CORAL REEFS AND HOW THEY HAVE DEGRADED OVER THE YEARS

A look at the environmental factors

A PRESENTATION BY:
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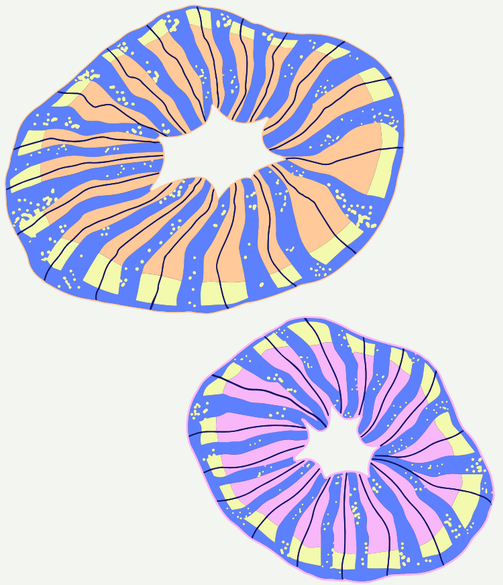
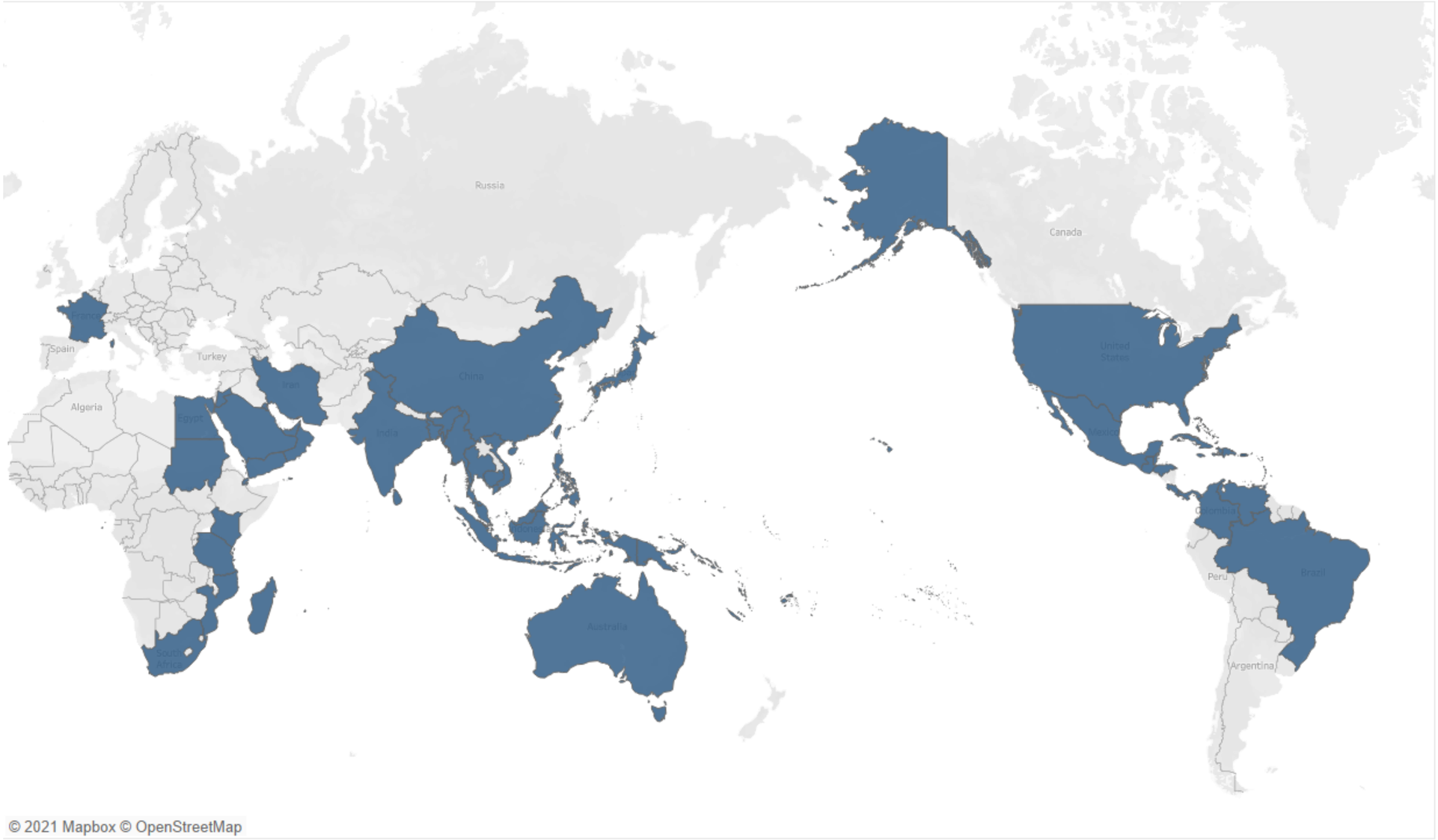


Source of data:

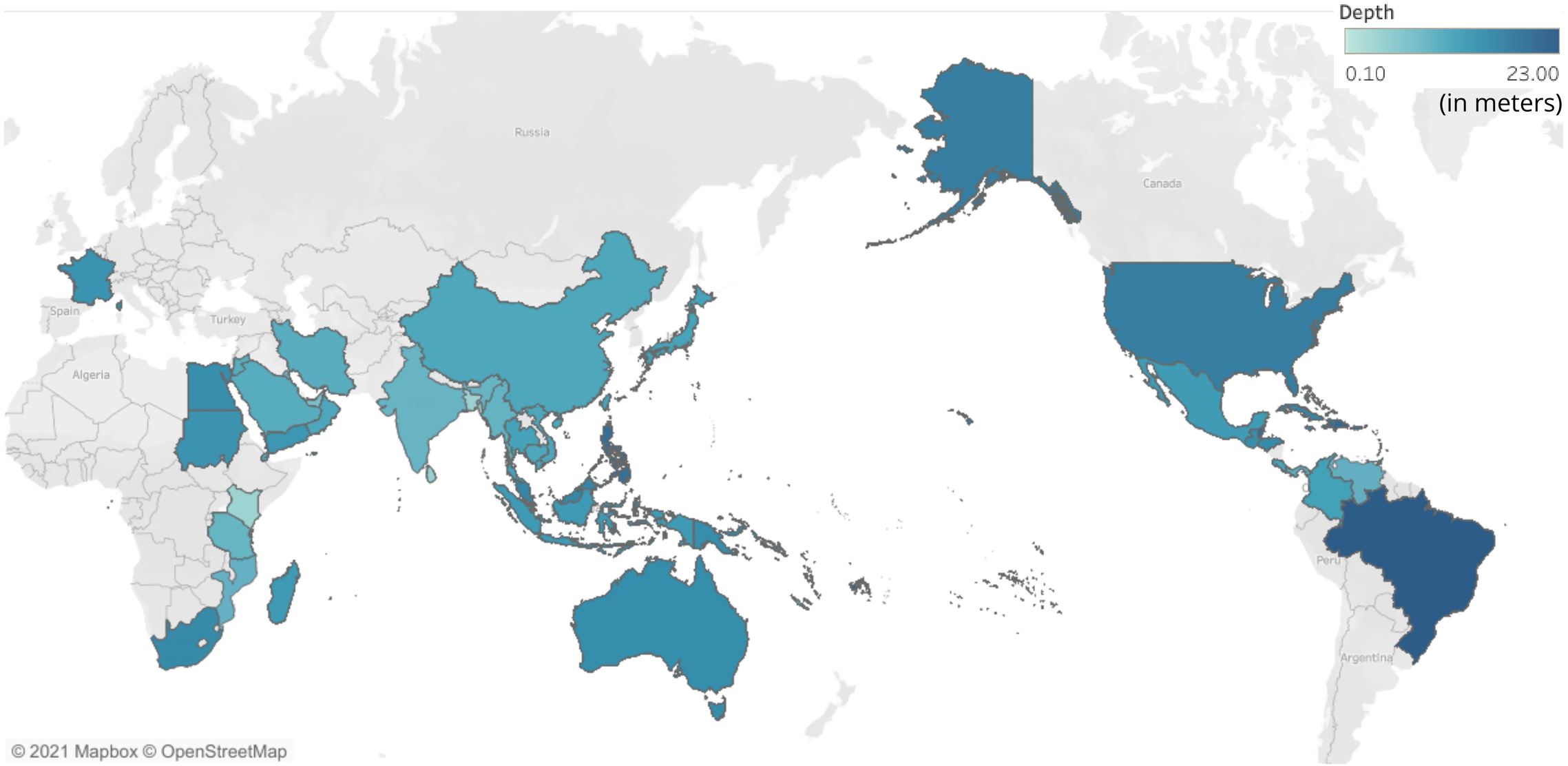
All visuals are inferred from the dataset "Global Bleaching and Environmental Data" by BCO-DMO.

REGIONS COVERED BY THE DATASET



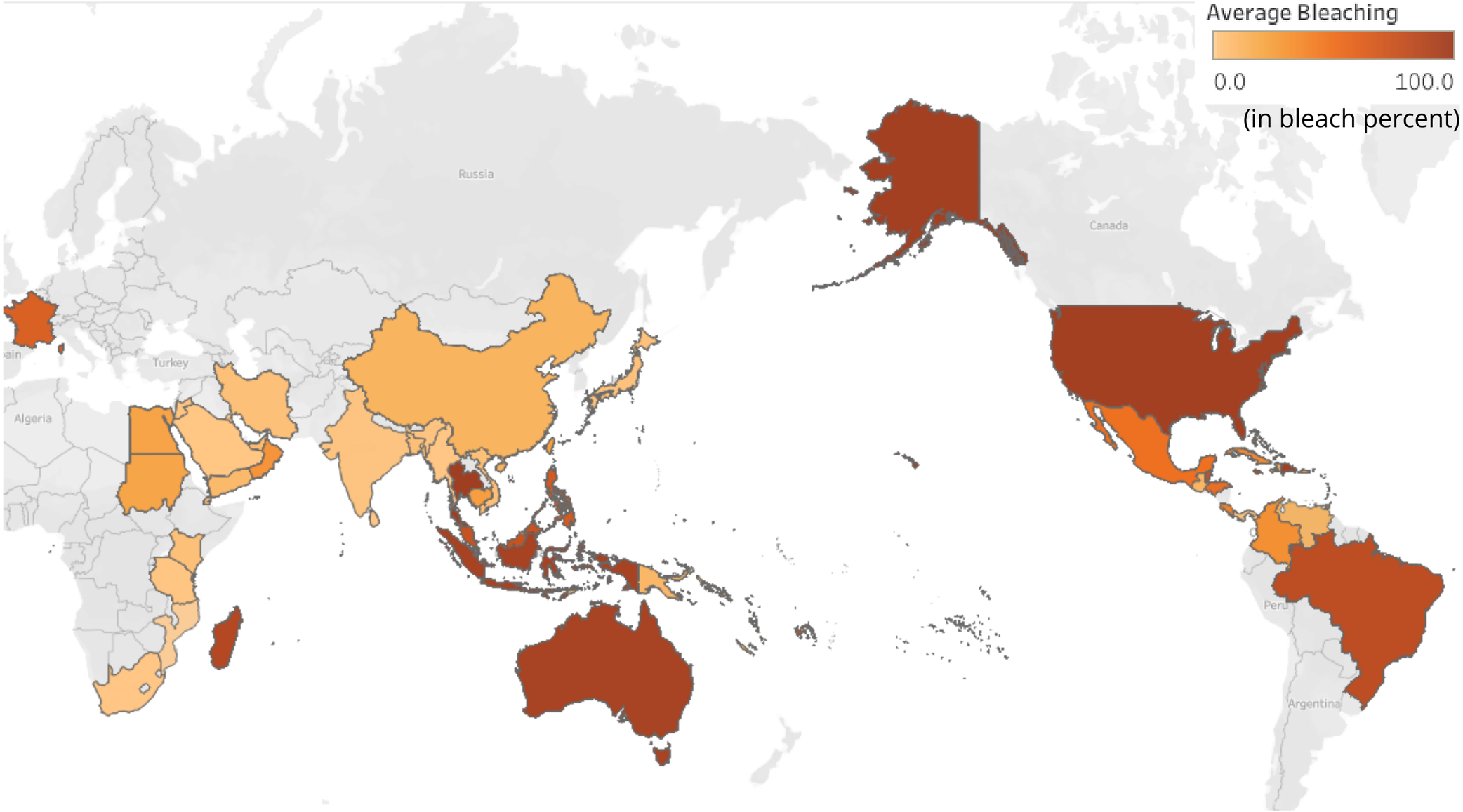
The regions covered by the dataset are highlighted in blue.

A LOOK AT THE DEPTH OF THE REEFS

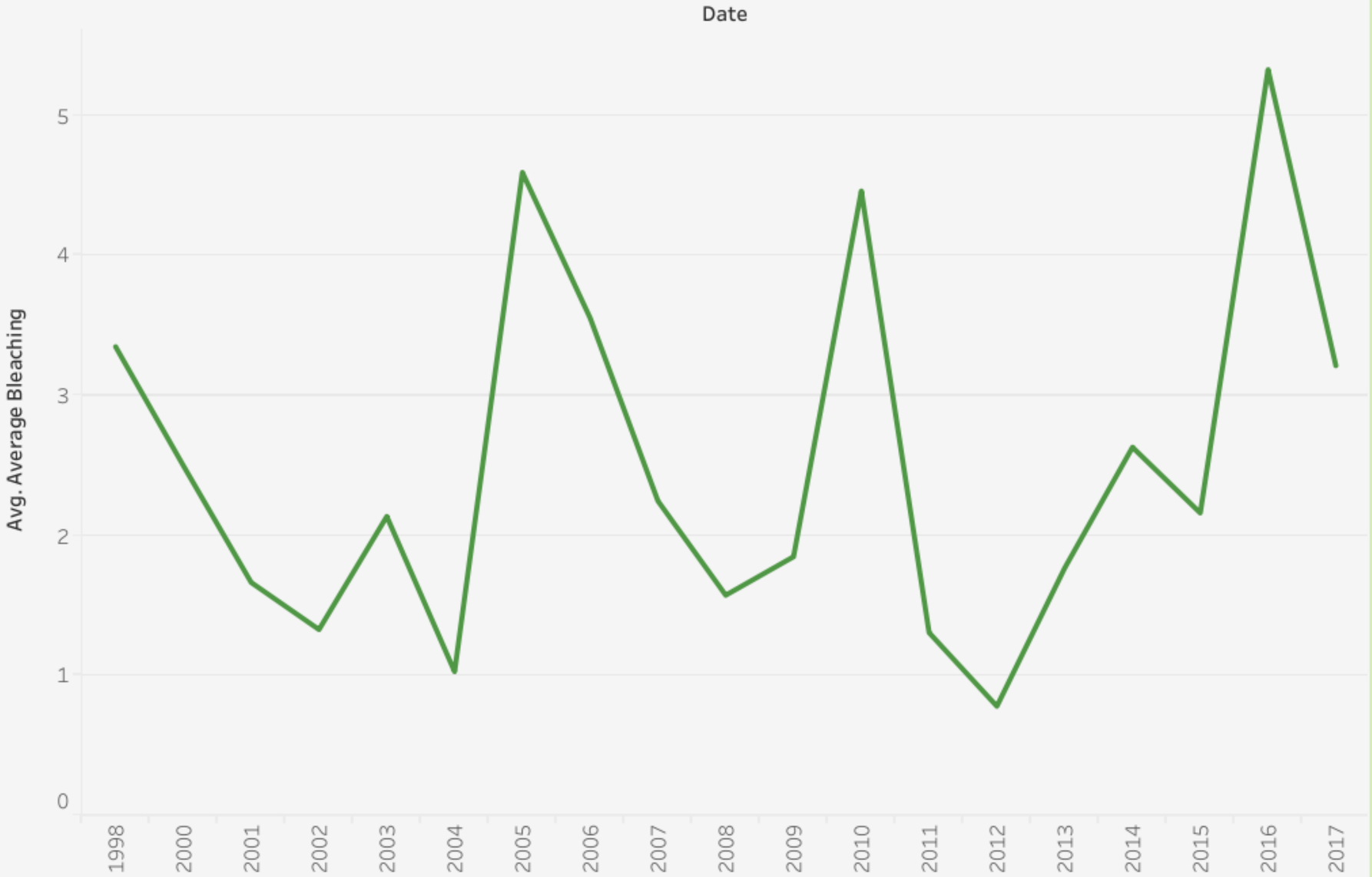


Brazil has the deepest reefs in the whole world

AVERAGE BLEACHING OVER THE YEARS



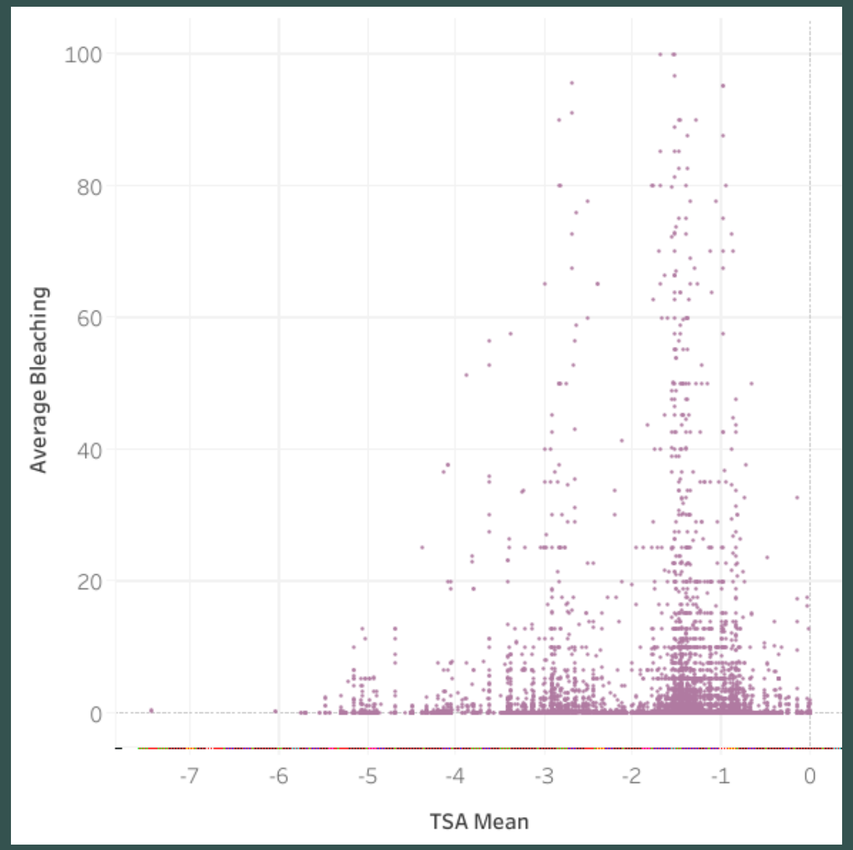
USA exhibits the highest average coral bleaching

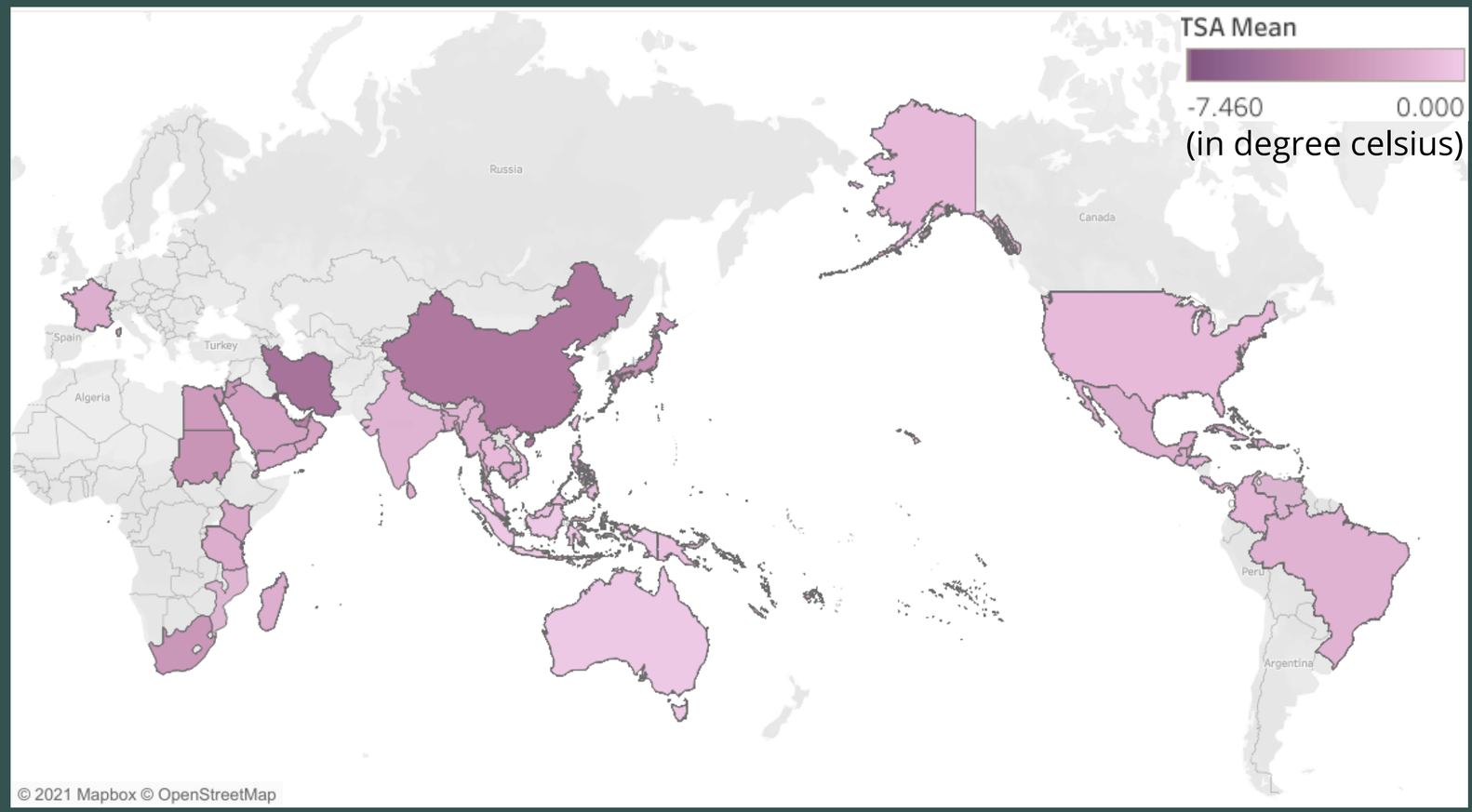


VARIATION OF AVERAGE BLEACHING OVER THE YEARS

Amongst all the years, 2016 exhibits the highest bleaching rate.

TSA Mean vs Average Bleaching

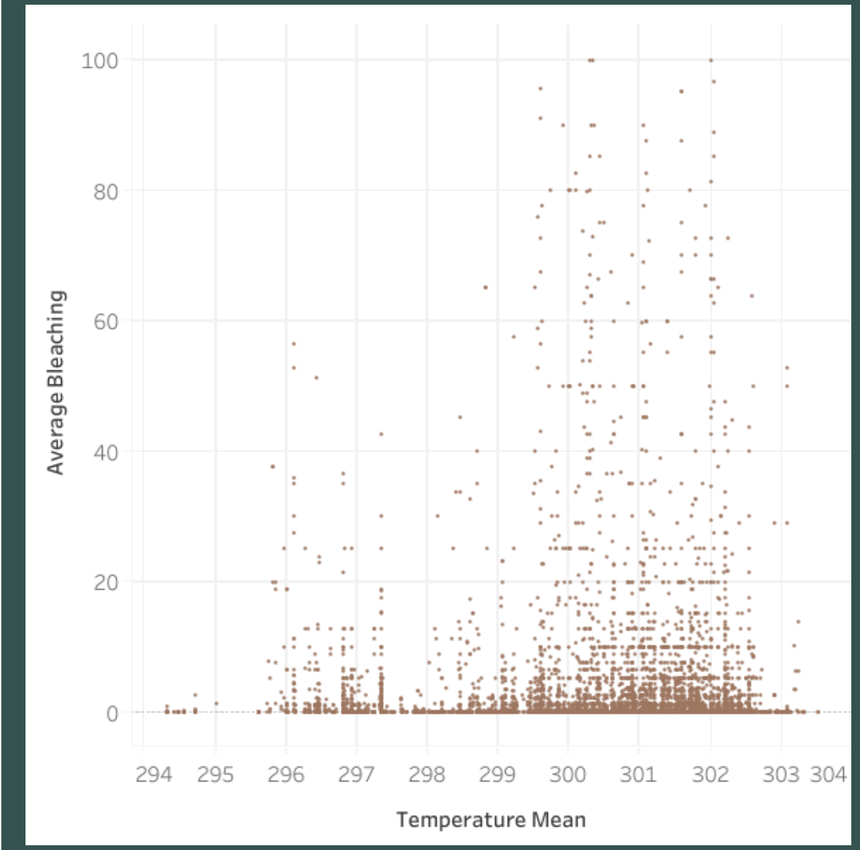


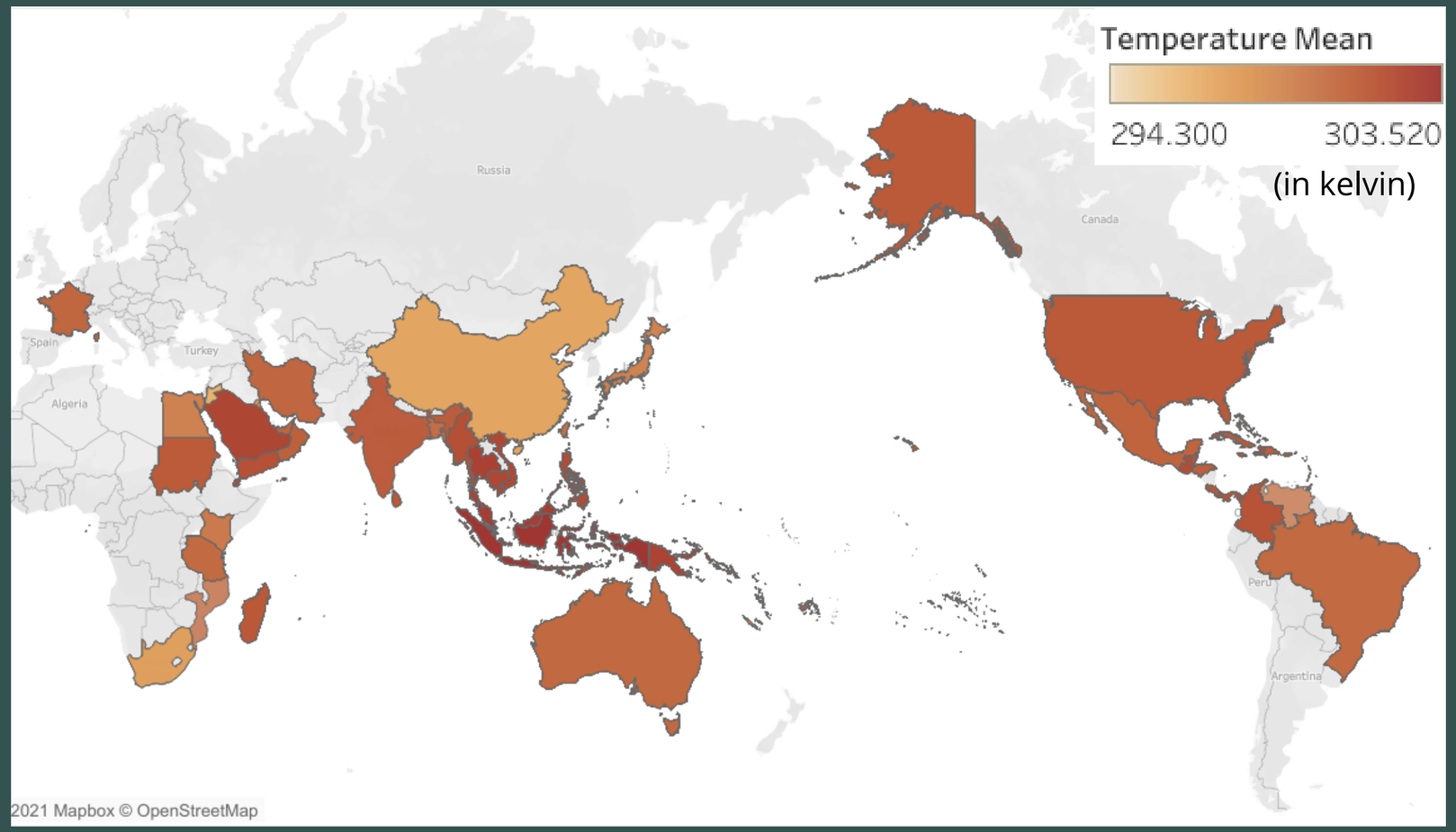


TSA Mean: Country-wise

TSA Mean values around -3 to 1 celsius contribute to high bleaching. The map on the right shows that USA and other countries with larger bleaching fall in the same range.

Temperature Mean vs Average Bleaching

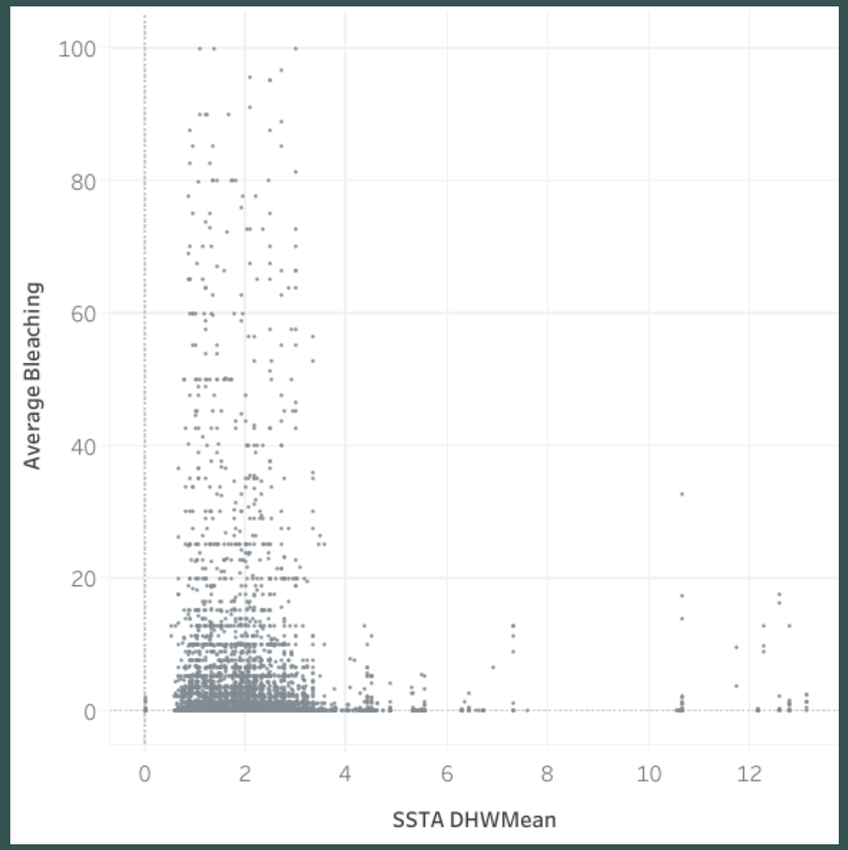




Temperature Mean: Country-wise

A temperature around 300-302 kelvin results in high bleaching. Temperature Mean of countries like USA, Australia which have high bleaching rates, exhibit temperature in the same range.

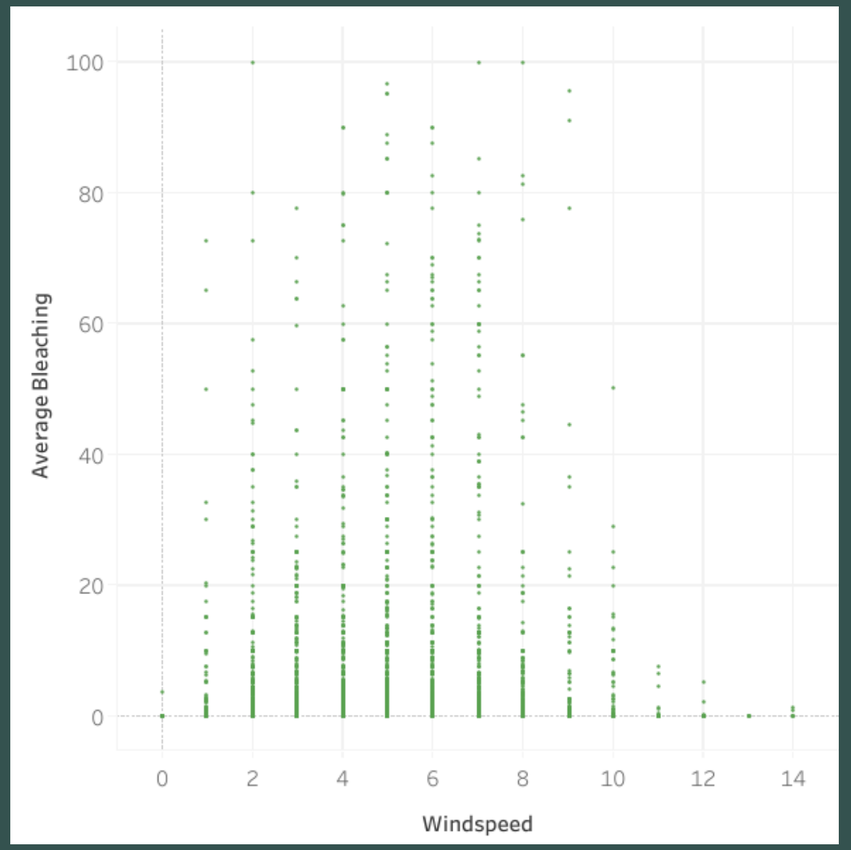
SSTA DHW Mean vs Average Bleaching



SSTA DHW Mean: Country-wise

SSTA DHW mean around 1 to 3 celsius results in high bleaching. SSTA DHW Mean of countries USA, Brazil fall in the same range. Australia is an exception.

Windspeed Mean vs Average Bleaching



Windspeed Mean: Country-wise

Windspeeds in the range 2-8 correspond to high bleach rates. But the map on the right shows that countries with high bleach rates have greater wind speeds. This means that windspeed does not contribute to the bleaching rate.

CITATION:

van Woesik, R., Burkepile, D. (2019) Bleaching and environmental data for global coral reef sites from 1998-2017. Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version 1) Version Date 2019-07-18 doi:10.1575/1912/bco-dmo.773466.1

THANK YOU!