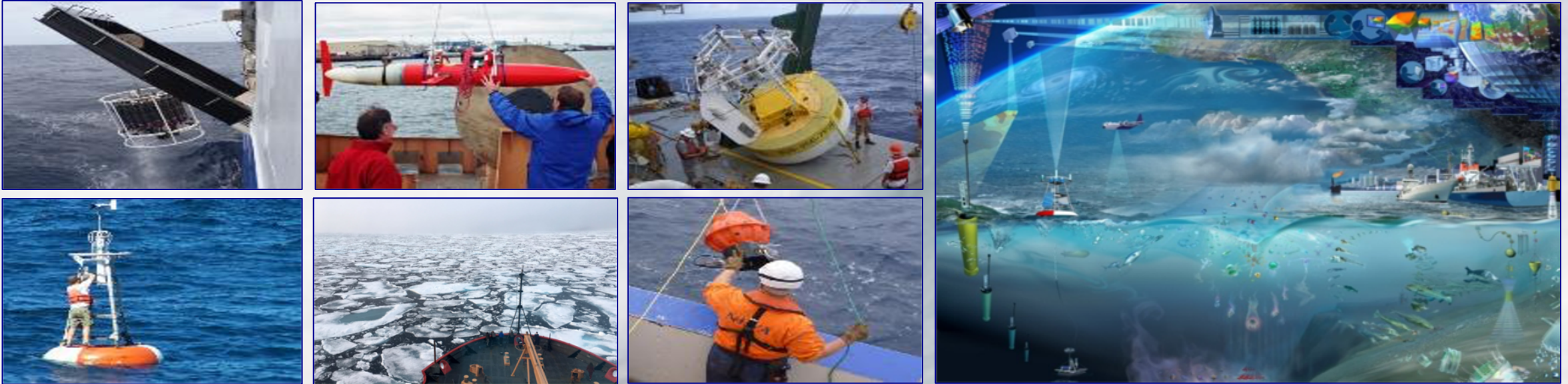


NOAA's Role in International Tropical Atlantic Observing



Dr. David M. Legler

NOAA Oceanic and Atmospheric Research (OAR)

Chair, PIRATA Resources Board (PRB)

Director, Global Ocean Monitoring and Observing Program

Chair, GOOS Observations Coordination Group



Tropical Atlantic Weather and Climate Impacts

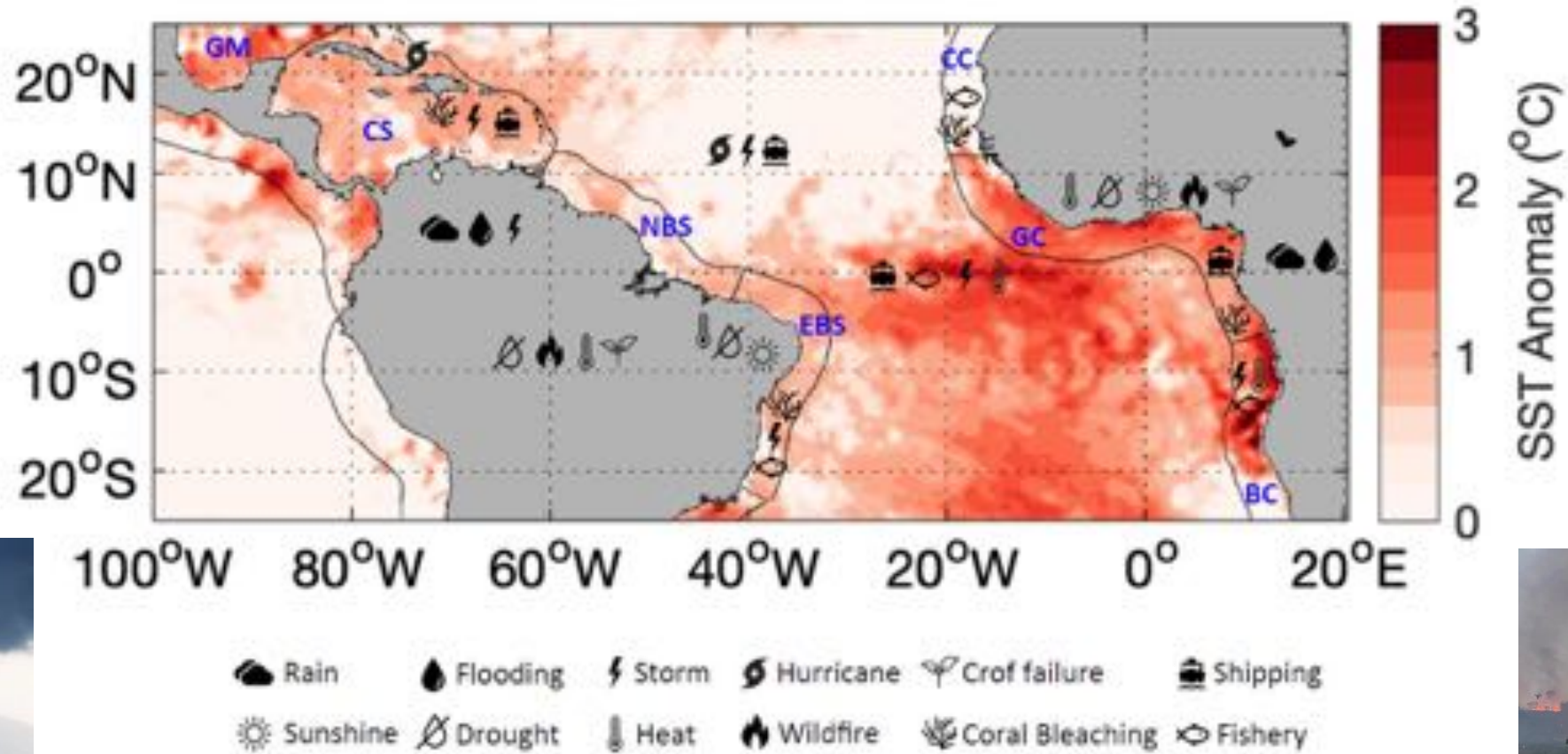
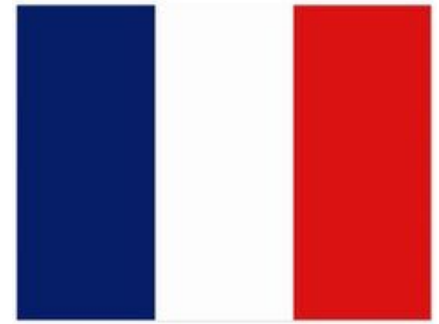


Figure provided by R. Rodriguez

Successes



- Successful PIRATA PNE cruise – Jan 15 – Feb 24, 2021 - on NOAA ship *Ronald H. Brown*, Chief Scientist, Greg Foltz (NOAA/AOML, USA). The first RHB cruise with scientists on board!; also one Brazilian mooring was serviced
- Successful PIRATA cruises – Feb 16 - Mar 30, 2020 and Feb 22 - Apr 20, 2021 - on French ship R/V *Thalassa*, Chief Scientist, Bernard Bourles (IRD, France)
- The new PIRATA MOU to be signed soon shows the commitment of all partners!



Challenges



- Piracy in Gulf of Guinea (impact to French cruise, moving PIRATA mooring)
- Mooring servicing severely curtailed (COVID-19) resulting in moorings parting from their anchors
- Funding for overcoming COVID losses, upgrades, maintenance and “emergencies”

Perseverance

"Going on one more round,
when you don't think
you can, that's what makes
all the **difference**."

- Sylvester Stallone

Goalcast

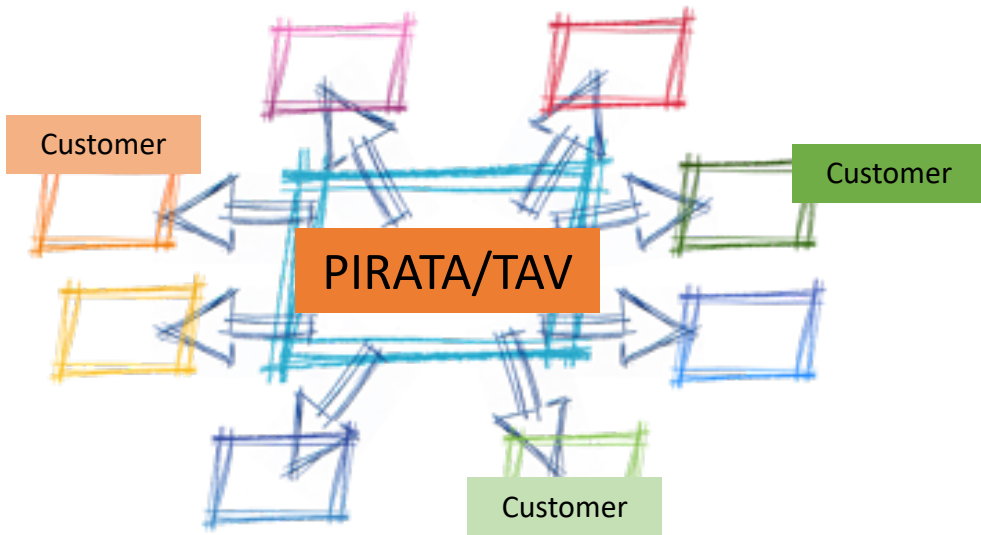


Potential Opportunities

- Addressing TAOS Review (under final review)
- New US Administration Priorities
 - Climate Crisis, Racial Equity, Building Back Better
- GO-BGC (500 BGC Argo floats)



- UN Decade (ocean science for sustainable development)



- **Realizing value**
- **Co-Evolution with its “customers”**
- **Leadership – making things happen**



Extra Slides



Image credit: Bertrand Dano

PIRATA-24/TAV
(24th Prediction and Research Moored Array
in the Tropical Atlantic /Tropical Atlantic
Variability Meeting)

Meeting Logistics

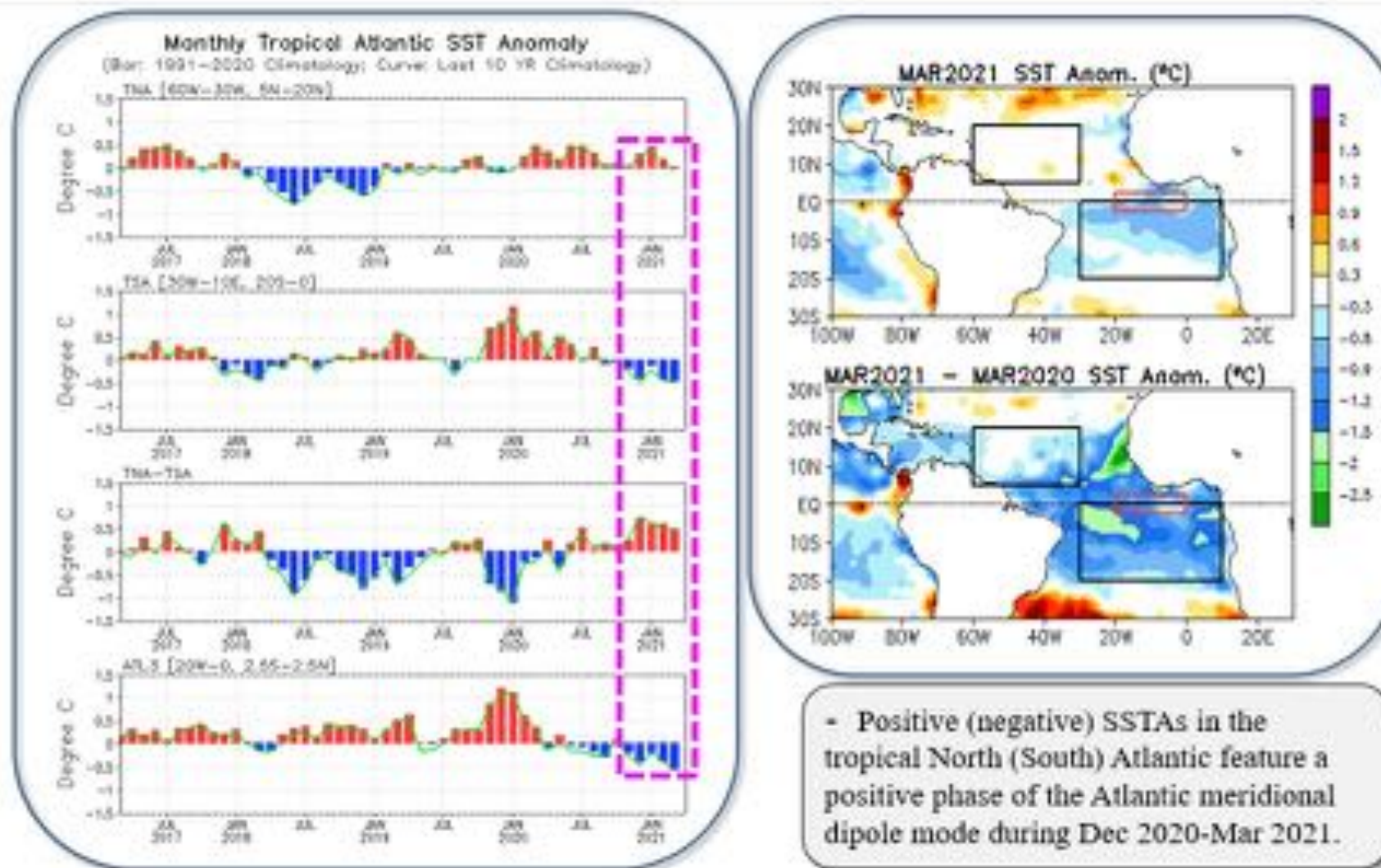
20 - 22 April, 2020

The Mayfair at Coconut Grove
3000 Florida Avenue
Coconut Grove, FL



Image credit: Demetrius Theune/Getty

Evolution of Tropical Atlantic SST Indices



Tropical Atlantic Variability region indices, calculated as the area-averaged monthly mean sea surface temperature anomalies (°C) for the TNA [60°W–30°W, 5°N–20°N], TSA [30°W–10°E, 20°S–0°] and ATL3 [20°W–0, 2.5°S–2.5°N] regions, and Meridional Gradient Index, defined as differences between TNA and TSA. Data are derived from the NCEP OI SST analysis, and anomalies are departures from the 1991–2020 base period means.

NOAA RHB cruise impacts due to COVID-19 (from Greg Foltz): For preparation, points 4-6 probably had the biggest impact. This is mostly only for AOML. It's possible PMEL had additional challenges.

Preparation

1. AOML was in "phase 0," meaning very limited access to the lab, only mission-critical and with pre-approval. This made prep work less efficient.
2. Requirement for 7-day SIP prior to boarding the RHB for loading. Several of our engineering staff had just returned from another cruise and could not complete the SIP, so they were not able to help with loading/setup. As a result, instead of having everything ready to go for the cruise, we had to set up and troubleshoot during the cruise (added stress, but everything was accomplished).
3. Requirement for 7-day SIP prior to embarking. Significant added hotel/per-diem expense for PMEL participants.
4. Crewmember was not allowed to join because of contact with COVID. This happened about 5 days before the scheduled departure, so the cruise was delayed 2 days while the replacement did their SIP. We did not get the 2 days back, meaning lost DAS and lost science (reduced CTDs).
5. Requirement for start/end ports to be in the U.S. This resulted in very long transits and 43 DAS needed to complete the science objectives. When we lost 2 days due to COVID, science had to be sacrificed.
6. Requirement to stay within 500 nm of medical facility during the first week of the cruise. Again, limiting time for science.

During

No major challenges besides nuisance of wearing a mask all day for the first 3 weeks and social distancing, which probably reduced morale.

After

All AOML engineers were doing SIP for another cruise, so they could not help unload and transport gear back to Miami. This added stress and expense for us (renting large truck, forklift, driving everything back ourselves).

23rd PIRATA meeting and the 2nd TAOS
REVIEW meeting was held in Marseille, France
from October 22 to 26, 2018



Photo credit: France Today (3-20-2019)