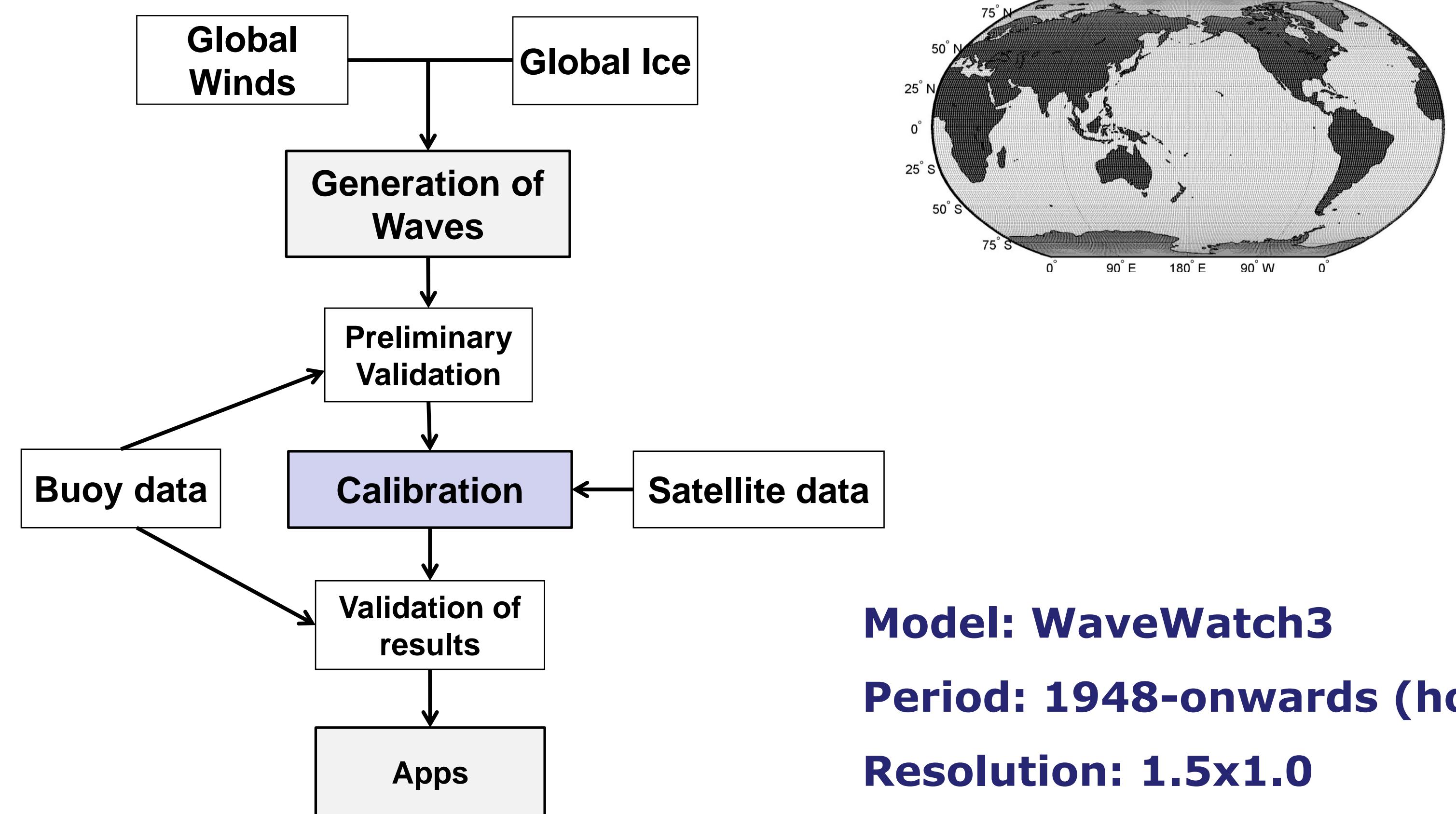
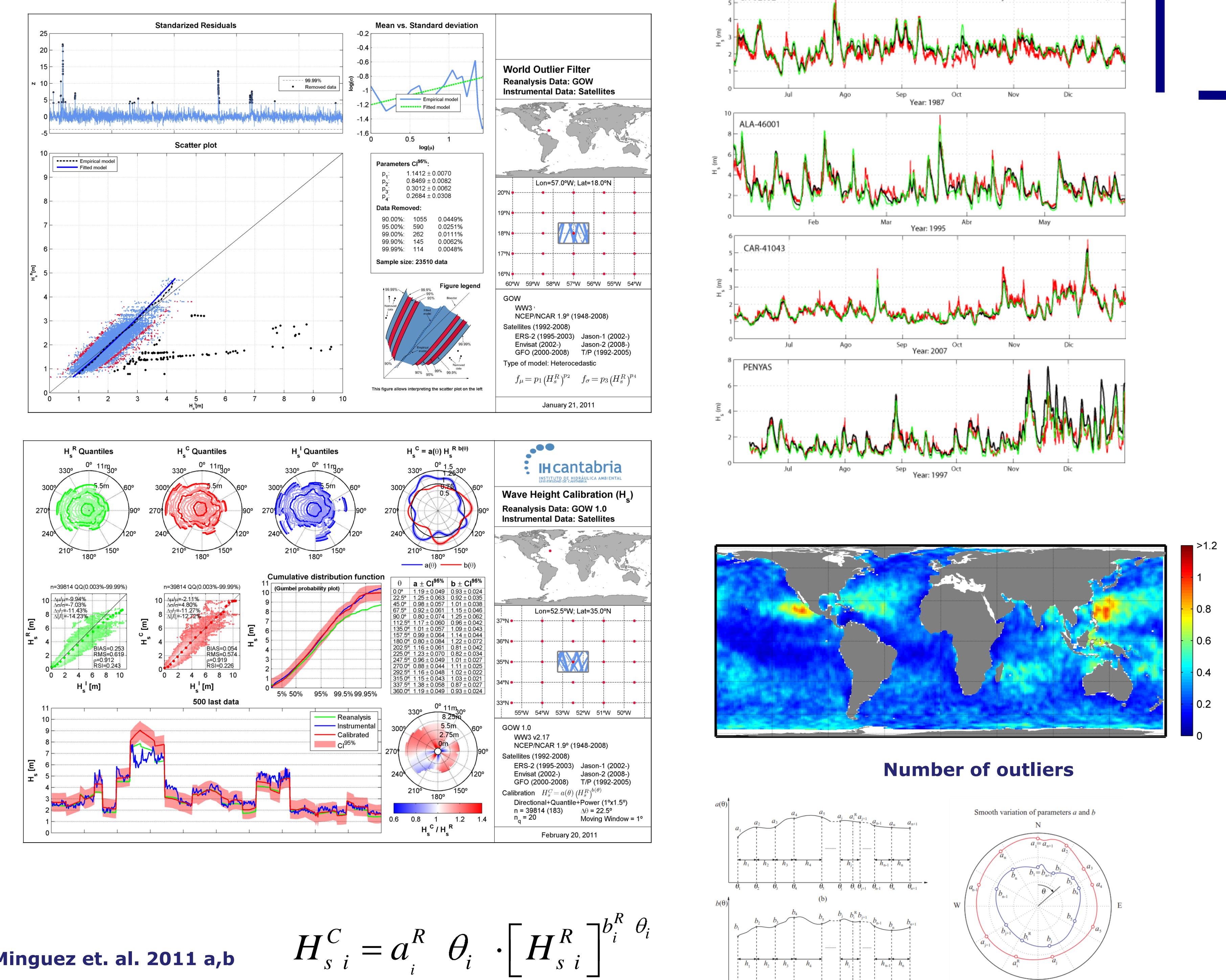


1. Methodology



4. Calibration and outliers filtering

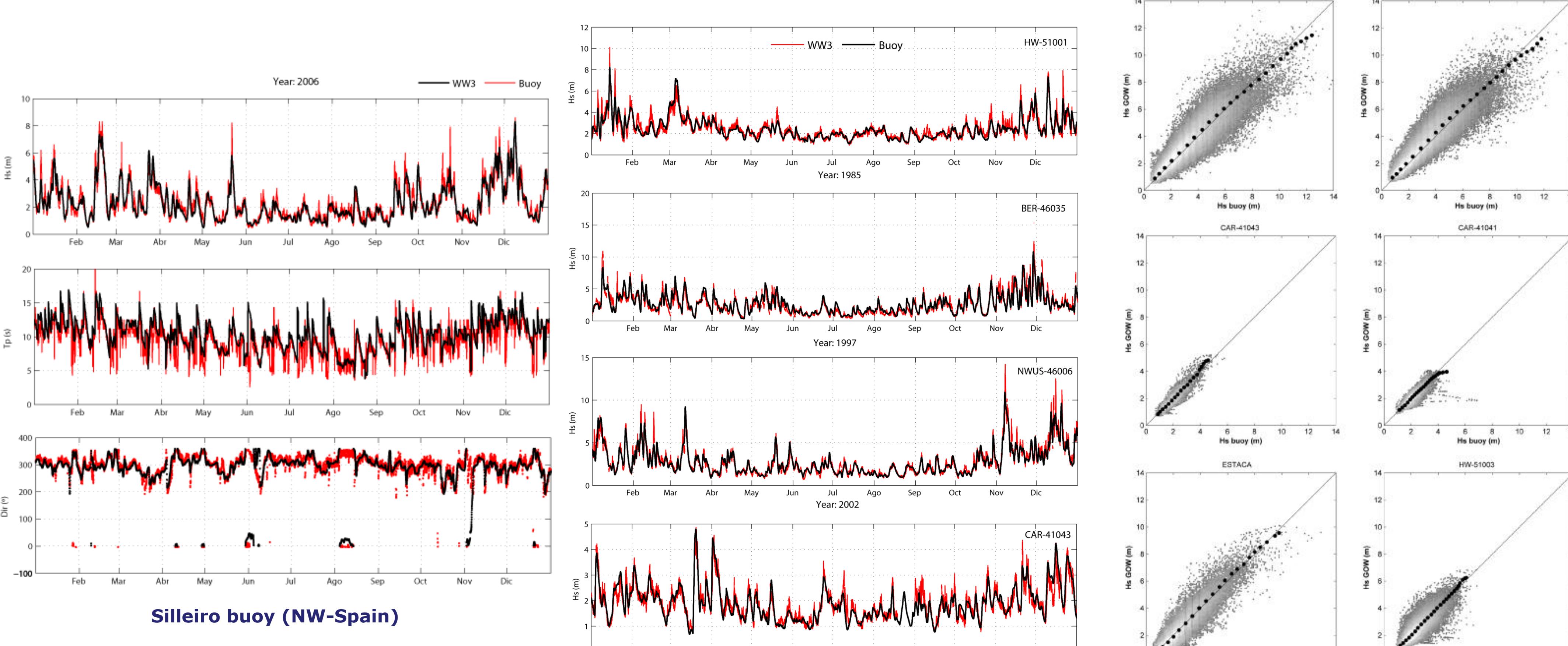
(Integration of satellite data)



2. Data

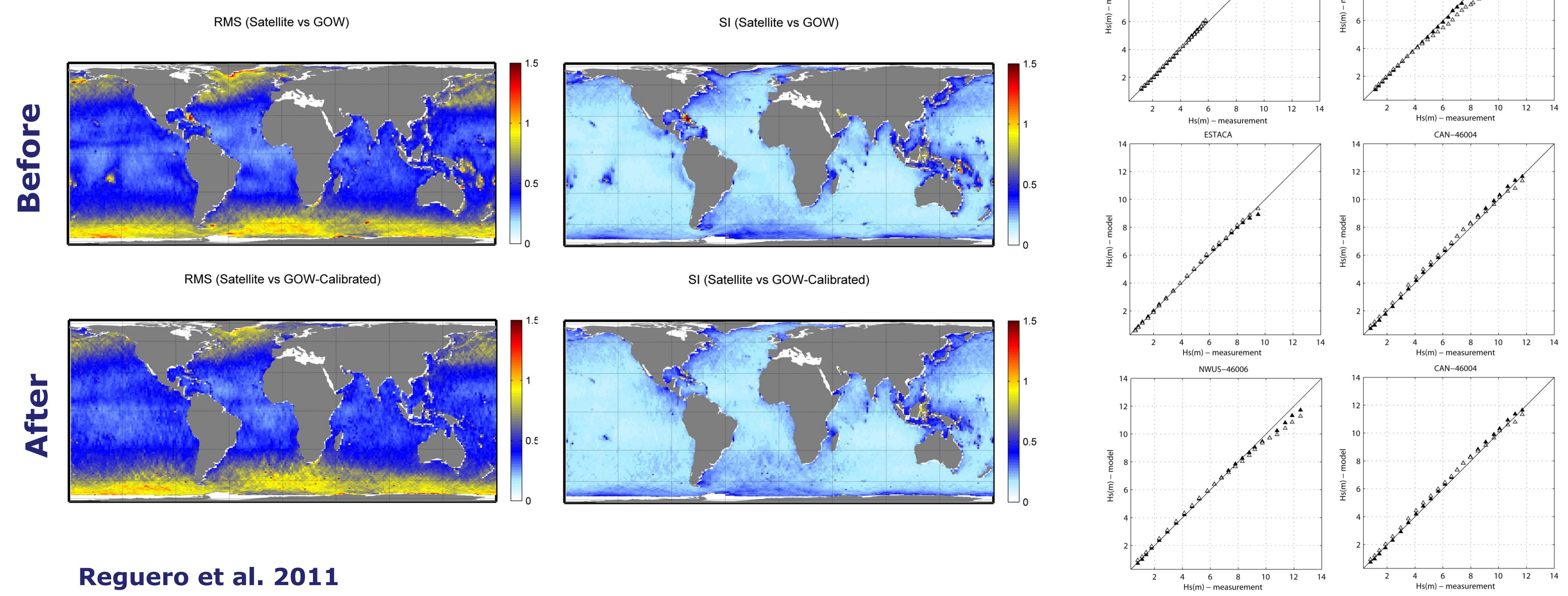
- Winds and ice fields: NCEP/NCAR Reanalysis
- Bathymetry: ETOPO
- Wave Data: Buoys (NOAA, Environment Canada, OPPE-Spain) and Satellite altimetry

3. Preliminary validation



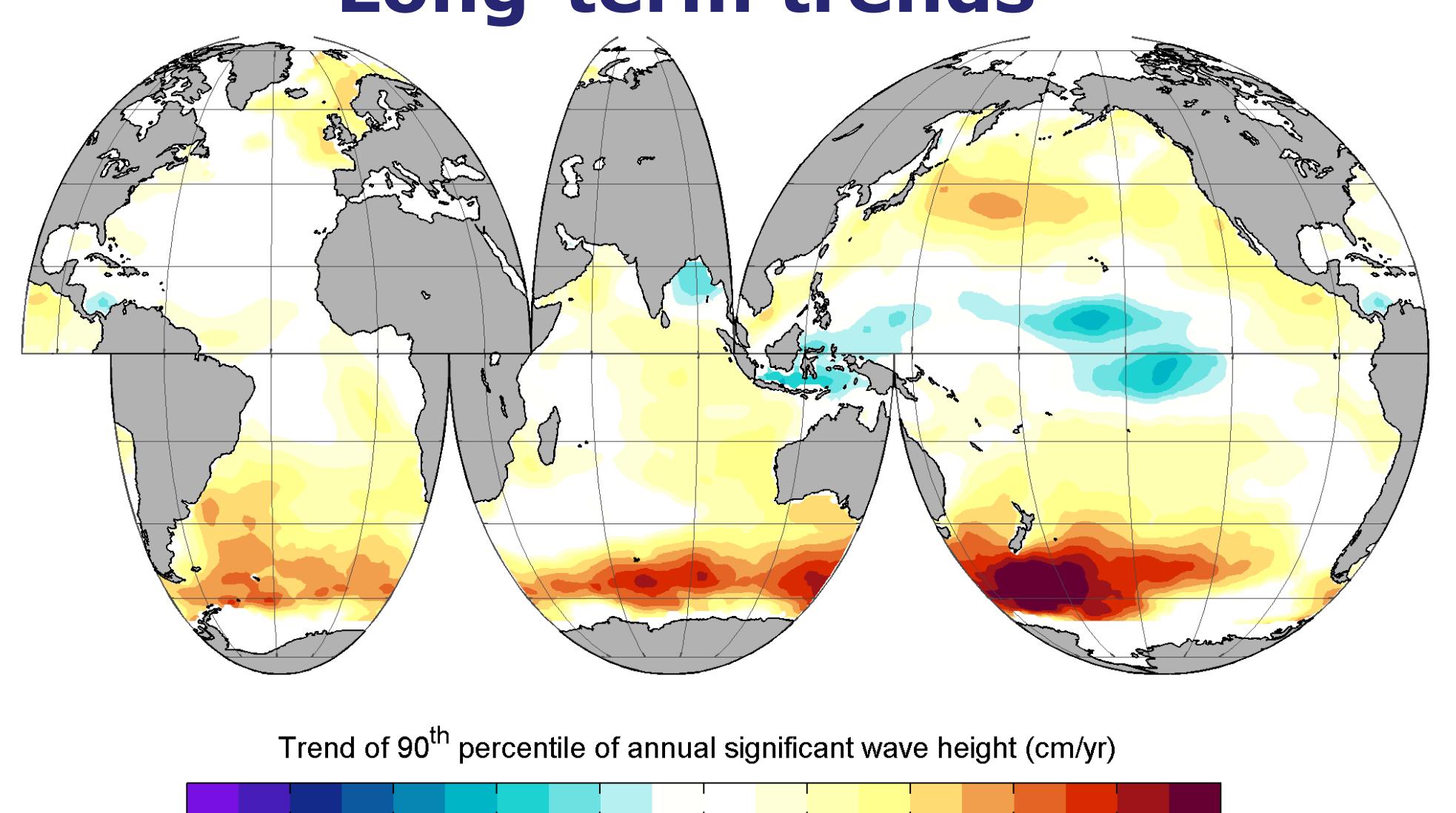
5. Validation

Satellite altimetry (1992–2008)

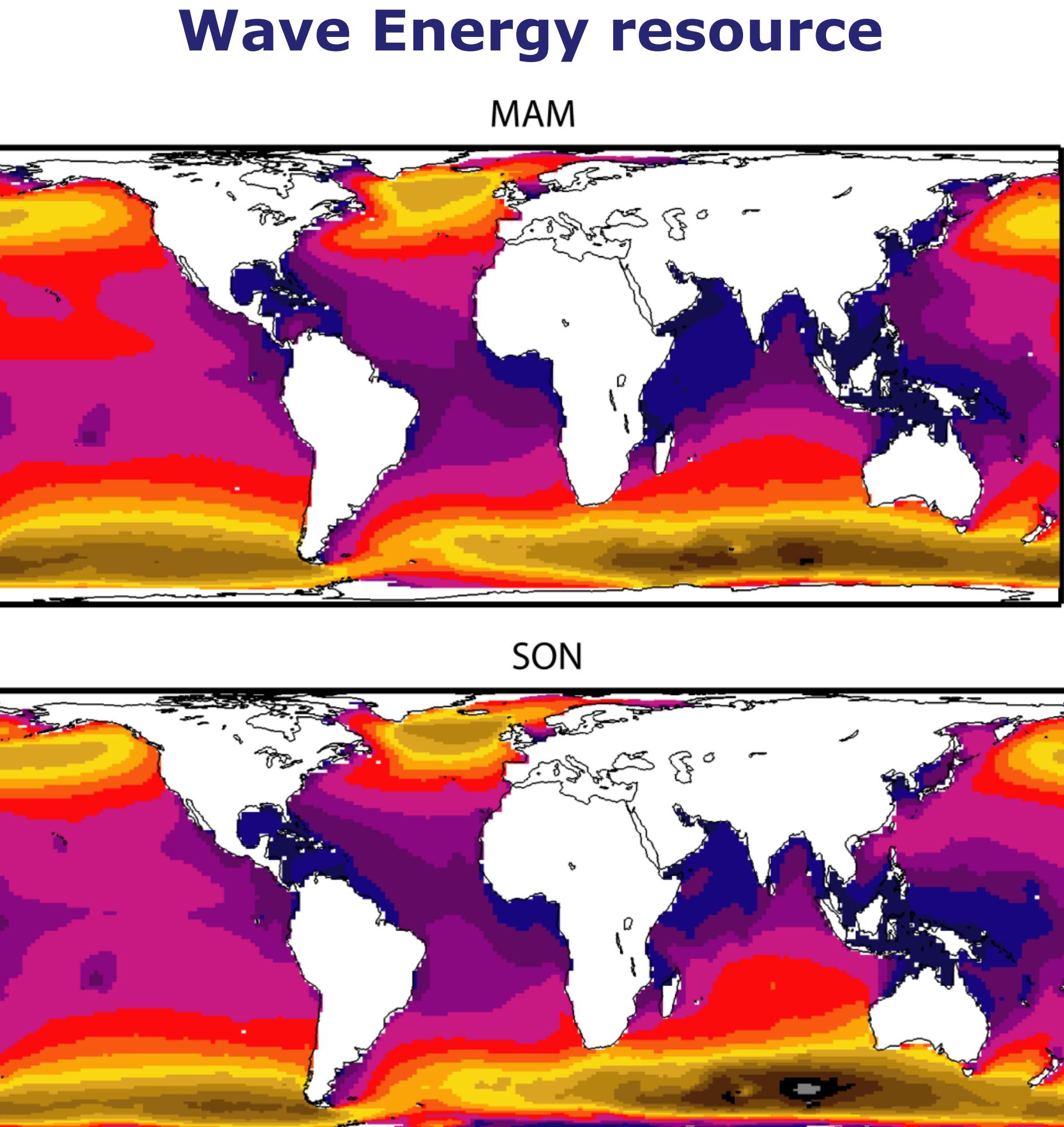


6. Results and applications

Long-term trends



Surf resource assessment



Derived research in preparation:

- Surfing through climate change
- Global wave energy assessment and seasonal to interannual variability
- Global wave climate. Description, interannual variability and long-term changes
- Is ocean wave energy changing?