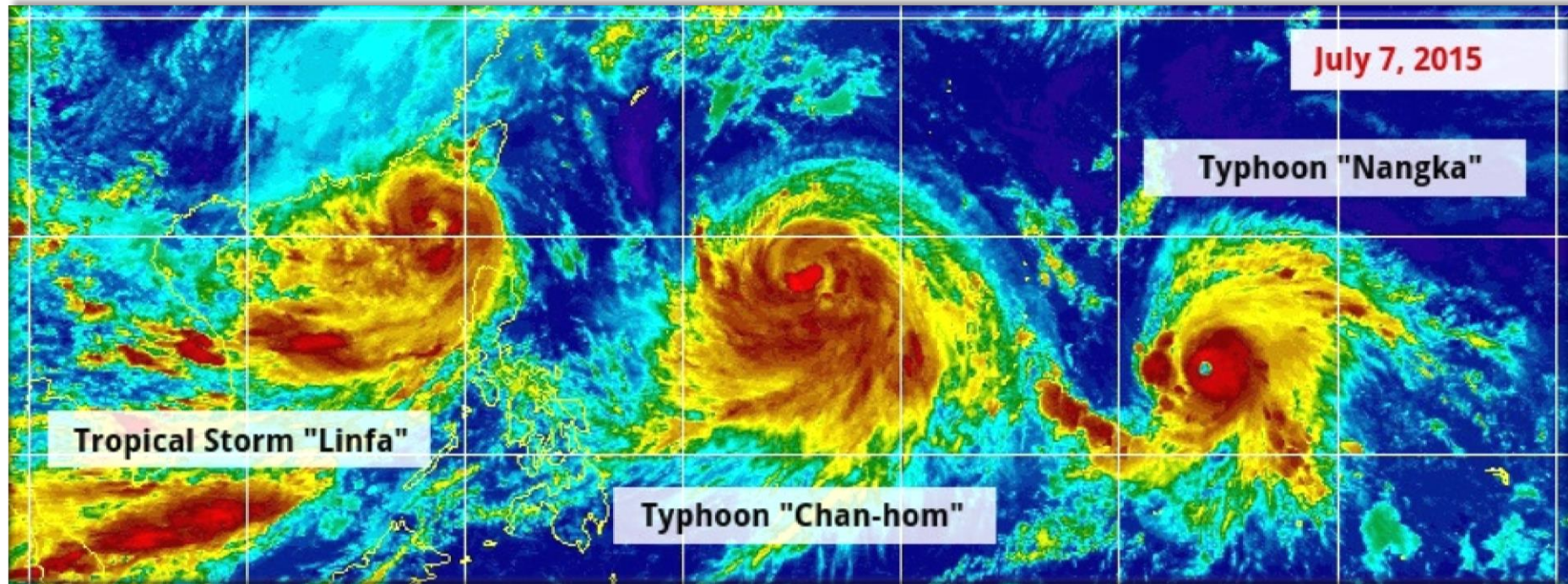


# *Weather, Climate, and Ocean Needs for Modern Warfighting*

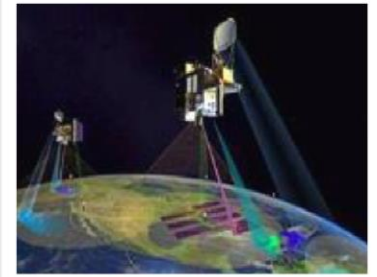


*Rear Admiral Tim Gallaudet, PhD  
US Navy (ret)  
CEO, Ocean STL Consulting*



*Ocean STL Consulting, LLC  
Ocean Science and Technology  
Leadership for the 21st Century*

# *When I Was In the Navy...*



*The Weather Gauge of the 21<sup>st</sup> Century*



# Climate Change Impacts



**Increasing Flooding**



**Water Scarcity**



**Seasonally Ice Free Arctic**



**Fish Stock Movement**



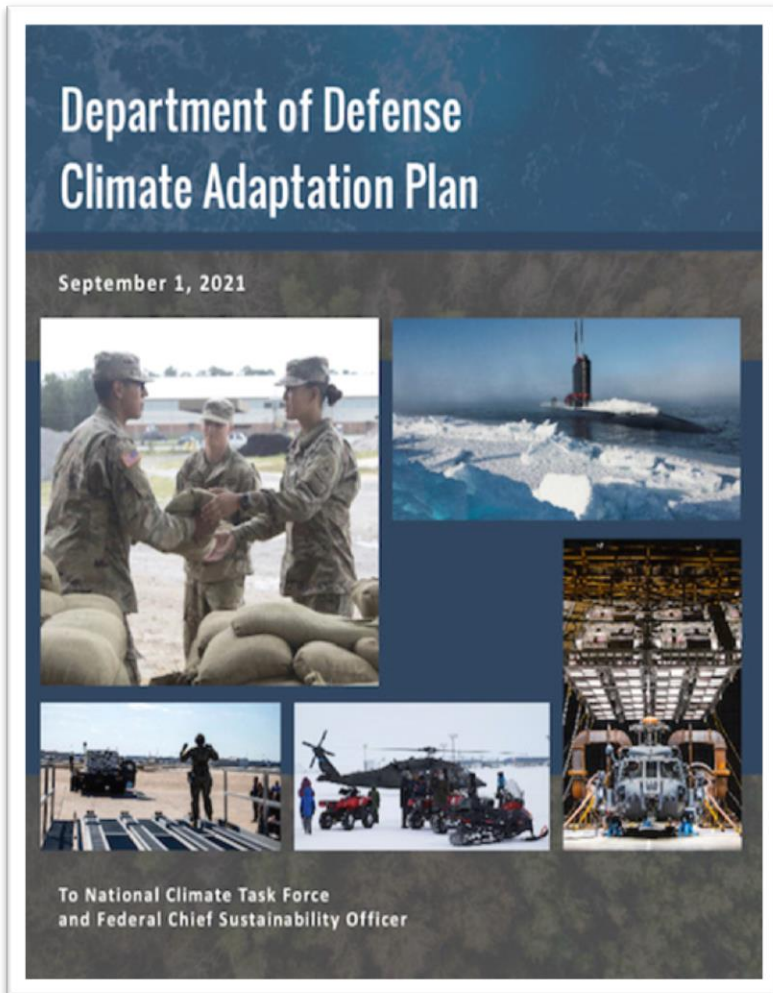
**Extreme Drought Conditions**



**Tropical Cyclone Intensification**

**Impacts to All DOD Missions Worldwide**

# DOD's Climate Plan





# *Tyndall AFB, October 2018*

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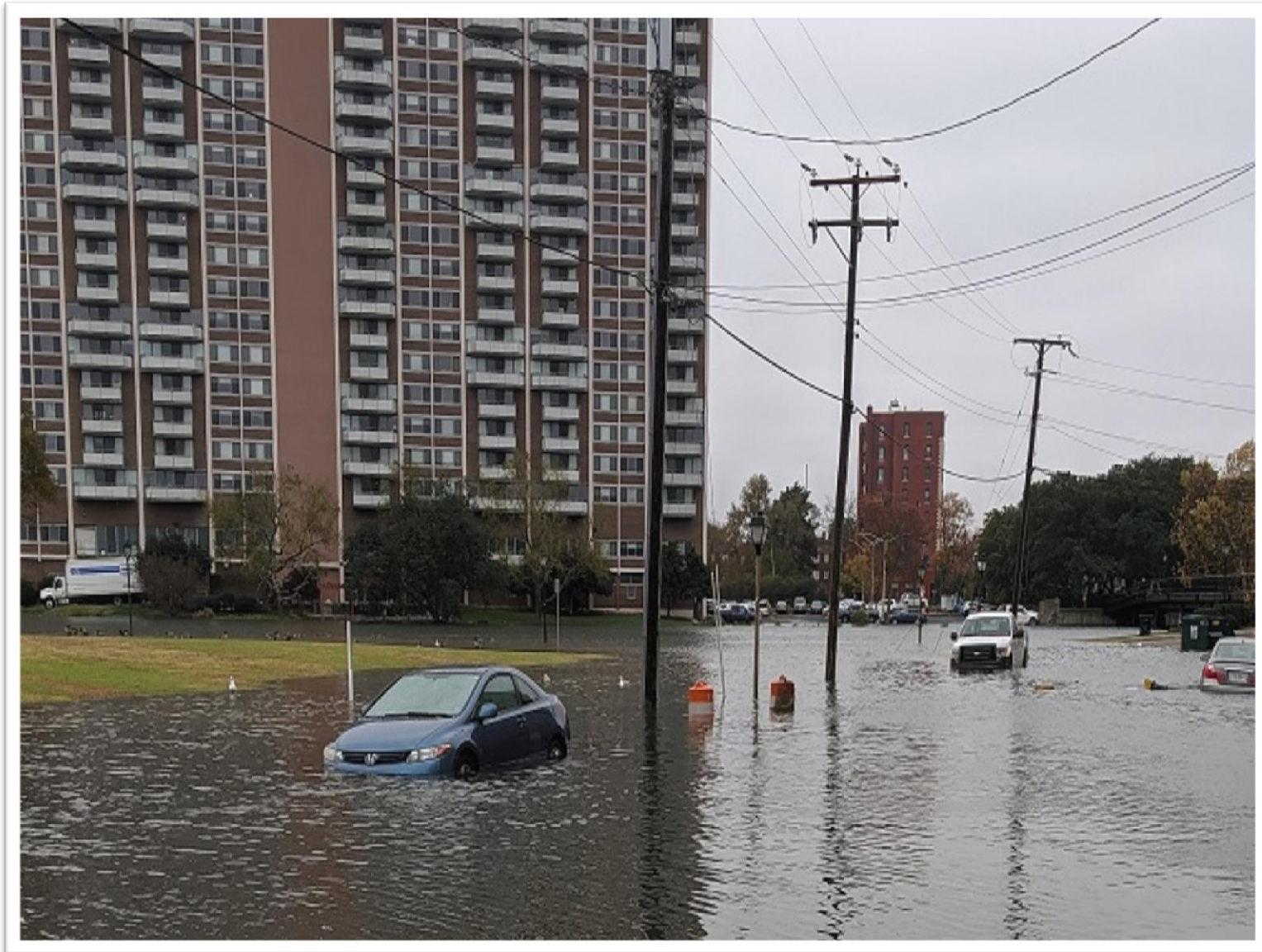
# *Offutt AFB, March 2019*





# *Norfolk Naval Base, 2020*

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# King's Bay Submarine Base, July 2021



TEAM COVERAGE

4 PEOPLE INJURED AFTER TORNADO TOUCHED DOWN AT NAVAL BASE

KINGS BAY, CAMDEN COUNTY

**FOX30**

ACTION NEWS JAX

75°



# Making the Military Climate Ready



RealClearDefense

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## Making the Military Climate-Ready for What Truly Matters – Modern Warfighting

By **Tim Gallaudet**

December 04, 2021



U.S. Navy photo by MC3 Andrew Langholf

# A Recent Wargame

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***“It failed miserably...(they) just ran rings around us...(and) knew just what we were going to do before we did it.”***

***Gen John Hyten  
former Vice CJCS***



# Modern Warfighting Elements

***Distributed Force  
Dispositions***



***Joint All Domain  
Operations***



***Technology  
Proliferation***



***Information Warfare  
Ascent***



***Need Higher Precision, Longer Lead Times, Larger Areas***

# ***A Bold New Era***

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***“In 1957, when the Soviet Union launched the Sputnik satellite, only the federal government could mount a response to that launch. Today, it could easily be a private company or even a startup,”***

***Dr. Kelvin Droegemeier  
former White House Science Advisor***

***DOD Needs Public-Private Partnerships More Than Ever***



# Way Ahead

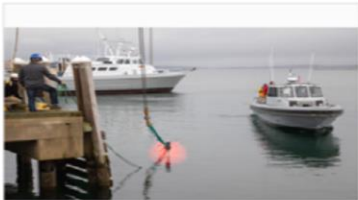
## Sofar and DARPA look to standardize ocean monitoring gadgets with Bristlemouth

Devin Coldewey

@techcrunch / 5:01 am PDT • September 23, 2021



## Dive Technologies Participates in 1st CRADA Event with NUWC - Newport Division

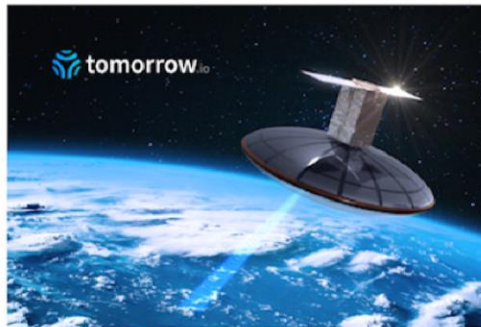


## Tomorrow.io secures US\$20m US Air Force contract to deploy weather satellite constellation



By DAN SYMONDS — October 5, 2021

No Comments



BREAKING  
**DEFENSE**

## Could 'Weather Intelligence' Take The Pentagon By Storm?

A weather "data coverage gap exists in areas that we operate on a regular basis in the military," says Dan Stillman, director of marketing for Tomorrow.io's space and government division.

By THERESA HITCHENS on July 08, 2021 at 7:00 AM



by CBRNE CENTRAL STAFF  
May 8, 2017, 8:52 am

**Solutions for DOD's Needs Are Available Now**

# *Thank You!*

