

# NOAA IN THE CARIBBEAN

CONNECTING NOAA & PARTNERS ACROSS THE CARIBBEAN



## NOAA in the Caribbean Newsletter - Spring Edition

Hello NOAA in the Caribbean Community,

Thank you to all who attended our Annual Partner meeting. We heard from our partners from academia, non-governmental organizations and industry, as well as engaged in great discussion on climate change and sargassum. If you weren't able to attend the meeting, you can find a recording of the meeting with English and Spanish subtitles [here](#).

Should you have questions or want more information, please contact [CaribbeanNews@noaa.gov](mailto:CaribbeanNews@noaa.gov). We hope to see you at our next NOAA in the Caribbean event July 21 from 10:30am-12pm ET!

Thank you,  
The NOAA in the Caribbean Executive Team

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## **NOAA Fisheries Assesses Vulnerability of Atlantic Sharks, Tunas, Swordfish, and Billfish to Climate in the Atlantic, Gulf, and Caribbean regions**

*By Stephanie Soto and Christa von Hillebrandt-Andrade, UNESCO/IOC-NOAA International Tsunami Information Centre Caribbean Office*

Fisheries managers, climate policy specialists, and a scientific panel of 15 NOAA and external experts came together in San Juan, Puerto Rico to carry out an Atlantic Highly Migratory Species (HMS) Climate Vulnerability Analysis (CVA) workshop from May 16-18, 2023. NOAA Fisheries uses CVAs to identify which species may be most vulnerable to climate change based on their exposure to projected changes in the environment (e.g., warming oceans) and their sensitivity or adaptability to handle those changes based on their life history characteristics. Vulnerability in this context refers to how climate-related changes could affect fish species' productivity or abundance, and to some extent, their distribution.





The in-person workshop was hosted by NOAA Fisheries and specifically focused on the evaluation of life history or behavioral characteristics (“sensitivity attributes”) that make HMS (Atlantic sharks, tunas, swordfish, and billfish) more or less vulnerable to climate change. Participants evaluated the sensitivity of HMS to climate change by individually scoring sensitivity attributes, and then discussed the scores and considered new information provided by scientists, Caribbean region experts, and observers to refine their scores, and opinions on, each HMS.

Once the panelists finalize their evaluation of sensitivity attributes, NOAA Fisheries climate specialists will combine this information with the results of a climate projection model (“exposure analysis”) to develop final vulnerability rankings for HMS. The exposure analysis compares the overlap in species distribution with the [expected magnitude of climate change](#). Final results of the [HMS CVA](#) will be made available on the NOAA Fisheries website.

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## **SUstainability, Predictability and RESilience of Marine Ecosystems (SUPREME) Programme**

*Content taken from OceanDecade.org website*

The United Nations Decade programme is focused on convening global partners through knowledge networks to share information and support the production of robust ocean forecasts, predictions, and projections to guide effective marine ecosystem management and adaptation strategies in a changing climate. The overall goal of this effort is to advance the modeling tools needed to reduce risks and increase resilience of marine/coastal resources and the people who depend on them.



The Sustainability, Predictability and Resilience of Marine Ecosystems (SUPREME) Decade Programme seeks to globally implement an infrastructure to support robust climate- and ocean-related forecasts, predictions, and projections to guide marine ecosystem management and adaptation strategies that reduce risks and increase resilience of marine/coastal resources and the people who depend on them.

Priority activities for the first two years:

- Develop program governance structure, international steering committee and implementation plan.
- Establish regional teams to fuel innovation and co-development of applications and fisheries management tools.
- Hold workshop on strategic planning and capacity sharing to develop common modeling frameworks and advance regional modeling systems.
- Hold workshop to facilitate stakeholder engagement.
- Participate in Ocean Decade Communities of Practice and Ocean Decade Laboratories.

More information can be found at [oceansdecade.org/actions/sustainability-predictability-and-resilience-of-marine-ecosystems-supreme/](https://oceansdecade.org/actions/sustainability-predictability-and-resilience-of-marine-ecosystems-supreme/)

Point of contact: [hannah.lachance@noaa.gov](mailto:hannah.lachance@noaa.gov)

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## **CARIBE WAVE 2023 Exercise**

*By Stephanie Soto and Christa von Hillebrandt-Andrade, UNESCO/IOC-NOAA International Tsunami Information Centre Caribbean Office*

Over 430,000 people across the Caribbean and adjacent regions were registered to participate in the twelfth CARIBE WAVE exercise held on March 23, 2023. This annual tsunami exercise is carried out with the purpose of validating and advancing tsunami resilient communities in the region. It is organized by the United Nations Educational, Scientific, and Cultural Organization (UNESCO)/ Intergovernmental Oceanographic Commission (IOC) Intergovernmental Coordination Group for Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions. Two hypothetical scenarios were modeled for this exercise, a tsunami generated by a magnitude 7.6 earthquake located in the Gulf of Honduras and a tsunami generated by a flank collapse of the Mount Pelée volcano in Martinique. It was up to each of the 48 Member States and Territories to choose between the two scenarios and decide the level of participation and activity for their country.

The Pacific Tsunami Warning Center (PTWC), the regional Tsunami Service Provider (TSP), issued a “dummy” message at 1400 UTC through the different warning systems to test communications with Tsunami Warning Focal Points (TWFPs) and National Tsunami Warning Centres (NTWCs). Different methods of communications were used to test and disseminate the message: The World Meteorological Organization (WMO), Advanced Weather Interactive Processing System (AWIPS), Aeronautical Information Replacement System (AIRS), NOAA Weather Wire, GEONETCast Americas, fax, and email. According to feedback from the post-exercise survey as well as social media and web posts, the “dummy” message was successfully received. The Central America Tsunami Advisory Center also disseminated simulated products for the Gulf of Honduras scenario to its stakeholders.



Pictures from the different activities during CARIBE WAVE. From top left to right; Costa Rica, Venezuela, Puerto Rico, Mexico, Pacific Tsunami Warning Center, Aruba, Colombia, and Guadeloupe.

During the exercise, the International Tsunami Information Center (ITIC-CAR) accessed the availability of sea level data, which is important to forecast and confirm a real tsunami event. If a tsunami had occurred during the day of the exercise, data of 44 of the 65 sea-level stations in the region would have been available. Of the seven Deep Ocean Assessment and Reporting of Tsunamis (DART), only two were operational during the exercise. A regional post-exercise “hot-wash” webinar took place on April 4 to permit Member States and Territories to discuss and provide feedback on the exercise in an open forum. Some of the Member States highlighted the successful execution of tsunami evacuations in schools and business. The exercise also helped Emergency Managers identify the need for redundant communication and to adjust their Standard Operating Procedures.

The majority of the 432,244 participants registered on tsunamizone.org from across the region were from Kindergarten through grade 12 schools. State governments, universities, and preparedness organizations also had high levels of participation. A marked increase of people with disabilities was also noted. Full-scale exercises, seminars, and communication tests were some of the many activities that were organized for CARIBE WAVE. Since 2011, CARIBE WAVE has been improving and validating tsunami preparedness, which is why tsunami exercises are crucial to maintaining readiness in case of a real tsunami event. For more information on the exercise, the Gulf of Honduras and Mount Pelée scenarios, and exercise reports visit [caribewave.org](http://caribewave.org).

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## **United Nations Decade - Caribbean Early Career Ocean Professionals (ECOP) node**

*Published on [ECOPDecade.org/caribbean/](http://ECOPDecade.org/caribbean/)*

### Introducing ECOP Caribbean

The Node for the Caribbean region launched in November 2022, with a call to Early Career Ocean Professionals (ECOP) across the diverse Islands, nations and states in the Caribbean to connect through a collective ECOP Programme network.

### Goals and Objectives

ECOP Caribbean aims to provide access to opportunities both within the Caribbean region as well as immediately outside the region, mainly North America:

1. Significantly increase the number of ECOPs from the Caribbean in the global database. Currently, there are only 7 ECOPs from Caribbean Small Island Developing States.
2. Conduct a Needs Assessment for Caribbean ECOPs with a priority listing of these needs and strategies to fill these needs.
3. Share opportunities available to ECOPs especially in US Universities, Marine Laboratories and Aquariums in the field of marine research and conservation.
4. Work with US partners to remove barriers such as housing, transportation and meals costs to allow Caribbean ECOPs to participate in observerships, internships or apprenticeships.
5. Create a network of academic and scientific experts to serve as research advisors and career mentors for Caribbean ECOPs currently in a graduate program at their home Universities.

6. Convene an in-person conference or workshop with ECOP representatives from all Caribbean countries to share research, conservation activities and network with each other and established professionals in the field.
7. Establish a communication mechanism to allow Caribbean ECOPs to network and share opportunities and also challenges, facilitating a coordinated approach to addressing common issues.
8. Facilitate Caribbean ECOPs to attend regional fisheries and marine conservation conferences.
9. Establish Points of Contact for each Caribbean country.
10. Work in collaboration with Latin American and US regions.

Please share with all early career members of your community!



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## **Drought Update for Puerto Rico and the U.S. Virgin Islands**

*Published on Drought.gov*

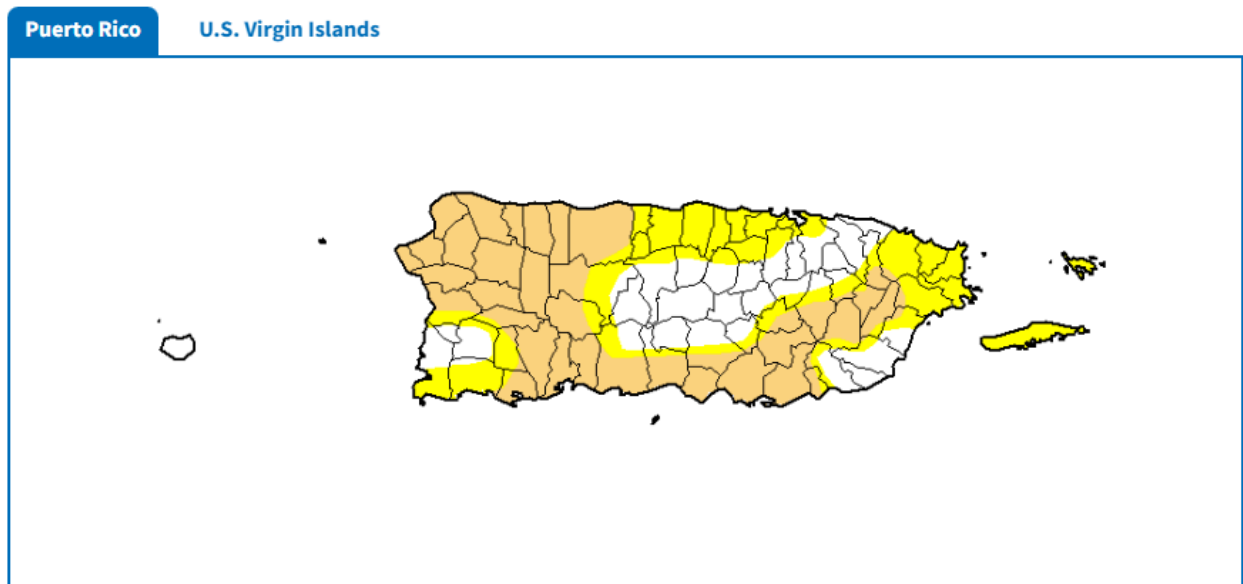
Drought conditions continue to deteriorate across all islands. Moderate drought (D1) conditions are now observed across Puerto Rico and Saint Thomas, with severe drought conditions noted in Saint Croix.

The most likely scenario during the next few months is for the persistence and expansion of drought conditions across all islands. The rainfall during the month of May will be crucial to determine if drought conditions will prevail during the summer months. Farmers are preparing now for the dry season ahead.



Puerto Rico Conditions: Limited rainfall activity has been observed across the local islands during the past few months. As a result, abnormally dry (D0) to moderate drought (D1) conditions continue to expand across nearly all of Puerto Rico, but especially along the southern coast, from Guayama west to Cabo Rojo. Some hints of severe drought (D2) are beginning to show near Aguadilla and parts of the municipalities of Moca, Isabela, and Mayaguez. The National Weather Station station at Coloso in the municipality of Mayaguez has reported only 4.45 inches of rain through April 4. This is the driest year-to-date total since 2014.

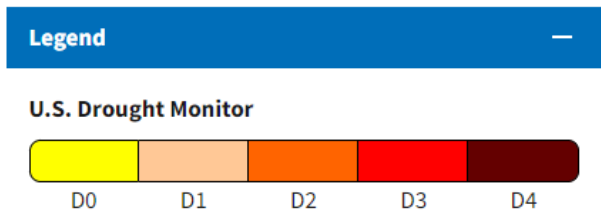
Puerto Rico Impacts: The fire danger weather in Puerto Rico continues to increase as dryness intensifies. There are reports of soil cracking, and dried and brown grass. A decreasing trend in water levels continued to be observed at reservoirs, rivers, and aquifers across Puerto Rico.



[U.S. Drought Monitor map](#) for Puerto Rico, as of April 4, 2023. The U.S. Drought Monitor is updated each Thursday to show the location and intensity of drought across the country.

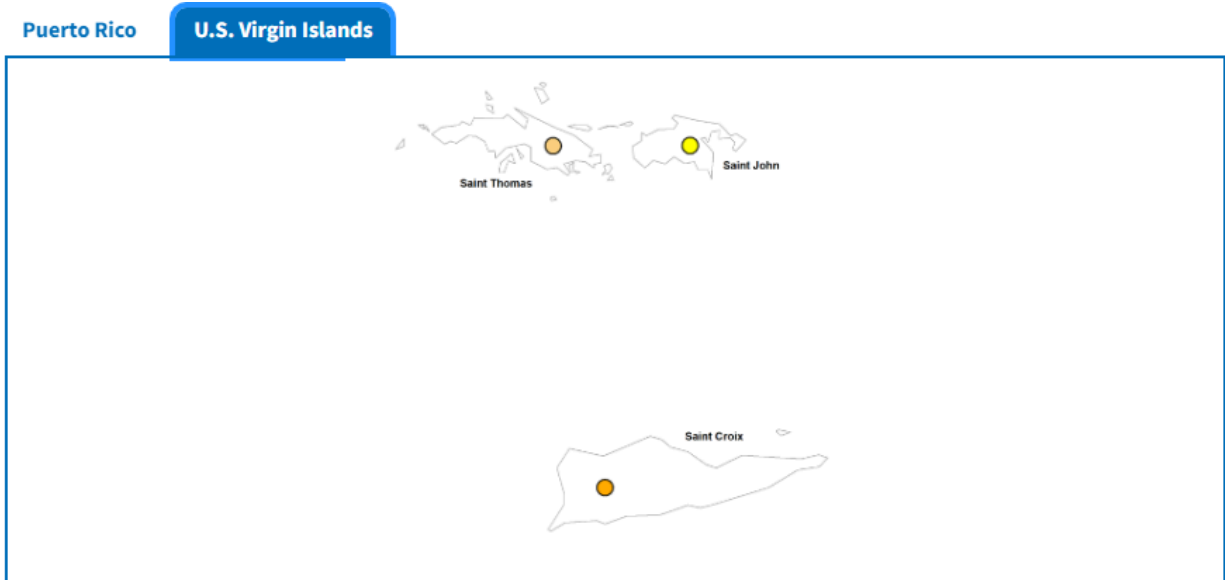
The map uses 5 classifications: Abnormally Dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought (D1–D4).

Source(s): [NDMC](#), [NOAA](#), [USDA](#)



U.S. Virgin Islands Conditions: Sporadic rain is occurring in the USVI, but wind and high temperatures are causing the loss of water from the soil and preventing the rains from saturating the soil. While the rainy season helped replenish some groundwater, drought is expanding and intensifying across the USVI, especially in St. Croix. Over the past 60 days, Rohlsen Airport has reported only 1.22 inches of rain, or about 40% of normal. This is the 4th driest such period in 63 years of data, or about 1 in 15 years of dryness, reflective of the severe drought (D2) being reported in the U.S. Drought Monitor.

U.S. Virgin Islands Impacts: Vegetation is beginning to show signs of distress due to the drier-than-normal conditions. Poultry farmers across the USVI are reporting a decrease in egg production due to heat.



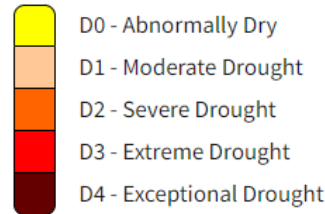
U.S. Drought Monitor map for the U.S. Virgin Islands, as of April 4, 2023. The U.S. Drought Monitor is updated each Thursday to show the location and intensity of drought across the country.

The map uses 5 classifications: Abnormally Dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought (D1–D4).

Source(s): [NDMC](#), [NOAA](#), [USDA](#)

#### Legend

#### U.S. Drought Monitor Categories



Looking Ahead: The most likely scenario during the next few months is for the persistence and expansion of drought conditions across the islands. The rainfall during the month of May will be crucial to determine if drought conditions will prevail entering the summer months.

For weather information specific to your area, please monitor products issued by the [National Weather Service in San Juan](#).

More information on this can be found at: <https://www.drought.gov/drought-status-updates/drought-update-puerto-rico-and-us-virgin-islands-2023-04-06>.

## Announcements

### Funding:

#### 1. NOAA Climate Resilience Regional Challenge

NOAA has released the [Notice of Funding Opportunity](#) for our new program, the *Climate Resilience Regional Challenge (CRRC)*, which provides approximately \$575 million in funding from the Inflation Reduction Act for investing in holistic, collaborative approaches to coastal resilience at regional scales. All the details are available here: [Climate Resilience Regional Challenge](#).

Projects will need to consider four overarching priorities: *risk reduction; regional coordination and collaboration; equity and inclusion; and enduring capacity*.

There are two funding tracks to choose from:

- Track One: *Regional Collaborative Building and Strategy Development*: (\$25 million)
- Track Two: *Implementation of Resilience and Adaptation Actions*: (\$550 million)

### [Frequently Asked Questions Page](#)

We encourage potential applicants to focus on the following sections of the Funding Opportunity:

- **Program Overview** section (I.A.2): describes the framework for this funding competition and provides examples of the types of projects that could be funded under each Track.
- **Program Priorities** section (I.B): describes what should be achieved as a result of investments supported by this funding.
- **Evaluation Criteria** section (V.A): describes how NOAA will evaluate the proposals we receive under each Track.
- **Content and Form of Application** section (IV.B): describes what information needs to be included in an application.

Reviewing the sections identified above should help potential applicants determine if this funding opportunity is right for you. Please remember there is important and valuable information throughout the [Notice of Funding Opportunity](#), so everyone that is interested in applying should read the entire document carefully. We also encourage you to check the [CRRC website](#) frequently since we will be updating it as needed to include dates for informational webinars, Q&A sessions, and other supporting material.

**Virtual Information Sessions for Applicants:**

- [Tuesday, June 27, 1 to 2 p.m. Eastern Time](#)
- [Tuesday, July 11, 3 to 4 p.m. Eastern Time](#)
- [Wednesday, July 12, 7 to 8 p.m. Eastern Time](#)

Please do not hesitate to send an email to [resiliencechallenge@noaa.gov](mailto:resiliencechallenge@noaa.gov) if you have questions or if you need additional information.

2. NOAA Sea Grant and Climate Program Office, together with support from the NOAA Office of Coastal Management, have opened the [Climate Ready Workforce for Coastal States, Tribes, and Territories Initiative](#) funding opportunity.

NOAA envisions making between 10-20 awards under this competition, at amounts ranging from \$500,000-\$10 million each, to establish programs aimed at placing people across the country into good jobs that advance climate resilience and assisting employers in developing a 21st century workforce that is climate literate, informed by climate resilience, and skilled at addressing consequent challenges. Subject to the availability of funds, NOAA is seeking qualified organizations to lead partnerships to place workers in quality jobs that enhance climate resilience.

This opportunity is open to state, tribal, territorial and local governments, institutions of higher education, and non-profit organizations in coastal states or territories. Resources from NOAA's Climate Program Office, Office for Coastal Management, and National Sea Grant Office and its partners will be available to provide technical assistance to applicants and recipients to support these innovative efforts.

Please help us spread the word about this funding opportunity, which encourages the development of robust partnerships. We will continue to conduct outreach and develop additional materials in the coming weeks.

Learn more about the Climate Ready Workforce and view the Federal Notice of Funding Opportunity (NOFO) at <https://seagrant.noaa.gov/crw>.

NOAA will host several informational webinars about this opportunity.

- [Informational webinar #1](#) - July 11 at 3 pm Eastern
- [Definition of “resilience” webinar](#) - July 12 at 3 pm Eastern
- [Informational webinar #2 -Q&A focus-](#) July 20 at 3 pm Eastern
- [How to leverage partnerships webinar](#) - July 21 at 3 pm Eastern
- [Tips for first time applicants webinar](#) - August 2 at 3 pm Eastern

Important Dates:

- Letters of Intent are due at 11:59 pm Eastern Time on November 30, 2023.
- The deadline for application submission is 11:59 pm Eastern Time on February 13, 2024.
  - Letters of Intent or applications received after the above deadlines will not be reviewed or considered.

This competition is one component of [NOAA's \\$3.3 billion in Inflation Reduction Act funds](#), which will further NOAA's efforts to build a Climate-Ready Nation. I encourage you to consider applying to NOAA's other Inflation Reduction Act funded initiatives, such as:

- [NOAA Climate Resilience Regional Challenge](#) (Letters of intent due August 21, 2023)
- [NOAA Climate Resilience Accelerators](#) (expected to open July 2023)

**General:**

### **1. Webinar: Engaging Youth in Living Shoreline Programs**

Please join us for a webinar focused on two highly successful living shoreline programs that use a variety of approaches, including oyster reef and salt marsh restoration. Join us to learn about these programs, gain access to helpful information resources, and see how students and other young adults are incorporated into these efforts.

Webinar: Engaging Youth in Living Shoreline Programs- hosted by NOAA's Office for Coastal Management

- **Timing: July 12, 2023, 1:00 to 2:00 p.m. (EST)**
- Registration: please fill out [this form](#)

- For questions, please contact [Bridget.Lussier@noaa.gov](mailto:Bridget.Lussier@noaa.gov)

### NOAA in the Caribbean Newsletter

If you wish to subscribe to NOAA in the Caribbean's newsletter or the community distribution list, please fill out this [form](#).

If you wish to submit any questions, comments, story ideas, artwork or photographs, please email us at [CaribbeanNews@noaa.gov](mailto:CaribbeanNews@noaa.gov).

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