

**Update on:**

**Eastern Boundary Upwelling Systems (EBUS)  
Research Focus**

CLIVAR SSG meeting  
10 March, 2021

**Some recent works: participation in OceanObs'19 review papers**

Todd, Robert E., et al. "Global perspectives on observing ocean boundary current systems." *Frontiers in Marine Science* 6 (2019): 423.

Stammer, Detlef, et al. "Ocean climate observing requirements in support of Climate Research and Climate Information." *Frontiers in Marine Science* 6 (2019): 444.

Foltz, Gregory R., et al. "The tropical Atlantic observing system." *Frontiers in Marine Science* 6 (2019): 206.

**Ongoing (and final) work: A perspectives manuscript on priorities in EBUS science**

We aim to draw upon the broad atmosphere-ocean-ecological expertise of the group to propose “critical questions” that might help guide research concerning EBUS sensitivities to climate change.

We identified 6 questions that deserve some focused research before the scientific community can confidently project the impacts of future climate change on EBUS.

## *Ongoing (and final) work: A perspectives manuscript on priorities in EBUS science*

**#1 - What large-scale characteristics control the position, strength and seasonality of upwelling?**

Lead author : Thomas Toniazzo

**#2 - At the regional scale, what are the impacts of orography, bathymetry, and topography on EBUS processes?**

Lead author : Paquita Zuidema

**#3 - What are the physical and biogeochemical interactions within EBUS that need to be resolved?**

Lead author : Martin Schmidt

**#4 - What effect do EBUS have on large-scale climate conditions?**

Lead author : Alban Lazar

**#5 - What are the sensitivities of EBUS to larger-scale climate processes?**

Lead authors : Art Miller, Moussa Diakhate

**#6 - What are the relative roles of physical and biogeochemical processes (bottom-up) vs fishing practices in influencing important fish populations in EBUS?**

Lead author : Ryan Rykaczewski

## *EBUS RF evolution in 2020*

Co-chairs Alban Lazar (France), Ryan Rykaczewski (USA), and Thomas Toniazzo (Norway) made a pause

COVID required significant life adjustments , that overall slowed down our work

and furthermore R. Rykaczewski

- changed his work position for an operational one at NOAA, Honolulu

- got a fascinating baby

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## *Outlook for the coming months*

Intention to finalise a version of the draft during a FG meeting this spring.  
and present it to the Pacific and Atlantic Regional Panels in order to narrow  
down the scope of the paper

*Thanks!*