

U.S. National Statement
UN Informal Consultative Process on Oceans and the Law of the Sea
Sea Level Rise and Its Impacts
June 14-18, 2021

The world faces a profound climate crisis, and together we have a narrow moment to pursue action in order to avoid the most catastrophic impacts of that crisis and to seize the opportunities that tackling climate change presents. The United States is demonstrating international leadership in these efforts, with a goal of catalyzing and significantly enhancing global action. This is why President Biden took steps to rejoin the Paris Agreement immediately after taking office, convened a Leaders Summit on Climate in April, and named our nation's first Special Presidential Envoy for Climate to lead our efforts around the world.

Secretary of State Blinken also has been clear that the climate crisis is at the center of U.S. foreign policy. The United States looks forward to working with other countries and partners, both bilaterally and multilaterally, to keep the vital goal of limiting warming to 1.5 degrees Celsius within reach, and to build resilience against the climate impacts that are already underway.

Sea level rise and increased coastal flooding due to climate change can pose substantial threats to coastal communities and island nations around the world, and we must all better prepare and support communities, families, and businesses *before* disasters occur. To that end, the United States will increase our investments in climate research and monitoring to improve our understanding of these events, and in climate resilience, adaptation, and mitigation.

U.S. government initiatives that support these objectives are not new. U.S. government agencies have invested in and undertaken efforts to understand and address sea level rise through projections and modeling, monitoring, adaptation, and resilience for decades, and we are grateful for the opportunity at this ICP to highlight some of that work.

U.S. Efforts to Understand and Address Sea Level Rise

Projections/Modeling

As globally recognized authorities on ocean and atmospheric science, U.S. government agencies undertake extensive work to project and model sea level rise around the world. For example, the U.S. National Oceanic and Atmospheric Administration, or NOAA, produces models that: analyze global physical ocean conditions; show projected sea level rise; simulate ocean dynamics and physics; and explore ice sheet dynamics and ocean-ice shelf interactions. Some of these models also have contributed to assessment reports of the Intergovernmental Panel on Climate Change (IPCC). Many of these models and associated data are publicly available and are used by our international partners. For example, through funding from NOAA, the [University of Hawaii Sea Level Center](#) provides monthly sea level rise projections for several Pacific Island Countries.

Similarly, the [Sea Level Change Science Team](#) at the U.S. National Aeronautics and Space Administration, or NASA, looks at sea level science from multiple angles (ocean physics, cryospheric science, hydrology, modeling), and is developing improved, data-driven, physics-based projections of sea level rise on multiple time horizons – seasonal, decadal, centennial – to address multiple user needs. This summer, NASA will be the national host of IPCC Sixth Assessment Report sea level projections, with NASA scientists serving as leading IPCC authors.

Additional sea level change science is being supported through funding from the U.S. National Science Foundation, or NSF. To better understand possible future conditions, NSF-funded research includes studying historical sea-level changes through drilling cores from the seafloor and collecting sediment samples. For example, NSF supports the International Ocean Discovery Program [JOIDES Resolution ship](#), which collects sediment and core samples worldwide to reconstruct a 100-million-year history of global sea level change, showing how quickly ice sheets have melted and how sea level rise was globally distributed. In addition, NSF funds the [Antarctic Ice Sheet Large Ensemble \(AISLENS\)](#) project, which models how quickly the Antarctic Ice Sheet will melt in order to help project future sea level rise. Other NSF funded projects that use innovative statistical analyses have the potential to assess human influence on sea level rise, providing data to better predict changing coastal conditions in some of the world's most heavily populated, vulnerable coastlines, such as those in the [Indian Ocean basin](#).

Monitoring

The United States also is active in global sea level monitoring. U.S. government initiatives contribute to global understanding of sea level change through satellite data, modeling, and in-situ measurements in coastal and open ocean waters. For example, the United States supports the global data center for sea level at the University of Hawaii, whose team of technicians supports tide gauge installation at more than 80 stations around the world. Support for those gauge installations includes capacity building for local professionals on station maintenance.

In addition, NASA has been providing uninterrupted, direct measurements of sea level over three decades, with 90% global coverage and unprecedented accuracy that allows scientists to disentangle mm-scale signals such as global mean sea level rise. In cooperation with our European partners, the agency recently launched another sea level mission in collaboration with international partners known as [Sentinel-6](#), which will ensure continuity of sea level observations into a fourth decade.

Similarly, the [NOAA Laboratory for Satellite Altimetry \(LSA\)](#), through collaboration within the U.S. Government and with our partner governments, collects satellite data measuring global sea level rise, and has been producing sea level rise measurements on ten-day increments since 1992. One such collaboration resulted in production of the [Radar Altimeter Database System \(RADS\)](#), a joint effort of LSA, the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), and Delft University of Technology in the Netherlands, to provide sea level anomaly, waves, and ocean surface wind speed data to experts and entry level users.

In addition, the United States supports half of the global Argo program, which measures temperature and salinity globally, and has begun investing in the Deep Argo program to capture

the full heat content of the ocean. We also recently announced U.S. support for at least 50% of the 1000 [Biogeochemical \(BGC\) Floats](#) needed to measure changes in ocean carbon concurrent with the changes in heat and salinity.

Impacts/Adaptation/Resilience

The United States is a leader in researching the impacts of sea level rise and supporting associated adaptation and resilience efforts, including through international collaboration. A good example of this is [the U.S. Climate Resilience Toolkit](#), a multi-agency platform that provides tools, information, and resources for coastal managers to strengthen community climate resilience from threats, including sea level rise. The toolkit, which houses expert reports and training courses, helps coastal managers achieve resilience by breaking down the challenge into smaller strategies and providing information and assistance in one place. Global case studies showcased in the toolkit demonstrate the toolkit's relevance to policy makers anywhere sea level rise poses a threat.

The U.S. Government also supports ecosystem restoration, which can provide natural resilience against the destructive forces of sea level rise. The [National Coastal Resilience Fund](#), which was recently announced during President Biden's Leaders Summit on Climate, is an innovative partnership between U.S. government agencies as well as other governmental and private partners to provide \$34 million for nature-based approaches to coastal resilience. These projects will advance restoration and enhancement of natural features, such as coastal wetlands, dunes, and coral reefs, to protect coastal communities and infrastructure from flooding, while also improving habitat for fish and wildlife. The United States is committed to advancing the science and practice of implementing nature-based approaches to coastal resilience with international communities of practice by participating in exchanges and dialogues to share the lessons and innovations learned from these projects.

The U.S. Government also undertakes a significant body of research into the impacts of sea level rise on populations. The NSF Coastlines and People (CoPe) program, which supports scientific research on complex coastal systems and the interplay of human systems with coastal hazards such as sea level rise, brings coastal stakeholders and communities into the research process to develop solutions through [workshops](#) and community engagement events. The CoPe has funded workshops, such as one that engaged [Pacific Island communities](#) to discuss human migration and economic impacts of sea level rise.

Conclusion

The United States is grateful for the opportunity to participate in this ICP as we work together to highlight the threats posed by sea level rise, as well as the myriad solutions we are embracing as an international community. The United States intends to continue demonstrating our ambitious leadership, and we look forward to learning more about all the work being done around the world to combat this threat so we may identify opportunities to collaborate toward our shared objectives.

Thank you.