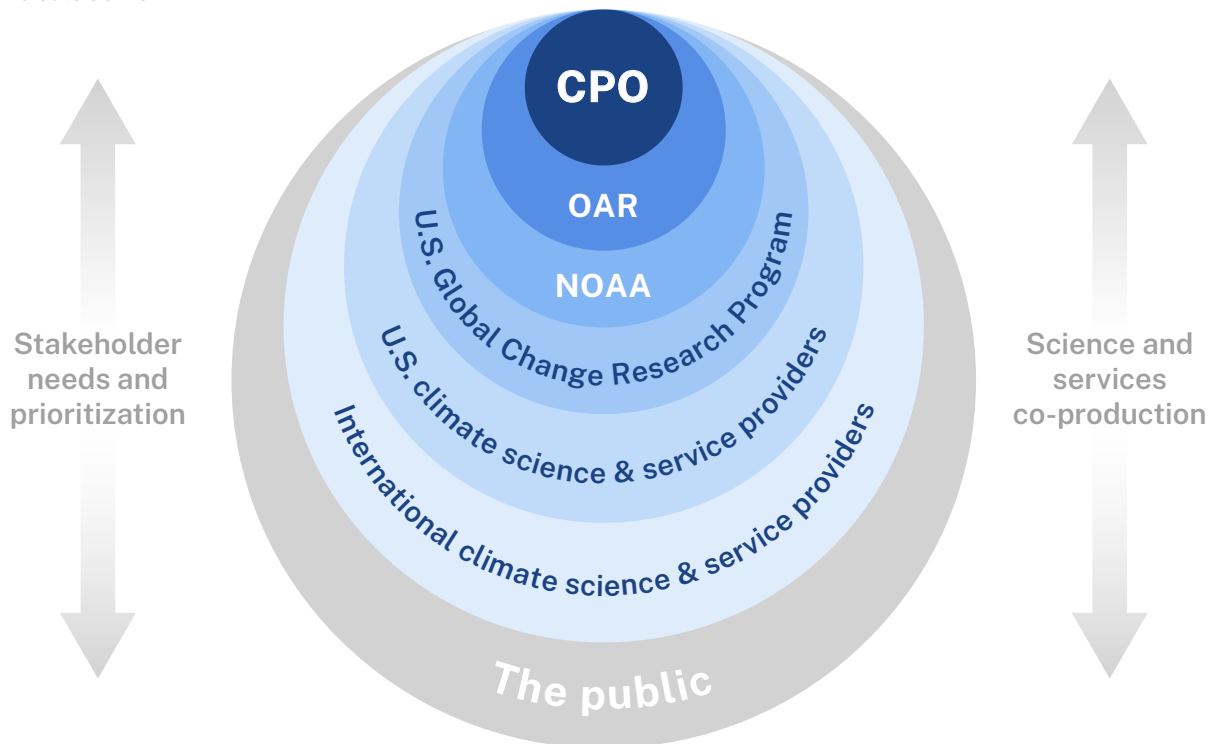


Figure 3: CPO is a unique entity within NOAA that advances climate science and services.



Goals



Goal 1: Advance the science foundation for climate change adaptation, resilience, and mitigation.

Advance the science-based knowledge of Earth's atmosphere, ocean, land, and ice systems, and the Nation's social science capabilities. This knowledge will support the Nation's health, well-being, and economic vitality; and will inform strategies to reduce risks from extreme weather, natural disasters, and mitigate human-caused climate change.

Figure 4: Advancing foundational science is one of CPO's primary goals.

Strategic Objectives

1.1 Lead, convene, and support NOAA’s climate science agenda.

1.11 Convene and lead CPO partners, stakeholders, and networks, nationally and internationally to jointly identify and co-develop scientific priorities, bolster collaborations, and coordinate resources, services, and actions.

1.12 Expand and adapt grants programs, and office practices to catalyze emerging research areas with funding instruments that entrain the highest quality U.S. scientific expertise to respond to societal challenges.

1.13 Pursue interdisciplinary science across Earth and human systems to enhance NOAA’s approach to generating authoritative information for climate hazards and risks, socio-economic stressors, and mitigation and intervention approaches.

1.14 Maximize research investments to advance NOAA and partners’ capabilities through leveraging existing capabilities, and transitioning research outcomes into transformational advancements.

1.2 Improve knowledge of climate, its risks and impacts, and solutions.

1.21 Generate new information and data on the socio-political-economic dimensions of climate change, including impacts, risks, barriers, uncertainties, and opportunities, for successful adaptation and mitigation approaches, in order to inform relevant and implementable solutions across communities.

1.22 Deepen understanding of high-impact climate phenomena and long-term trends, including social contexts, critical to societal challenges through observation, modeling, and dataset development studies to advance NOAA’s supporting capabilities to deliver climate services.

1.23 Fill gaps in understanding of Earth system processes not captured by observing and modeling systems, through targeted field campaigns and data analyses that are critical to representing climate variability and change in NOAA’s decision-supporting models and data.

1.24 Build a baseline understanding of the Earth System and its processes, including climate feedbacks, that will inform the effectiveness of climate change adaptation, mitigation, and intervention strategies for a range of future climate scenarios.

1.3 Advance NOAA’s climate models, datasets, and applications.

1.31 Develop and improve NOAA Earth system models for more accurate forward-looking information and improved understanding of the Earth system in a changing climate.

1.32 Develop and improve NOAA’s climate datasets and related socio-economic data for improved understanding, historical and real-time monitoring information, and modeling needs.

1.33 Pilot new applications for NOAA Earth and human systems observations, models, and data, including integrated data and tools highlighting Earth-human systems interactions, on the local, regional, national, and global level.



Goal 2: Advance climate adaptation, resilience, and mitigation by enhancing partnerships and providing actionable information.

Strengthen, enhance, and expand partnerships across local, state, federal, and tribal governments, non-government organizations, and businesses that enable equitable and trusted codevelopment of long-term strategies and implementable actions for a Climate-Ready Nation.

Figure 5: CPO builds resilience across the nation through strong partnerships with local, state, federal, and tribal governments, and other entities.

Strategic Objectives

2.1 Facilitate inclusive approaches to guide climate science and services priorities.

2.11 Cultivate and sustain relationships with a wide range of partners to understand their decision-making needs and to improve the knowledge and networks they rely on to address climate concerns.

2.12 Enable and support collaborative processes between scientists and decision-makers to identify and address climate information needs, across a range of time scales, geography and societal sectors.

2.13 Adapt CPO’s and partners’ public-facing and authoritative information and associated tools to address advancements in NOAA science and emerging stakeholder needs.

2.14 Advance inclusive engagement approaches through co-development and participatory science to ensure that climate information is useful and usable by all.

2.2 Develop climate knowledge that is relevant and used in decision-making.

2.21 Co-develop tailored information for decision makers through partnerships and targeted research that is founded in authoritative data, observations, and capabilities.

2.22: Advance interdisciplinary research that crosses disciplines and sectors to improve risk assessments, knowledge of uncertainties, and actions that can be applied at local, regional, and sectoral scales.

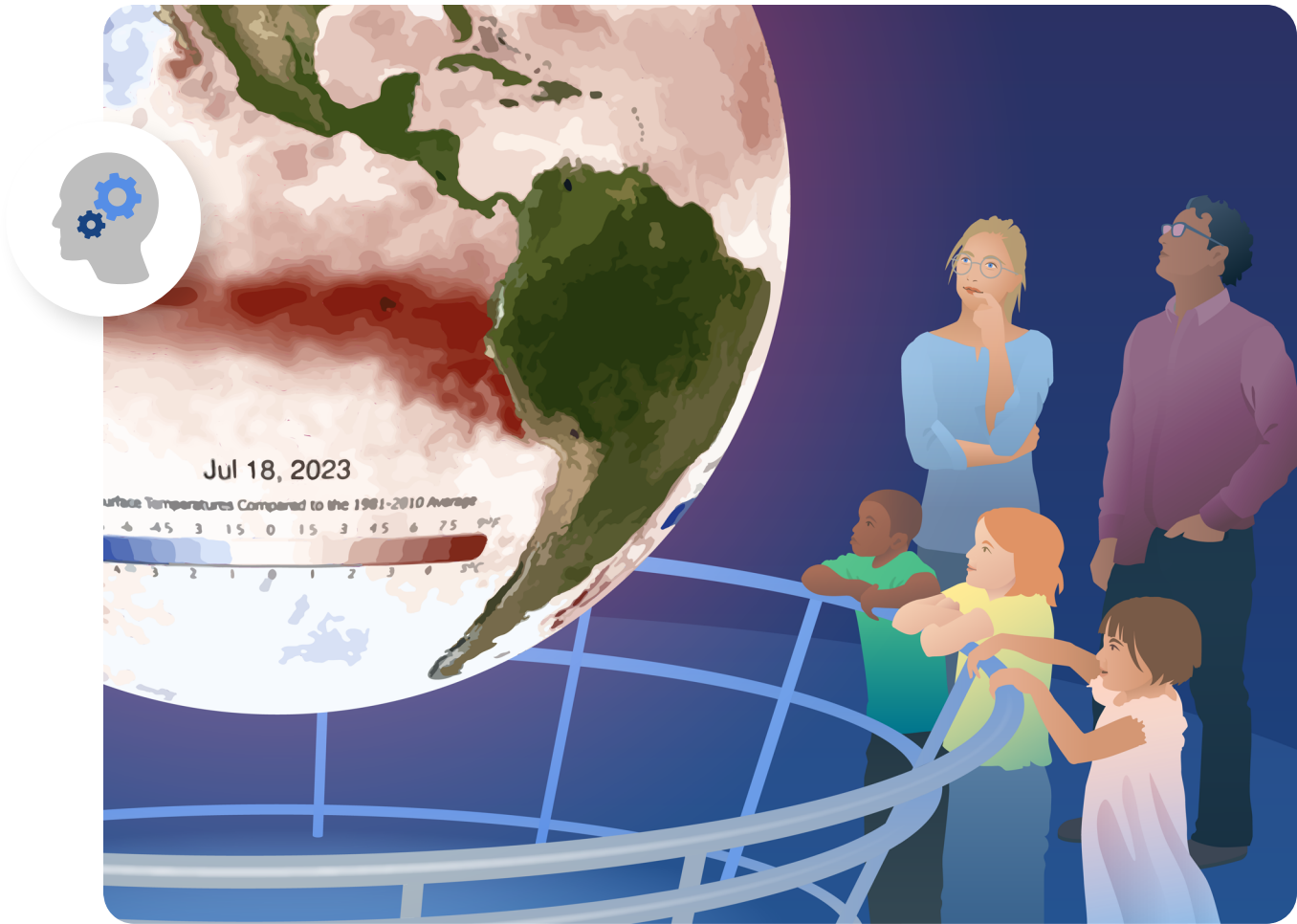
2.23: Support integrated, systems-focused approaches that accelerate climate responses with co-benefits to communities to ensure solutions promote well-being across social and natural systems.

2.24: Advance research and evaluation on engagement and application processes that improve climate service development, delivery, and evaluation to ensure effective and equitable practices across communities and sectors.

2.3 Expand the reach of NOAA’s trusted information and services.

2.31 Expand and scale CPO program’s efforts through partnerships and other activities to support communities and tribal nations across U.S. states and territories, and internationally, with emphasis on the underserved.

2.32: Shape regional, national, and global climate services through sustaining long-term partnerships and by providing technical support.



Goal 3: Improve public understanding and bolster capacity to respond to climate change.

Co-develop and deploy education and training initiatives that build knowledge and skills people need to build climate resilience while reducing harmful climate impacts and mitigating future change.

Figure 6: CPO invests in diverse means of public communication and engagement.

Strategic Objectives

3.1 Build climate literacy across the Nation.

3.11 Advance understanding of climate science through clear, compelling, factual, plain-language communications.

3.12 Enhance and expand communication efforts to reach more people through the use of media outlets, multimedia platforms, web services, education systems, and engagement activities.

3.13 Build and enhance strategic partnerships to strengthen NOAA's and its partners' climate communication, education, and capacity-building initiatives.

3.14 Support educators at all levels in integrating climate-related sciences, hazards, resilience-building, and mitigation strategies into curricula and professional development programs.

3.2 Bolster and support a climate-ready workforce.

3.21 Advance professional development and training of students and early career scientists to develop the next generation of leaders for NOAA mission areas.

3.22 Support opportunities for solutions-oriented education at all levels, particularly among underserved groups, to help people understand how climate change intersects with social and political issues and identify opportunities for resilience and mitigation

3.23 Prepare the Nation's workforce to tackle 21st century climate challenges and innovate solutions by applying climate-related sciences and data to complex societal issues through funding, training, boundary organizations, finance, and network building.

3.3 Build community capacity.

3.31 Grow capacity for practitioners and decision-makers to develop and implement place-based solutions in communities and sectors across the nation and the world through networks, co-development, understandings of tradeoffs and benefits, and financial pathways.

3.32 Grow capacity for communities to participate in and inform decisions for relevant climate responses through engagement, training, relevant information, and education.

3.33 Build relationships with marginalized, overburdened, and underserved communities to reduce systemic barriers to resources and knowledge, and to ensure co-development of equitable climate responses.

3.34 Foster connectivity and learning with and among diverse communities through engagement and network building to share knowledge and accelerate and scale climate responses at the local, regional, national, and international levels.



Goal 4: Empower our workforce to advance NOAA’s priorities.

Recruit and sustain a highly skilled CPO workforce that is diverse, dedicated, and resilient. Evolve the practices they require (tools, processes, policies etc.) to be nimble and adaptive. Foster a culture of openness and collaboration to ensure all staff members feel valued and included.

Figure 7: CPO maintains a high standard of excellence for its business and administrative functions.

Strategic Objectives

4.1 Ensure staff have the knowledge and resources they need to support CPO’s mission.

4.11 Ensure continuity of leadership, expertise, and knowledge through retaining and attracting a highly skilled, innovative, diverse and flexible workforce, and developing succession plans.

4.12 Align and manage healthy workloads with plans, priorities, and professional development, emphasizing mission-critical outcomes.

4.13 Evolve our business processes and workforce plans to be efficient and effective.

4.14 Support professional/career development and growth where staff enhance their individual skills and competencies, and are recognized for their achievements.

4.2 Foster an inclusive and collaborative culture in and outside of CPO.

4.21 Encourage teamwork opportunities for developing ideas through collaborative, coordinated efforts within CPO and with partners.

4.22 Sustain a culture of transparency, integrity, and empowerment across CPO through communication and decision-making at all staff levels.

4.23 Drive and maintain meaningful partnerships inside and outside the agency across CPO portfolio areas through strong customer focus practices and relationship development investments.

4.24 Promote diversity, equity, inclusion, justice, and accessibility (DEIJA) and integrate these principles into initiatives and collaborative opportunities, including performance elements across all staffing plan levels; and prioritize activities that carry DEIJA principles to our partners, stakeholders, and communities.

4.3 Promote excellence in resource stewardship and administration.

4.31 Ensure fair and equitable access to resources by utilizing the full breadth of funding mechanisms and agreement types that effectively obtain, leverage, and transparently administer resources.

4.32 Operate and maintain priorities that reflect CPO’s balanced, integrated climate portfolio, informed by our work and partners.

4.33 Promote awareness and build support for CPO’s investments in climate science and services among executive and legislative government leaders.

Supplementary Information

Measures of Performance

Program performance is assessed on an annual basis through OAR’s Annual Operating Performance process, and through OAR’s 5-year program review cycle. Divisions and programs within the Climate Program Office conduct varying levels of performance monitoring and evaluation to ensure alignment with and implementation of CPO’s strategic plan. CPO activities are complex and integrated and can fulfill multiple table measures at the same time. In addition, individual CPO programs may have their own performance measures.

Outcome	Output and Impact Measures
<p>Goal 1 NOAA’s Earth system and social science research capabilities generate improved understanding and can be applied in new ways to inform societal climate responses—climate adaptation, mitigation, resilience.</p>	<p>Milestones</p> <ul style="list-style-type: none"> ■ CPO’s climate science agenda is co-developed with partners and supports NOAA’s mission ■ Projects and activities generate new knowledge, improve understanding and/or societal applications <p>Quantitative Measures</p> <ul style="list-style-type: none"> ■ Annual number of new grant awards that improve scientific understanding of the climate system ■ Annual number of peer-reviewed publications that advance climate understanding, predictions, and delivery of information to communities ■ Annual number of research and information products that are transitioned to a new stage (development, demonstration, or application) to improve Earth system understanding and provide information to the private and public sector
<p>Goal 2 Communities have improved actionable information to support their short and long-term planning needs for climate adaptation, mitigation, and resilience.</p>	<p>Milestones</p> <ul style="list-style-type: none"> ■ Teams provide comprehensive, nationwide research, partnerships and services to stakeholders ■ CPO initiatives are co-developed with support and buy-in from stakeholders and partners

Outcome	Output and Impact Measures
<p>Goal 2 (cont.) Communities have improved actionable information to support their short and long-term planning needs for climate adaptation, mitigation, and resilience.</p>	<p>Quantitative Measures</p> <ul style="list-style-type: none"> ■ Number of assessments of current or future states of the climate system that inform science, service, and stewardship directions that are developed or implemented ■ Number of decision-maker plans, policies, and actions that are informed by our research, engagement, programs, tools, and assessments ■ Number of States, Territories and Tribal Nations are working with CPO programs to incorporate information into decision-making/management efforts
<p>Goal 3 More people across the Nation and the world have the requisite knowledge and skills to participate, innovate, and lead on climate science and climate responses—adaptation, mitigation, and resilience.</p>	<p>Milestone</p> <ul style="list-style-type: none"> ■ CPO initiatives are coordinated and integrated where appropriate with NOAA and non-NOAA partners <p>Quantitative Measures</p> <ul style="list-style-type: none"> ■ CPO-hosted climate.gov visits increases in viewership (year over year percent increase) ■ Number of projects and activities launched to build capacity, support students and professionals, and train practitioners
<p>Goal 4 CPO is a leader in NOAA in setting the standard for cutting edge business practices.</p>	<p>Milestone</p> <ul style="list-style-type: none"> ■ CPO staff participate in trainings/growth opportunities <p>Quantitative Measure</p> <ul style="list-style-type: none"> ■ Breadth of CPO impact on NOAA offices (number of offices CPO shares its business practices with, executes resources, or provides support)
<p>Goal 4 CPO is an inclusive place to work where all staff feel a sense of belonging.</p>	<p>Milestone</p> <ul style="list-style-type: none"> ■ CPO activities across Divisions align with the DEIJA strategic plan <p>Quantitative Measure</p> <ul style="list-style-type: none"> ■ CPO has satisfactory Workplace Survey Results

Alignment with Strategic Plans

CPO Strategic Goals	Alignment with Goals and Objectives of Strategic Plans
<p>Goal 1 NOAA’s Earth system and social science research capabilities generate improved understanding and can be applied in new ways to inform societal climate responses—climate adaptation, mitigation, resilience.</p>	<p><i>Dept. of Commerce Strategic Plan 2022–2026⁴</i></p> <ul style="list-style-type: none"> ■ Address the Climate Crisis Through Mitigation, Adaption, and Resilience Efforts (3.1, 3.2) <p><i>NOAA Climate-Ready Nation Strategic Plan 2022–2026⁵</i></p> <ul style="list-style-type: none"> ■ Build a Climate-Ready Nation (1.2, 1.3) ■ Make Equity Central to NOAA’s Mission (2.1) ■ Accelerate Growth in an Information-based Blue Economy (3.1, 3.3) <p><i>OAR Strategic Plan 2020–2026⁶</i></p> <ul style="list-style-type: none"> ■ Explore the Marine Environment (1.2) ■ Detect Changes in the Ocean and Atmosphere (2.2, 2.3) ■ Make Forecasts Better (3.1, 3.2, 3.3) ■ Drive Innovative Science (4.2, 4.3) <p><i>U.S. Global Change Research Program Decadal Strategic Plan⁷</i></p> <ul style="list-style-type: none"> ■ Pillar 1: Advancing Science ■ Pillar 4: Engaging Internationally
<p>Goal 2 Communities have improved actionable information to support their short and long-term planning needs for climate adaptation, mitigation, and resilience.</p>	<p><i>Dept. of Commerce Strategic Plan 2022–2026⁴</i></p> <ul style="list-style-type: none"> ■ Address the Climate Crisis Through Mitigation, Adaption, and Resilience Efforts (3.1, 3.2) <p><i>NOAA Climate-Ready Nation Strategic Plan 2022–2026⁵</i></p> <ul style="list-style-type: none"> ■ Build a Climate-Ready Nation (1.1, 1.2, 1.3, 1.4) ■ Make Equity Central to NOAA’s Mission (2.1, 2.2) ■ Accelerate Growth in an Information-based Blue Economy (3.1, 3.2, 3.3)

CPO Strategic Goals	Alignment with Goals and Objectives of Strategic Plans
<p>Goal 2 (cont.) Communities have improved actionable information to support their short and long-term planning needs for climate adaptation, mitigation, and resilience.</p>	<p><i>OAR Strategic Plan 2020–2026</i>⁶</p> <ul style="list-style-type: none"> ■ Explore the Marine Environment (1.3) ■ Detect Changes in the Ocean and Atmosphere (2.3) ■ Make Forecasts Better (3.3) ■ Drive Innovative Science (4.2, 4.3) <p><i>U.S. Global Change Research Program Decadal Strategic Plan</i>⁷</p> <ul style="list-style-type: none"> ■ Pillar 2: Engaging the Nation ■ Pillar 3: Informing Decisions ■ Pillar 4: Engaging Internationally
<p>Goal 3 More people across the Nation and the world have the requisite knowledge and skills to participate, innovate, and lead on climate science and climate responses—adaptation, mitigation, and resilience.</p>	<p><i>Dept. of Commerce Strategic Plan 2022–2026</i>⁴</p> <ul style="list-style-type: none"> ■ Provide 21st Century Service with 21st Century Capabilities (5.1, 5.2) <p><i>NOAA Climate-Ready Nation Strategic Plan 2022–2026</i>⁵</p> <ul style="list-style-type: none"> ■ Build a Climate-Ready Nation (1.1) ■ Make Equity Central to NOAA’s Mission (2.1, 2.2) <p><i>U.S. Global Change Research Program Decadal Strategic Plan</i>⁷</p> <ul style="list-style-type: none"> ■ Pillar 2: Engaging the Nation ■ Pillar 4: Engaging Internationally

Legislation

- NOAA is mandated by Congress to advance scientific understanding of climate variability and change, and to deliver actionable information to society. In particular, the **National Climate Program Act of 1978** (Public Law 95-361; 15 U.S.C. §§ 2901-2908) called for a national climate program within the Department of Commerce which today is the Climate Program Office.⁸
- CPO plays a leading role in the U.S. Global Change Research Program, which was mandated by Congress in the **Global Change Research Act of 1990** (15 U.S.C. §§ 2921-2961).⁹ Further, CPO provides critical support to the Act’s mandated National Climate Assessment, USGCRP’s annual report to Congress called Our Changing Planet, and other major interagency activities.
- CPO leads the multi-agency **National Integrated Drought Information System (NIDIS)**, authorized by Congress in 2006 (PL-109-430) and reauthorized in 2014 and 2019.^{10,11}
- Congress defined NOAA’s role in science and stewardship education with the **America Competes Act of 2007 and 2011** (Public Law 110–69; Public Law 111–358), which was last reauthorized in 2017 as the American Innovation and Competitiveness Act (Public Law 114–329). These acts provide broad authority for educational activities.^{12,13,14}
- **Weather Research and Forecasting Innovation Act of 2017** (15 U.S.C. § 8501)¹⁵
- **Inflation Reduction Act 2022**¹⁶
- **Infrastructure Investment and Jobs Act 2022**¹⁷

Glossary

Actionable information: Data or knowledge that is specific and relevant enough to be used to make a decision or take an action. Such information must meet or exceed a threshold of confidence to be acted upon.

Adaptation: Adjustment in natural or human systems to a new or changing environment that takes advantage of beneficial opportunities or moderates negative effects.¹⁸

Climate Information: Data that describe past, present, or future environmental conditions at scales from local to global. Climate information encompasses records of short-term weather events and their consequences, reconstructions of millenia-long periods interpreted from natural records, and projections from computer-based models.

Climate Knowledge: Awareness and comprehension of the main components of the climate system, interactions among them, consequences of observed or projected changes in the system, and strategies to equitably protect vulnerable people, ecosystems, and infrastructure. Essential elements of climate knowledge include physical and social science concepts.

Climate Literacy: The ability to understand, communicate, and make informed decisions about how to address climate change.¹⁸

Climate Mitigation: Measures that reduce the amount and speed of future climate change by either reducing emissions of carbon dioxide, methane, and other heat-trapping gases or removing carbon dioxide from the atmosphere. Measures that alter the energy balance of

the Earth by other means are referred to as intervention.⁷

Climate-Ready Nation: 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.⁵

Decision Makers: Decision makers include federal, state, local, and tribal leaders; academia, nonprofit, and private industry leaders; and others who have the capacity to use NOAA data to make informed decisions impacting their constituents, customers, and families.¹⁹

Earth System: The Earth System has two primary components—the geosphere and the biosphere. The geosphere includes the atmosphere, lithosphere, cryosphere, and hydrosphere (e.g. ocean is a component of the hydrosphere). Climate processes and cycles (biogeochemical, hydrological) are interactions within and across the components of the Earth System.²⁰

Overburdened Community: Minority, low-income, tribal, or indigenous populations or geographic locations in the United States that potentially experience disproportionate environmental harms and risks. This disproportionality can be as a result of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative or lack of positive environmental, health, economic, or social conditions within these populations or places. The term describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.²¹

Marginalized People and/or Communities: Individuals, groups, or communities who are excluded from civic discourse and decision making or lack equal access to resources, services, and social, economic, and political opportunities, because of systemic and persistent discrimination and other forms of oppression.

Underserved Communities: The term “underserved communities” refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list in the preceding definition of equity.¹⁹

Resilience: The capacity to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment.⁷

Risk: Threats to life, health and safety, the environment, economic well-being, and other things of value. Risks are often evaluated in terms of how likely they are to occur (probability) and the damages that would result if they did happen (consequences).⁷

Strategic Plan Development Process and Cycle

Building on the recommendations for the next strategic plan in the Climate Program Office Program Review Report (2022), the office formed a writing team with representation across its four divisions and integrated programs in Fall 2022 to draft an outline. The office presented drafts to OAR leadership in January 2023, as well as to OAR leadership and Directors in May 2023. CPO sought feedback on its Draft Strategic Plan from NOAA through the NOAA Climate Team leads, and through the NOAA Science Advisory Board Climate Working Group (CWG). In addition, CPO also sought feedback from both the Federal and non-Federal communities it works with. Comments from the NOAA CWG are available online. A total of 143 comments were received from CPO's Federal and non-Federal partners, which included representatives across disciplines and academia, Non Governmental Organizations, and industry as well as Federal representatives in USGCRP. These comments, along with recommendations from the CWG were taken into account in revising for the final Plan, and will also inform CPO's more detailed plans as it moves discussions forward in implementing its strategic plan. CPO will begin the development of its next strategic plan, following its 5 year program review in 2028.

References

1. NOAA NCEI, 2023, <https://www.ncei.noaa.gov/access/billions/events.pdf>
2. IPCC, 2022: Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–33, doi:10.1017/9781009325844.001.

3. National Academies of Sciences, Engineering, and Medicine. 2022. Equitable and Resilient Infrastructure Investments. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26633>.
4. Department of Commerce Strategic Plan 2022–2026, <https://www.commerce.gov/about/strategic-plan>
5. NOAA Climate-Ready Nation Strategic Plan 2022–2026, https://www.noaa.gov/sites/default/files/2022-06/NOAA_FY2226_Strategic_Plan.pdf
6. OAR Strategic Plan 2020–2026, <https://research.noaa.gov/wp-content/uploads/2023/05/OAR-Strategy-2020-2026-14.pdf>
7. U.S. Global Change Research Program (USGCRP) Decadal Strategic Plan, 2022, <https://www.globalchange.gov/reports/us-global-change-research-program-2022-2031-strategic-plan>
8. National Climate Program Act of 1978, 15 U.S.C. §§ 2901-2908, <https://uscode.house.gov/view.xhtml?path=/prelim@title15/chapter56&edition=prelim>
9. Global Change Research Act of 1990, 15 U.S.C. §§ 2921-2961, <https://uscode.house.gov/view.xhtml?path=/prelim@title15/chapter56A&edition=prelim>
10. National Integrated Drought Information System Act, Public Law 109-430, <https://www.congress.gov/109/plaws/publ430/PLAW-109publ430.pdf>
11. National Integrated Drought Information System Reauthorization Act of 2018, Public Law 115-423, 15 U.S.C. § 313d), <https://www.congress.gov/115/plaws/publ423/PLAW-115publ423.pdf>
12. America Competes Act of 2007, Public Law 110-69, <https://www.govinfo.gov/app/details/PLAW-110publ69>
13. America Competes Act of 2011, Public Law 111-358, <https://www.govinfo.gov/app/details/PLAW-111publ358>
14. American Innovation and Competitiveness Act, Public Law 114-329, <https://www.congress.gov/114/plaws/publ329/PLAW-114publ329.pdf>
15. Weather Research and Forecasting Innovation Act of 2017 (15 U.S.C. § 8501) <https://uscode.house.gov/view.xhtml?path=/prelim@title15/chapter111&edition=prelim>
16. Inflation Reduction Act, 2022, <https://www.congress.gov/bill/117th-congress/house-bill/5376/text/rh>
17. Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act), 2022, <https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf>
18. USGCRP, 2009, <https://www.globalchange.gov/reports/climate-literacy-essential-principles-climate-science-0>
19. NOAA Weather Water Climate Strategy 2023, <https://www.noaa.gov/sites/default/files/2022-12/NOAA-FY23-27-Weather-Water-and-Climate-Strategy-12092022.pdf>
20. USGS, 2012, https://pubs.usgs.gov/pp/p1386a/pdf/notes/1-8hydrocycle_508.pdf
21. EPA Environmental Justice Glossary, 2020, <https://www.epa.gov/environmentaljustice/ej-2020-glossary>

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