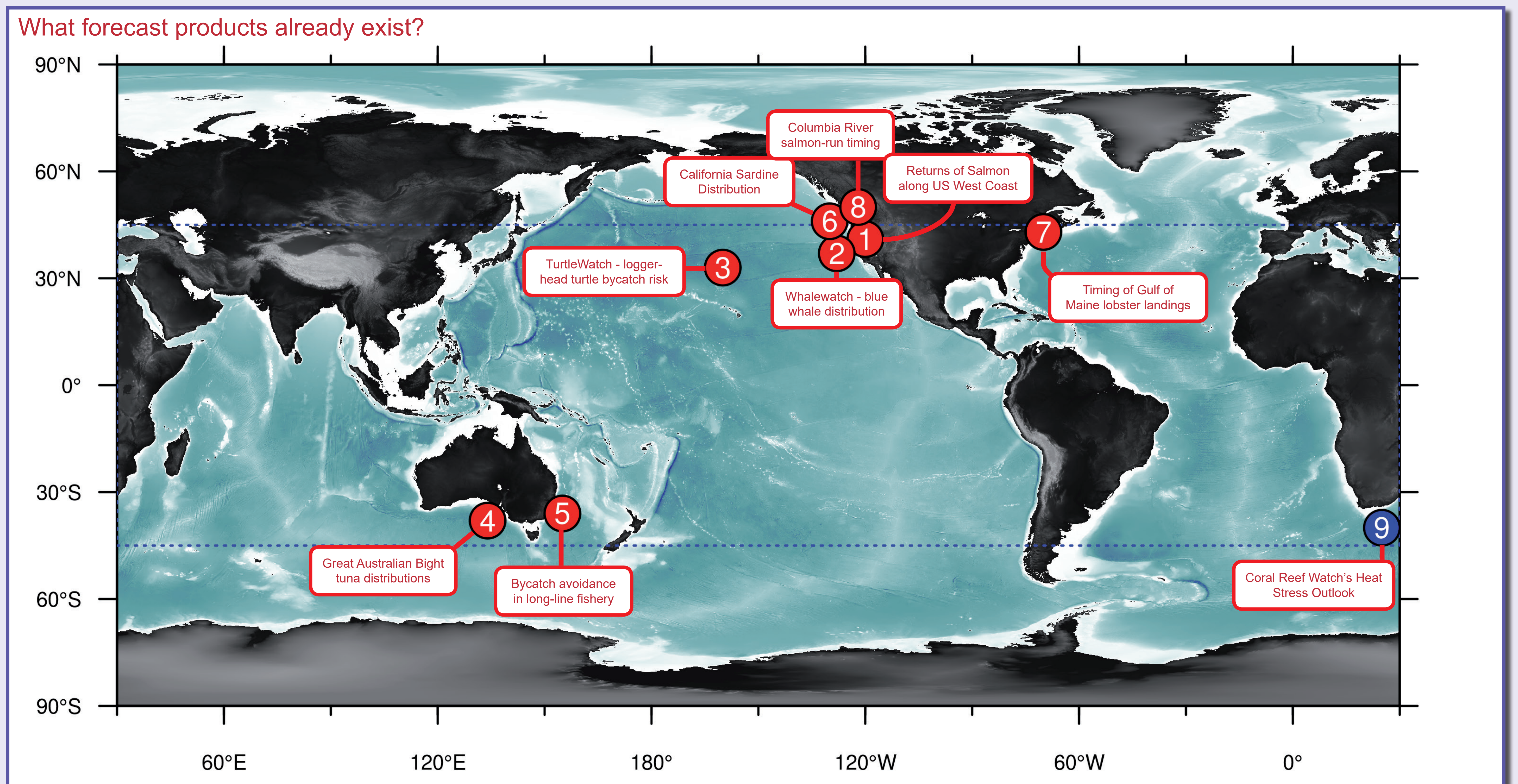


Lessons from the First Generation of Marine Ecological Forecast Products

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Today the state of the ocean can be skilfully forecast months and even years into the future. Based on these forecast systems, the first generation of marine ecological forecast products has now emerged. What makes a successful forecast? And how can new forecasts be developed?



What variables are being predicted?

- Majority of products (6) are spatial distribution forecasts, reflecting close link between distribution and environment
- Phenology (timing) of events (2)
- Fish stock productivity (1)
- Coral reef bleaching (1)

Where is forecasting taking place?

- Australia pioneered the field 10 yrs ago
- USA catching up rapidly
- Interestingly, no products in Europe, even though its oceans are amongst the most predictable on the planet.

Where else could forecasting be applied?

- We propose three criteria that can be used to identify "low-hanging fruit"
- Skilful predictions of the environment
 - Good mechanistic understanding of physical-biological linkages
 - Close causal linkages ("proximity") between the driver and the response

Involve end-users!! A good forecast is one that people use to make decisions! Involving end-users from the start to define, design and produce forecasts is critical to ensure their uptake and success.

Interested? Some useful resources and groups to get started with!

- MarEcoFor - The Marine Ecological Forecasting Mailing List
<http://bit.ly/MarEcoFor>
- ICES Working Group on Prediction of Marine Ecosystems (WGS2D)
- PICES WG-40 Working Group on Climate and Ecosystem Predictability
- CLIOTOP Task team 2016/03: Dynamic ocean management and seasonal forecasting for pelagic ecosystems.
- Article that this poster is based on:
doi:10.3389/fmars.2017.00289

“Successful development of marine ecological forecasts requires striking a balance between what is *feasible* and what is *useful*.”