Adaptation Communication of the United States

November 2021

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Introduction

With reference to the Paris Agreement Article 7, paragraphs 10 and 11 and decision 9/CMA.1, this document serves as the United States' first adaptation communication under the Paris Agreement.

Climate change is already impacting almost every aspect of life, including human health, agriculture, infrastructure, and natural resources. In the United States, climate change has already resulted in more frequent heat waves, extreme precipitation, larger wildfires, and water scarcity. The last few years have been among the hottest on record, seen accelerated sea level rise and unprecedented climate-related weather extremes. These are serious challenges that directly affect families, communities, and jobs across the nation and all over the world. The United States is committed to scaling up actions that enhance the resilience of people, communities, infrastructure, and natural resources to the impacts of climate change domestically and internationally.

Recognizing the urgency of the climate crisis, the Biden Administration has taken steps to rapidly scale up adaptation efforts both domestically and abroad. Within one week of his inauguration, President Biden established a cabinet-level National Climate Task Force and called on it to develop a whole-of-government approach to the climate crisis. Among other things, the President spelled out the necessity to "increas[e] resilience to the impacts of climate change." Toward that end, the White House has established five high-level Interagency Working Groups to tackle major climate impacts that are affecting the United States. The Interagency Working Groups cover extreme heat; drought; floods; wildfires; and coastal impacts. Bolstered by the White House and cabinet's strong support, federal agencies are working together to provide data, expertise, and financial resources that will help communities across the country be better prepared and more resilient to climate-related hazards and challenges.

Looking forward, domestically the United States is advancing five cross-cutting adaptation priorities coordinated by the National Climate Task Force coordinated by the National Climate Task Force: 1) improving community resilience planning; 2) promoting the design and construction of resilient infrastructure; 3) measuring, disclosing, managing, and mitigating

climate-related financial risks to communities and the U.S. economy; 4) conserving and restoring lands and waters; and 5) advancing innovative and measurable resilience solutions.

As the United States reduces and manages the impacts of climate change domestically, it is also committed to enhancing international cooperation and helping vulnerable countries adapt. The President's Emergency Plan for Adaptation and Resilience (PREPARE) will support vulnerable developing countries and communities around the world in their efforts to prepare for climate impacts. PREPARE includes three priority areas of action – PREPARE Knowledge, PREPARE Plans and Programs, PREPARE Resources – that will serve as the cornerstone of the U.S. Government response to addressing the increasing impacts of the global climate crisis abroad. Through PREPARE, the United States will bring the full expertise of its federal agencies to work with international partners to enhance adaptive capacity, strengthen resilience, and reduce vulnerability. These efforts will build on the Federal agency climate adaptation and resilience plans the Administration released, each of which outlines steps an agency will take to ensure that Federal facilities and operations advance adaptation and increase resilience to climate-related impacts.

This Adaptation Communication outlines the United States' major domestic and international climate adaptation initiatives. Section I, entitled Advancing U.S. Climate Resilience, identifies major resilience activities underway in the United States. Section II, entitled International Cooperation, outlines U.S. climate adaptation commitments to the international community.

Advancing U.S. Climate Resilience

President Biden has made combatting the climate crisis—including building resilience against the climate impacts that already are taking American lives and livelihoods—a central priority of his Administration. At its core, U.S. adaptation policy is driven by a commitment to support and partner with the communities that are facing climate challenges. To expand on longstanding initiatives, the federal government is focusing on five priorities for better assisting communities and their leaders, institutions, businesses, and residents to build a more resilient future:

1) Improving community resilience planning;

2) Promoting the design and construction of resilient infrastructure;

3) Measuring, disclosing, managing, and mitigating climate-related financial risks to communities and the U.S. economy;

4) Conserving and restoring lands and waters; and

5) Advancing innovative and measurable resilience solutions.

The federal government also is leading by example. In October 2021, the Administration released plans developed by more than 20 federal agencies to ensure that their facilities and operations adapt to and are increasingly resilient to climate change impacts. The plans reflect President Biden's whole-of-government approach to confronting the climate crisis as agencies integrate climate-readiness across their missions and programs and strengthen the resilience of federal assets from the accelerating impacts of climate change. Through agency programs and the Justice40 Initiative—which commits to delivering at least 40% of the overall benefits of federal investments in climate and clean energy to disadvantaged communities— the Administration is ensuring that all Americans have equitable access to resilience resources.

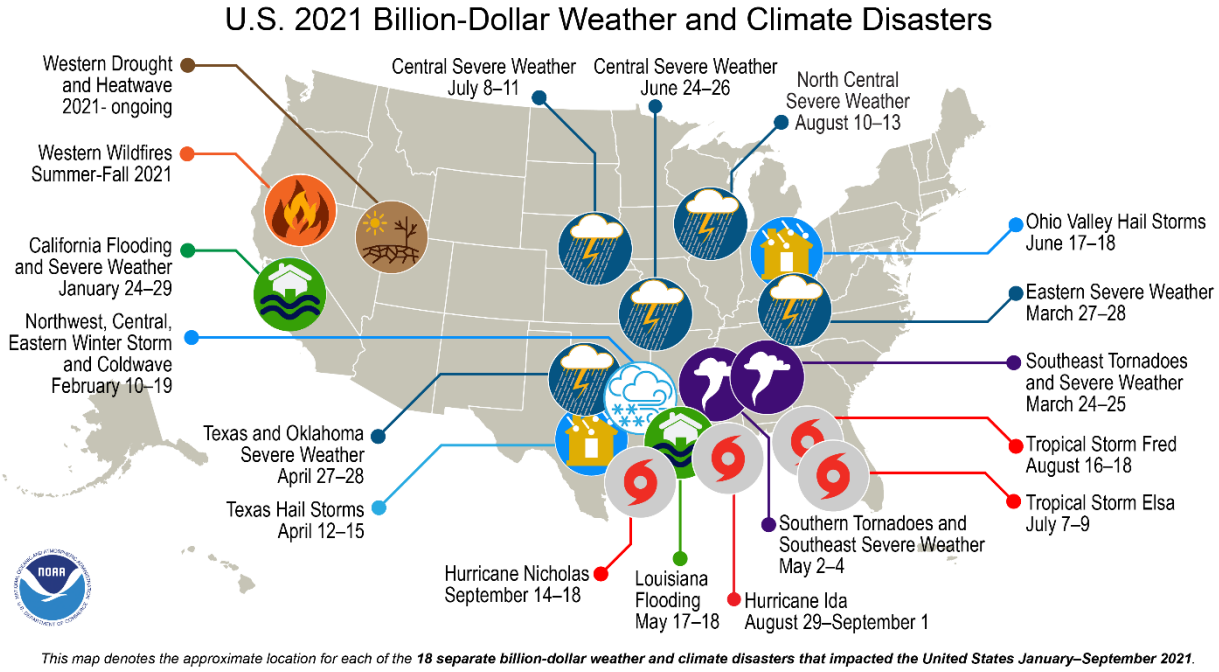
While this document focuses on recent and forthcoming federal actions, the U.S. Seventh National Communication to the United Nations Framework Convention on Climate Change provides additional context on U.S. climate trends, impacts, and vulnerabilities, and highlights

ongoing efforts by the federal government; state, local, Tribal, and territorial governments; and businesses and civil society to increase the resilience of American communities.

The Case for Action

Climate impacts already are hitting many U.S. communities hard, and more challenges lie ahead. Extreme weather events worsened by climate change are devastating homes, businesses, infrastructure, and ecosystems. All too often, historically underserved groups are hit the hardest—including, in particular, low-income communities, communities of color, and people with disabilities. Many communities also lack the technical and financial resources to implement mitigation and preparedness strategies that will limit impacts and enable a quicker recovery when the next climate disaster strikes.

In economic terms, the impacts are staggering. During the first nine months of 2021 alone, extreme weather and climate disasters have cost the United States more than $100 billion in damages—including from 18 separate billion-dollar disasters including wildfires, droughts, heat waves, tornado outbreaks, hurricanes, floods, and more.



*This map denotes the approximate location for each of the **18 separate billion-dollar weather and climate disasters that impacted the United States January–September 2021**.*

SOURCE: NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2021). https://www.ncdc.noaa.gov/billions/

Experience shows, however, that impacts to communities and the economy can be mitigated. The National Institute of Building Sciences has found that for every dollar spent on federal resilience

grants, six dollars are saved in avoided damages. These investments protect both the financial security and well-being of U.S. families, workers, and businesses.

The United States is mobilizing resilience funding to make these smart investments. In August 2021, for example, the Federal Emergency Management Agency (FEMA) announced funding opportunities to help communities increase their preparedness in advance of climate-related disasters—including grants through the Building Resilient Infrastructure and Communities program, the Hazard Mitigation Grant Program, and the Flood Mitigation Assistance program. Additionally, in September 2021 the U.S. Congress and the President directed additional funding to support communities recently affected by disasters—including resources for the Department of Housing and Urban Development to support restoration of housing and infrastructure, economic revitalization, and other relief efforts; for the U.S. Forest Service to address the consequences of wildfires; and for the Department of Agriculture to provide relief for crop losses related to disasters. Through his Build Back Better Agenda, President Biden has called on Congress to make historic investments in community resilience.

In addition to securing new investments, the Administration is implementing a national climate resilience strategy by 1) improving community resilience planning; (2) promoting the design and construction of resilient infrastructure; (3) measuring, disclosing, managing, and mitigating climate-related financial risks to communities and the U.S. economy; (4) conserving and restoring lands and waters; and (5) advancing innovative and measurable resilience solutions.

President Biden established a cabinet-level National Climate Task Force to "increase resilience to the impacts of climate" among other climate-related priorities. To prioritize and help coordinate the federal government's resilience efforts, the National Climate Task Force has established five Interagency Working Groups, led by high-level agency leaders, that focus on specific, high-impact climate threats.

Coordinated Responses to Five Major Climate Threats

The National Climate Task Force has established five Interagency Working Groups to coordinate efforts to build resilience against specific climate impacts. Recent initiatives include:

Coastal Resilience: Agencies are working to improve coordination with state, local, Tribal, and territorial governments in identifying and implementing effective coastal resilience strategies, including by providing disadvantaged communities with better climate data and by enhancing nature-based approaches.

Drought Resilience: The Department of Agriculture's Commodity Credit Corporation is making new investments to support drought recovery and encourage the adoption of water-smart practices, and the Department of the Interior has reprogrammed significant funding to support drought response actions in heavily impacted states.

Extreme Heat: As part of a broader interagency effort, the Department of Labor is launching a multi-prong initiative on occupational heat exposure to protect outdoor workers, including agricultural, construction, and delivery workers, as well as indoor workers, including those in warehouses, factories, and kitchens.

Flood Resilience: The White House Flood Resilience Interagency Working Group is coordinating the implementation of the reinstated Federal Flood Risk Management Standard to ensure that federal investments include standards of safety against floods and sea level rise.

Wildfire Resilience: The Administration has taken action to bolster firefighter pay, extend hiring of temporary firefighters and provide federal surge capacity, continue transitioning to a more permanent firefighting workforce, improve hazardous fuels management, utilize data and technology to protect communities, and bolster investment in community wildfire resilience.

Community Resilience Planning

Intentional, proactive, and forward-looking community planning is at the center of community resilience and combatting the impacts of climate change. This resilience planning is well underway across all levels of government—from regional coalitions like the Gulf of Mexico Alliance, the Mid-America Regional Council, and the Southeast Florida Regional Climate Change Compact that are partnering on resilience efforts; to Tribal Nations proactively implementing preparedness strategies; to states from Alaska to Maine and local governments from Flagstaff, Arizona to Fayetteville, Arkansas developing assessments and action plans. To better support state, local, Tribal, and territorial partners in advancing this work, the federal government will:

Enhance Financial and Technical Assistance for Planning and Capacity Building

Many U.S. communities are already engaged in resilience planning for all hazards. For example, more than 23,600 communities that represent nearly 80 percent of the U.S. population have adopted FEMA hazard mitigation plans, which identify hazards, assess risks, and establish 5-year strategies to reduce vulnerability. Yet many communities still lack the resources to undertake robust resilience planning that adequately accounts for ever-changing climate impacts. To address these gaps, federal agencies are boosting their technical assistance to communities for a range of resilience planning needs. Examples include:

- The Department of Housing and Urban Development (HUD) is launching a technical assistance initiative to increase the capacity of affordable multifamily housing owners and operators, public housing agencies, and other HUD-financed multifamily housing, to undertake risk and vulnerability assessments of their portfolios, identify those properties most at risk, and develop resilience plans to respond to particular climate risks.
- The National Oceanic and Atmospheric Administration (NOAA) is providing over 100 communities with tools to increase ecosystem resilience through habitat restoration

solutions and will develop new training series on topics such as learning how to incorporate habitat restoration into relocation planning.

- The Center for Disease Control (CDC) is supporting states and cities through the Climate Ready States and Cities Initiative, which funds state and city health departments across the country to develop and implement health adaptation plans, and address gaps in critical public health functions and services as guided by the Building Resilience Against Climate Effects (BRACE) Framework.
- The Environmental Protection Agency (EPA) is providing direct technical assistance to local governments on storm water infrastructure and other resilience actions.
- The U.S. Army Corps of Engineers (USACE) is using its Floodplain Management Services Program (FPMS) to support non-federal planning for climate change.
- The National Institute of Standards and Technology (NIST) is using its Community Resilience Program to accelerate research that supports science-based community planning, including on physical infrastructure systems.

Capacity such as staffing support can also be a challenge for many communities. AmeriCorps, an independent agency of the U.S. government that engages Americans in service through a variety of programs, plans to provide increased support to improve community preparedness for disasters, and will place members at the local level to assist with implementation of pre-disaster mitigation and adaptation measures, in particular engaging disadvantaged communities in the planning process.

Moreover, federal agencies that currently support a broad range of community planning efforts are leveraging these existing initiatives to better support resilience planning specifically. Agencies that already support resilience planning, including FEMA and others, are enhancing their community outreach and increasingly centering it on climate and equity considerations.

For example, HUD directly supports community resilience planning through its Community Development Block Grant Disaster Recovery (CDBG-DR) and Mitigation (CDBG-MIT) programs, particularly in low-income areas. HUD has modernized its rules to require grantee plans to incorporate climate resilience efforts, including identification of risks to low- and moderate-income residents.

Similarly, the U.S. Economic Development Administration (EDA), which works with communities on economic development strategy plans, is now requiring that all grant applicants who propose infrastructure projects to consider impacts from climate change in their project designs.

Target Resilience Investments to Promote Justice and Equity

The Administration's Justice40 Initiative aims to deliver at least 40 percent of the overall benefits from federal investments in climate and clean energy to disadvantaged communities. One of the twenty-one pilot programs to first begin integrating Justice40 principles is FEMA's Building Resilient Infrastructure and Communities Program (BRIC). BRIC will adjust project selection criteria and double the number of communities that can receive non-financial, direct technical assistance through hands-on support with project development. In addition, FEMA's Individual Assistance program has amended its policy to better support individuals and families after a disaster.

HUD is enhancing its CDBG-DR and CDBG-MIT programs to expand opportunities for equitable climate resilience projects. HUD will finalize its CDBG-DR universal guidance to institute consistent policies and requirements that will foster resilient projects and promote environmental justice. This effort will provide consistency for stakeholders to deliver funds on projects that will support disadvantaged communities. The Department of Health and Human Services has also provided flexibility for grantees of its Low-Income Home Energy Assistance Program to address disaster relief needs—including by covering costs to transport and temporarily house individuals, or to purchase air conditioners and generators, when health and safety is endangered by loss of access to heating or cooling.

As Tribes and Indigenous communities are often disproportionately threatened by climate impacts, the Administration is working to better support Tribal resilience building. For example, NOAA has developed a National Integrated Drought Information System Tribal Drought Engagement Strategy that will enhance drought observations, monitoring, and forecasting, and the Department of the Interior (DOI) has a new Indian Land Consolidation Program to assist Tribes in resilience planning and to promote economic development on lands restored to Tribal ownership. The Administration is also developing guidance on how to best collaborate with Tribes and Indigenous communities on using Traditional Ecological Knowledge to inform federal programs and analysis.

Increase Access to Climate Data and Mapping to Support Communities

Communities require accurate and localized data and climate projections to develop climate resilience strategies. The Administration's whole-of-government approach to expanding climate information and services includes:

- Two interagency reports delivered to the National Climate Task Force lay out a comprehensive roadmap for the federal government to holistically expand and improve climate information and decision tools for the public.
- FEMA recently updated its National Risk Index, which provides an online mapping tool to help communities understand their risk exposure to natural hazards, and began

gathering stakeholder input to inform potential revisions to the National Flood Insurance Program standards to help communities align their construction and land–use practices with the latest understandings of flood risk reduction.

- HUD is collecting building-level data across its programs to map existing climate risks and environmental justice concerns. This data will enable HUD, grantees, borrowers, and the public to conduct vulnerability assessments and develop resilience plans addressing climate impacts.
- Agencies are collaborating to provide web-accessible maps that show extreme heat hot spots and areas impacted by wildfire smoke, to inform health responses.

Promoting the Design and Construction of Resilient Infrastructure

Poorly designed buildings in high hazard areas pose major safety and financial risks. Accordingly, the Administration is developing programs that will leverage federal funding and financing to increase the use of resilient design and construction practices in homes, buildings, and infrastructure, and support the use of science-based codes and standards that consider current and future climate risks.

Initiatives that demonstrate the U.S. Government's ambition in this area include:

- Moving forward, federal infrastructure will seek to meet or exceed current consensus-based building codes and standards for natural hazards.
- FEMA is promoting increased collaboration on hazard-resistant building codes across the federal government and its state, local, Tribal, and territorial partners. It will encourage the use of updated building codes that will mitigate the rising cost of climate and weather disasters.
- The Administration will identify or develop risk management standards for environmental or climate-related hazards including flood, extreme wind, extreme heat, earthquakes, and wildfire, with a goal of developing such standards for construction or the substantial rehabilitation of federally funded or financed homes and properties.
- To help improve climate risk planning and management, the General Services Administration will improve climate adaptation requirements with its federal agency customers and utilize new tools to monitor and evaluate changing conditions to inform prudent capital investment and asset management.
- The U.S. Department of Agriculture (USDA)'s Rural Housing Service Community Facilities Programs is developing incentives to enable community facilities across rural America to serve as community resources during disasters, including embedding resilient design elements for efficient cooling and warming centers.
- EPA's Office of Community Revitalization will provide technical assistance to enable communities to retrofit public school facilities into cooling and clean air centers to abate

extreme heat and wildfire smoke risks. In addition, FEMA will begin deploying new manufactured homes with higher resilient design standards to better support disaster survivors displaced from their homes.

Measure, Disclose, Manage, and Mitigate Climate-Related Financial Risks to Communities and the U.S. Economy

Climate change poses a systemic risk to our economy and financial system. This year alone, extreme weather has upended the U.S. economy and affected one in three Americans. President Biden's Executive Order 14030 mobilized a whole-of-government effort to measure, disclose, manage, and mitigate the risks climate change poses to American families, businesses, and the economy. In October 2021, the Administration released a comprehensive, government-wide strategy with six main pillars:

- Promoting the resilience of the U.S. financial system to climate-related financial risks;
- Protecting life savings and pensions from climate-related financial risk;
- Using federal procurement to address climate-related financial risk;
- Incorporating climate-related financial risk into federal financial management and budgeting;
- Incorporating climate-related financial risk into federal lending and underwriting; and
- Building resilient infrastructure and communities.

Concrete actions from across federal agencies are underway to implement all six pillars of this strategy. For example, HUD, the Department of Veterans Affairs, USDA, and the Treasury Department are each working to enhance their federal underwriting and lending program standards to better address the climate-related financial risks to their portfolios, while ensuring the safety and security of communities most impacted by climate change.

Conservation and Restoration of Lands and Waters

Conservation and restoration efforts provide buffers against extreme weather, promote ecosystem health, and deliver a wide range of economic, environmental, and social benefits—all of which can boost climate resilience.

America the Beautiful Initiative

President Biden set a visionary goal of conserving 30 percent of U.S. lands and waters by 2030. To help reach this goal, the inter-agency "America the Beautiful" Initiative is supporting

locally-led, voluntary efforts and prioritizing actions that will boost resilience to climate impacts and address the biodiversity crisis.

Nature-Based Approaches in Federal Investments

To better harness nature-based approaches and their co-benefits:

- FEMA has developed a nature-based solution guide for communities in tandem with its BRIC program and is awarding preference points for BRIC applications with nature-based projects. This model will be replicated by other agencies to better provide options for natural infrastructure.
- The White House Coastal Resilience Interagency Working Group will provide stakeholders with information on utilizing natural infrastructure, including by harnessing the best available data on nature-based engineering from the USACE.
- DOI will invest in nature-based solutions such as wetlands restoration, beach and coral reef restoration, and reforestation as cost-effective approaches to increase ecosystem resilience and protect ecosystem services.

Managing Public Lands

As wildfires pose a significant risk to large regions of the United States, increased focus on land management and hazardous fuels mitigation is essential to enhancing resilience and reducing the risk of severe wildfires. Federal initiatives include:

- DOI has collaborated on 2,400 fuel treatments with State, local, and Tribal partners, to assist with local efforts to create more wildfire resilient areas.
- DOI is supporting science-driven decision-making to restore forests and rangelands, manage hazardous fuels and invasive species, and ensure firefighting resources can work safely and effectively to protect critical infrastructure and natural resources. Likewise, the U.S. Forest Service (USFS) has developed innovative approaches including a "Firesheds" tool to better identify areas that should be prioritized for hazardous fuel treatment.
- USFS is increasing reforestation on the National Forests, focusing on areas impacted by natural disasters, particularly wildfire, with the goal of long-term resilience and ecological integrity.
- The White House Wildfire Interagency Working Group is facilitating implementation of the National Wildland Fire Cohesive Strategy, which lays out a path to work collaboratively across all landscapes to support resilient landscapes, fire-adapted communities, and safe and effective wildfire response.

Innovative and Measurable Resilience Solutions

The Administration is charting innovative pathways to build a more climate resilient economy. It is partnering with the private sector, including business, industry, academia, and philanthropy, as well as state, local, Tribal, and territorial governments, to identify and share best practices, while investing in new ways of adapting to climate impacts.

For example, working through the Climate Hubs, USDA will provide resources to farmers, ranchers, and forest landowners to increase awareness of impacts and opportunities to address climate change. The Hubs convene and engage with partners and communities in innovative and interactive ways to help increase climate literacy and lower the barriers to climate adaptation, climate-related risk management, and rural economic development.

Initiatives underway at the U.S. Department of Energy (DOE) to identify innovative resilience solutions include:

- Using DOE facilities as testbeds to pilot innovative climate solutions that reduce emissions while simultaneously building resilience—including demonstration projects of new microgrids, power delivery systems, microreactors, water reuse systems, and gray water systems for landscaping.
- Establishing a network of Climate Resilience Labs hosted by minority-serving institutions to address climate impacts on disadvantaged communities in a variety of geographic regions to inform equitable, science-based solutions focused on adaptation, mitigation, and environmental justice.
- Expanding data by using DOE's High-Performance Computing system to model climate vulnerabilities and impacts and identify local adaptation and resilience solutions.
- Tackling water insecurity through the launch of the Solar Desalination Prize, a $15 million competition to accelerate the development of systems that use solar-thermal energy to produce clean water from very-high-salinity water.

Other agencies are exploring how to tackle specific climate-related disasters. For example, the Department of Homeland Security (DHS) is developing innovations that improve the nation's ability to predict, detect, and control wildfires. Through a variety of sampling sensors and advanced algorithms, these technologies, once deployed, will provide early warning to fire-vulnerable communities, ultimately providing valuable time that will aid responders and save lives. DHS is also launching a series of prize competitions to motivate American talent and creativity toward resilience solutions, with the first focused on new ways to protect people at risk during extreme heat events.

International Cooperation

As the United States prepares domestically to reduce and manage the impacts of climate change, it is also committed to enhancing international cooperation and helping vulnerable countries adapt. As underscored by the Working Group I contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), every region across the globe is experiencing the impacts of climate change today. Destructive flooding, record heat waves, prolonged droughts and severe storms are already negatively affecting food and water security, cities and communities, health security, infrastructure, ecosystems, and economies around the world. This is especially true for vulnerable countries with lower adaptive capacity to prepare for, respond to, and recover from impacts. The United States will strengthen our climate adaptation-related cooperation with financial and technical support for vulnerable countries and communities, at scale and with speed and urgency.

Recognizing the urgency of the climate crisis, the President's Emergency Plan for Adaptation and Resilience (PREPARE) will support vulnerable developing countries and communities around the world in their efforts to prepare for climate impacts. The President will work with Congress to provide $3 billion in adaptation finance annually for PREPARE by FY2024. It is the largest U.S. commitment ever made to reduce climate impacts on those most vulnerable to climate change worldwide. PREPARE will serve as the cornerstone of the U.S. Government response to addressing the increasing impacts of the global climate crisis. PREPARE activates a coordinated, whole-of-government approach to help more than half a billion people in developing countries adapt to climate change by 2030, to track with the timeline for meeting the Sustainable Development Goals. In addition to bilateral support through, for example, the Department of State, U.S. Agency for International Development (USAID), Millennium Challenge Corporation (MCC), and U.S. International Development Finance Corporation, PREPARE will include U.S. funding for multilateral funds that support adaptation. Through PREPARE, the United States will respond to partner countries' priorities, strengthen cooperation with other donors, integrate climate risk considerations into multilateral efforts, spur innovation, and mobilize significant private capital for adaptation.

Through PREPARE, the U.S. government will further scale up adaptation through a whole-of-government strategy to enable the United States to more effectively deploy its diplomatic influence, technical expertise, development and humanitarian assistance, and infrastructure:

- The **U.S. Agency for International Development (USAID)** will utilize its long-standing, on-the-ground partnerships to strengthen the climate resilience of governments and communities through sustainable development and humanitarian assistance. USAID's new climate strategy will allow it to support governments and communities to better integrate climate adaptation measures into governance, planning, and budgeting processes. USAID will use information and tools to address climate impacts, with the goal of protecting critical development gains.
- The **Department of State** will invest in multilateral and plurilateral partnerships, initiatives, and funds that drive global adaptation ambition and action and respond to the priorities of the most vulnerable developing countries. Efforts will harness global and regional capacity to tackle common threats and support South-South cooperation. This support will leverage other public and private sector investments in global climate resilience, provide technical assistance and capacity building, and significantly scale up adaptation efforts, with the goal of driving lasting change.
- The **Department of the Treasury** will advocate for increased adaptation finance throughout the multilateral system and is urging all the multilateral development banks (MDBs) in which the U.S. owns shares in to become Paris aligned as early as possible. Doing so will require the MDBs to screen all prospective investments for resilience potential. We will also support adaptation efforts through our contributions to the International Fund for Agricultural Development.
- The **National Oceanic and Atmospheric Administration (NOAA)**, a recognized leader in climate information and services, will work to build capacity by sharing its global data, resources, and tools, as well as provide direct technical assistance and capacity building to developing countries. By increasing access, use, and independent development of climate information, developing countries will be empowered to better understand and respond to climate hazards.
- The **U.S. International Development Finance Corporation (DFC)**, America's development bank, will partner with the private sector to finance solutions to the most critical challenges facing the developing world today. Investing in climate resilience is core to that work. DFC offers a wide range of financial tools, including debt, political risk insurance, technical assistance, and equity finance, to support projects in a variety of industries from critical infrastructure to power generation, healthcare, agriculture, technology and financial services.
- Other U.S. agencies, such as the Department of Agriculture, Department of Energy, Department of Health and Human Services, Department of Interior, Department of Homeland Security, Environmental Protection Agency, Federal Emergency Management Agency, Forest Service, International Development Finance Corporation, Millennium

Challenge Corporation, National Aeronautics and Space Administration, and U.S. Trade and Development Agency, will respond to the adaptation priorities identified by countries in their National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs), among others.

The United States will bring the full expertise of its federal agencies to work with international partners to effect critical global policy changes; pilot and learn from new approaches with the potential for impact; significantly expand the scale of impact and reach of existing and proven initiatives and partnerships.

PREPARE has three major components: (1) PREPARE Knowledge: the United States will support efforts to deepen understanding of climate risks, vulnerabilities, and adaptation solutions; (2) PREPARE Plans and Programs: The United States will help vulnerable countries and communities plan for climate impacts and mainstream adaptation into broader decision making; and (3) PREPARE Resources: The United States will accelerate financing of adaptation measures by contributing to and shaping multilateral and bilateral adaptation funds, supporting multiple climate risk finance strategies, strengthening capacity to develop bankable projects and access finance for adaptation, and mobilizing private capital. For each of these areas, this report identifies potential lines of action and provides examples. These examples are intended to be illustrative, not comprehensive, in nature.

PREPARE Knowledge: Information is Power

The United States will deepen understanding of climate risks, vulnerabilities, and adaptation solutions by:

- Supporting expanded development, innovation, and delivery of climate information services, decision support tools, and early warning systems;
- Expanding capacity to quantify costs and benefits of adaptation action and to track and evaluate progress in building climate resilience;
- Creating capacity to identify tipping points and thresholds for when incremental adaptation in support of existing systems may no longer be adequate and transformative approaches may be needed to support systems-level changes; and
- Developing education and training for the current and the next generation of adaptation policymakers and practitioners.

Climate information and early warning systems are crucial for effective adaptation. The Global Commission on Adaptation estimates that early warning systems save lives and assets worth at least ten times their cost.

The United States has been a leader in providing climate information services, decision support tools, and early warning systems. Through PREPARE, the United States will significantly scale best practice, building on lessons learned in order to turn best practice into widespread norm. For example:

1. Inter-agency collaboration matters. Inter-agency collaboration allows information services to leverage the different technical expertise, capacities, and relationships of agencies to produce more effective and actionable tools. For example, NOAA has trained hydrologists and meteorologists in Mali, who have worked with agricultural experts to downscale regional climate forecasts to provide actionable advice through SMS messages and community radio to farmers. USAID helped farmers access seeds and other inputs to put the advice into practice and protect productivity.

2. Bringing scientists, meteorologists, decision-makers and communities together results in more useful tools and builds enhanced capacity in countries to use those tools and mainstream climate adaptation into broader planning and operations. In the Caribbean, for example, NOAA helped build capacity for monitoring, understanding, communicating and applying climate information to support decision makers by enhancing regional networks and cooperative mechanisms. Through the U.S.-Caribbean Resilience Partnership, State Department and NOAA are bringing together and directly supporting institutions in the region to identify data and capacity gaps in early warning and resilience efforts, and develop strategies to address these needs and develop more useful tools. In Rwanda, a USAID program that provided farmers with decision-relevant, operational climate information and training increased farm yields of participating farmers by 47 percent and income from crops rose by 56 percent. By working directly with technical officers, policy and decision makers within the Government of Rwanda, and with farmers and other key stakeholders the project built long-term local capacity.

Building on the success and lessons learned of previous programs, the U.S. government will invest in climate information services, decision support tools, and early warning systems that address user needs and build long-term local capacity to understand climate stressors, impacts, tipping points, and adaptation strategies. U.S. Government agencies will expand climate information services to provide tens of millions of people with access to the information they need to make choices about where they live, what they do for work, and how to protect their families from extreme heat, droughts, floods, loss of land due to sea level rise, conflict spurred by climate stressors, and other environmental changes caused by climate change. For instance, the State Department and NOAA will invest in enhancing climate early warning systems and building capacity to anticipate and prepare for current and future climates in the islands of the Caribbean and Pacific. This early warning initiative will inform action across multiples scales and sectors that are sensitive to climate impacts such as agriculture, health, and water management.

In addition to climate services, the United States recognizes the need to deepen understanding of adaptation actions including quantifying cost and benefits and tracking progress in building climate resilience. Strengthening monitoring and evaluation can help identify adaptation actions that are effective and share lessons learned.

The United States also intends to build capacity to identify tipping points and thresholds for when incremental adaptation, which protects and seeks to support existing systems, may no longer be adequate. With Executive Order 14013, Rebuilding and Enhancing Programs to Resettle Refugees and Planning for the Impact of Climate Change on Migration, President Biden directed U.S. agencies to prepare a report on climate change and its impact on migration. The report examines the international security implications of climate-related migration; options for protection and resettlement of individuals displaced directly or indirectly from climate change; and proposals for how these findings should affect use of United States foreign assistance to mitigate the negative impacts of climate change; and opportunities to work collaboratively with other countries, international organizations and bodies, non-governmental organizations, and localities to respond to migration resulting directly or indirectly from climate change.

PREPARE Plans and Programs: Mainstream and Integrate Adaptation, Build Relationships, Execute

The United States will help countries and communities in vulnerable situations plan for climate impacts and mainstream adaptation into broader decision making, with the ultimate goal of safeguarding lives, livelihoods, and the natural environment from the impacts of climate change. The United States will increase capacity to plan for a changing climate by:

- Supporting national adaptation planning and efforts to mainstream adaptation into broader decision making and across government functions;
- Creating capacity to use climate information to manage uncertainty, integrate flexibility and adaptive management, and plan for tipping points;
- Improving the quality of existing investment impacts by the public sector in development and humanitarian assistance; and
- Investing in locally led adaptation that enables, vulnerable communities and populations to meaningfully participate in and lead adaptation decisions.

The breadth and magnitude of climate impacts, necessitates mainstreaming climate consideration into broader decision making and across government functions. Development investments in areas as diverse as eradicating malaria, improving agricultural yields, and developing transportation systems will not be effective in the long-term without considering climate change. Conversely, humanitarian and development assistance are critical to save lives, reduce food and water insecurity, strengthen livelihoods, improve health and learning outcomes, and ultimately

increase the capacity of communities to respond to climate change. While mainstreaming is considered best practice and is becoming more common, mainstreaming is not occurring at the scale or urgency required. As part of PREPARE, the United States will mainstream climate considerations into its international development and support programs to accelerate mainstreaming in partner countries.

Since 2014, Executive Order 13677 on Climate-Resilient International Development has required Federal agencies to factor climate-resilience considerations into all of the U.S. government's international development work and to promote a similar approach with multilateral entities. Mainstreaming climate change into development efforts has enhanced sustainability of development projects and has contributed to reducing damages to infrastructure, protecting public health, restoring ecosystem services, and building capacity of local decision-makers and community members to better manage climate risks in the future.
In the Philippines, for example, MCC and the Government of the Philippines used climate-resilient design in a project to rehabilitate 222km of roads on Samar Island. In 2013 when Typhoon Haiyan struck the Philippines, the road was directly hit by the storm but survived largely intact and provided a crucial artery for emergency response, subsequent reconstruction, and the ongoing development of Samar Island. To scale up this approach, the Philippines is now applying these design standards to other national roads. PREPARE, will make this common practice everywhere.

Since 2013, USAID has used the Climate Risk Management process to systematically assesses and adaptively manage climate risks within all new country development strategies and programs. In Cambodia, USAID's Climate Risk Management process improved the outcomes of a project to improve management practices and production of rice field fisheries. Climate screening tools included in the Climate Risk Management process helped identify how climate stressors, like drought, threaten rice field fisheries. To address these risks, the project trained local communities and helped them develop and implement drought abatement strategies, such as expanding and deepening community fish refuges. Despite prolonged drought, from 2018 to 2020, farming households directly involved in the project (22,800 households) produced nearly 10 percent more fish per household compared to before the project started in 2017. Overall, this resulted in an additional $1.2 million in incomes. The United States will rapidly scale up these efforts to deliver greater adaptation benefits of humanitarian and development assistance.

With Executive Order 14008, President Biden directed agencies to elevate climate considerations in their international work. In line with Executive Order 14008, agencies across the U.S. Federal government have prepared climate adaptation plans and strategies to integrate climate change into their international work. In April 2021, MCC approved an agency-wide Climate Change Strategy to strengthen the integration of climate considerations into all stages of program development and implementation. At COP26, USAID released for public comment its new

Climate Change Strategy that will accelerate and scale up the agency's climate adaptation and mitigation work. Building on these plans, PREPARE will coordinate agency efforts and share best-practices across agencies.

As agencies integrate climate considerations into their international programs, through PREPARE, they will also support partner countries to do the same. For example, the United States will support National Adaptation Planning Global Network and invest in efforts to mainstream adaptation into broader decision making and across government functions. Support for the development and implementation of national adaptation plan (NAP) processes is crucial. The NAP process enables least developed and developing countries to identify and address their medium- and long-term priorities for adapting to climate change. In doing so, NAPs drive coordination, set policy priorities, mobilize resources, allocate support, and track progress in countries' efforts to achieve their adaptation goals. The systems and capacities that are established through a country's NAP process are the foundation for adaptation action at scale, for moving from a patchwork of adaptation projects to a more coordinated effort at system change. As of March 2021, 126 of 154 developing countries had begun the process to formulate and implement NAPs and twenty-two had submitted NAPs to UN Framework Convention on Climate Change. Countries are also increasingly including adaptation priorities outlined in their NAPs in their NDCs. Demand is high for greater technical support to create strong NAPs that can increase collaboration, mobilize finance, and catalyze on the ground action.

In 2014, the United States spearheaded the creation of National Adaptation Planning Global Network to build capacity for and accelerate national adaptation planning. Today, the network connects over 1500 individual members across more than 150 countries involved in developing and implementing NAPs. The network accelerates national adaptation planning and action in developing countries through facilitating peer learning and exchange, supporting national-level action, and synthesizing and sharing knowledge. NAP-GN has demonstrated the value of national adaptation planning and network approaches of engagement. In line with the vision that all least developed countries have a national adaptation plan, the United States will continue to support the National Adaptation Planning Global Network in their efforts to provide climate-vulnerable countries with in-country technical support for NAPs, enable local governments to undertake national adaptation planning, support the translation of these priorities into bankable projects, and assess the effectiveness of NAPs and adaptation actions.

In addition to supporting national adaptation planning, the Unite States will support countries to mainstream climate considerations into broader decision making and across government functions. Integrating country adaptation priorities into national planning and budgeting processes can increase implementation and success of adaptation, as well as ensure that the deployment of climate finance is country-led and owned. U.S. programs have demonstrated the potential for mainstreaming to mobilize action to reduce climate vulnerability. For

example, USAID's Adaptasi Perubahan Iklim dan Ketangguhan (APIK), or Climate Change Adaptation and Resilience, project supported the government of Indonesia in integrating climate change adaptation and disaster risk reduction into national and subnational governance frameworks. Through integrating climate change into these frameworks, APIK ushered in more than 150 laws, policies, regulations, or standards addressing climate change adaptation and improving capacity among 174 institutions to assess or address climate change risks. Notably, APIK contributed to the development of Indonesia's National Action Plan for Climate Change Adaptation. This plan was later integrated into Indonesia's 2020-2024 national development plan, which mobilized over $3 billion in funds for climate change resilience in agriculture, water, coastal cities, and health. The United States will scale up these successful examples by supporting initiatives that improve the capacity of developing country central ministries, like finance and planning, to assess and embed climate risk into budgets, plans, policy, and operations.

A critical aspect of mainstreaming is supporting countries' efforts to integrate Sustainable Development Goals and climate change objectives and processes. Adaptation is critical to achieve sustainable development goals and activities to advance sustainable development can also help reduce vulnerability, increase adaptive capacity, and enhance resilience. The United States will support efforts support adaptation in the context of implementing relevant existing international frameworks such as the Sustainable Development Goals. During President Biden's Leaders' Summit on Climate, the Department of State and NOAA announced plans to support the Local2030 Islands Network, a UN-backed effort which will builds on Hawaii's expertise and experience in developing culturally-informed adaptation solutions. This network brings together island leaders and experts from across the world to focus on common challenges and solutions that reflect their unique cultures and sustainable development needs. The network will foster peer-to-peer learning, develop communities of practice, and engage technical experts to enhance capacity to integrate climate data and bolster adaptation planning in island economies. The network approach of linking local experts to share knowledge replicated in other regions and countries, further bringing together the Sustainable Development Goals and climate agendas.

Across all efforts to integrate adaptation into decision-making, participation from the people impacted, especially the most vulnerable, is critical. Locally led adaptation offers multiple benefits. People and communities on the frontlines of climate change are more aware of local circumstances and are often able to develop more innovative and effective adaptation solutions. Devolving power to local actors also increases their awareness of and investment in adaptation, which can lead to longer-term and more effective adaptation outcomes. Locally led adaptation also gives vulnerable and excluded communities greater agency over prioritizing and designing adaptation solutions. In doing so, locally led adaptation can help address root causes of vulnerability and structural inequalities faced by women, youth, children, disabled and displaced

people, indigenous peoples and other marginalized groups. Yet, too often, local actors lack access to the resources and power needed to design and implement adaptation solutions. By investing in locally led and demand driven adaptation, the United States will continue to elevate the voice of actors in decisions that most affect them and protect the most vulnerable.

PREPARE Resources: Mobilizing Finance and Private Capital

The United States will further accelerate the financing of adaptation measures by:

- Developing and implementing climate risk finance strategies with an emphasis on layering multiple instruments, ranging from forecast-based finance and insurance to social protection;
- Contributing to and shaping multilateral and bilateral adaptation funds;
- Strengthening capacity to access finance for adaptation; and
- Strengthening the enabling environment for private investment and generating partnerships to mobilize private capital for adaptation.

Climate and disaster risk finance strategies are critical to protect the financial security of governments, businesses, and individuals in the face of growing extremes. In 2015, the Department of State provided capital funds to the Pacific Catastrophe Risk Assessment and Financing Initiative which laid the foundation for the Pacific Catastrophe Risk Insurance Company. Department of State also provided funding to the Caribbean Catastrophe Risk Insurance Facility to expand into Central America. USAID support to the Africa Risk Capacity Replica program allowed governments in Africa to build up capacity over time and reduced financial burden on countries as they access disaster risk insurance coverage. Previous investments in climate risk finance has demonstrated the value of these mechanisms in providing predictable and rapid access to resources to help protect public budgets, as well as livelihoods of people affected by climate change and disasters. The United States will renew support for climate and disaster risk finance strategies to help countries access the layered disaster risk financing, including insurance coverage, they need to successfully manage increasingly frequent and intense climate-related extreme weather events.

Multilateral climate funds also play a critical role in facilitating adaptation to climate change. As climate finance providers tend to work on issues and with partners where they have experience, multilateral funds are able to fill important gaps in the climate finance landscape, working with particularly vulnerable or underserved communities, as well as responding strategically to important climate challenges which may be overlooked by providers. The Least Developed Countries Fund (LDCF), for example, works specifically with the Least Developed Countries who are highly vulnerable to climate change and have acute climate adaptation needs. Additionally, multilateral climate funds are pioneers in improving finance access. The Adaptation Fund (AF) and Green Climate Fund (GCF) use so-called “direct access” modalities,

which facilitate long-term capacity building for institutions in developing countries, assuring that climate finance provision not only supports single interventions, but contributes systemically to better nationally-driven adaptation action throughout an organizations overall portfolio in the future. Funding for multilateral adaptation funds will be an important element of the President's efforts to support developing countries as they build resilience to the adverse effects of climate change.

PREPARE will help to further strengthen developing countries' abilities to access climate adaptation finance. The United States intends to support innovative pilots and proven partnerships to build and strengthen country capacity to translate plans into investment strategies, develop bankable projects, and access climate finance both public and private.

While the United States is scaling up its public sector support for adaptation, it also recognizes that private finance is critical to meet the growing need for adaptation finance. As compared to mitigation finance, mobilizing private finance can be particularly challenging for adaptation where the financial return on investment for climate action is less clear. Yet, significant opportunities exist for private sector actors as they work to build resilience across their own assets, supply chains, or investment portfolios. United States programs aim to catalyze private finance and create enabling environments for private investment in adaptation. More efficient leveraging of private investment can allow limited public resources to be concentrated in areas and sectors where the private sector is less likely to invest on its own, particularly in adaptation activities in the most vulnerable countries and LDCs. This effectively multiplies the financing available to support partner countries' climate objectives.

Multiple U.S. government agencies are seeking to address this critical need. MCC, for example, uses several approaches, including leverage grant facilities, public-private partnerships, guarantees and hedging, and impact investor financing to reduce risk and costs for investors that wish to incorporate climate solutions in their projects. The Department of State supported the creation of Climate Resilience and Adaptation Finance Technology Transfer Facility (CRAFT), the first commercial investment vehicle to focus on expanding the availability of technologies and solutions for climate adaptation and resilience. Development Finance Corporation (DFC), America's development bank, has launched a Climate Action Facility, which will deploy at least $50 million in technical assistance funds to build a robust pipeline of climate finance investment transactions, including for adaptation. USAID's Green Recovery Investment Platform (GRIP) aims to catalyze private investment and innovative business solutions to increase the resilience of development outcomes across the sectors in which USAID works. Together, these efforts will help catalyze a global market for climate resilient products and services. PREPARE will help coordinate these initiatives, share lessons learned across agencies, and scale-up best practices to strengthen the enabling environment for private investment.

In summary, the United States is acting with urgency to scale up adaptation efforts around the world to prevent unnecessary, preventable losses to lives and livelihoods. The United States is committed to strengthening capacity in developing countries to understand climate change and to plan for, finance, and implement adaptation solutions. Through PREPARE, the United States will use its diplomatic influence, technical expertise, and implementation capacity to both fill strategic gaps in the adaptation space - including piloting new approaches - and provide support that will significantly expand the scale and reach of existing and proven initiatives and partnerships. The United States will also deepen and expand our partnerships to accelerate the implementation of adaptation actions so that we can collectively reduce risks of climate change.