

How does seasonality affects global marine biodiversity distributions

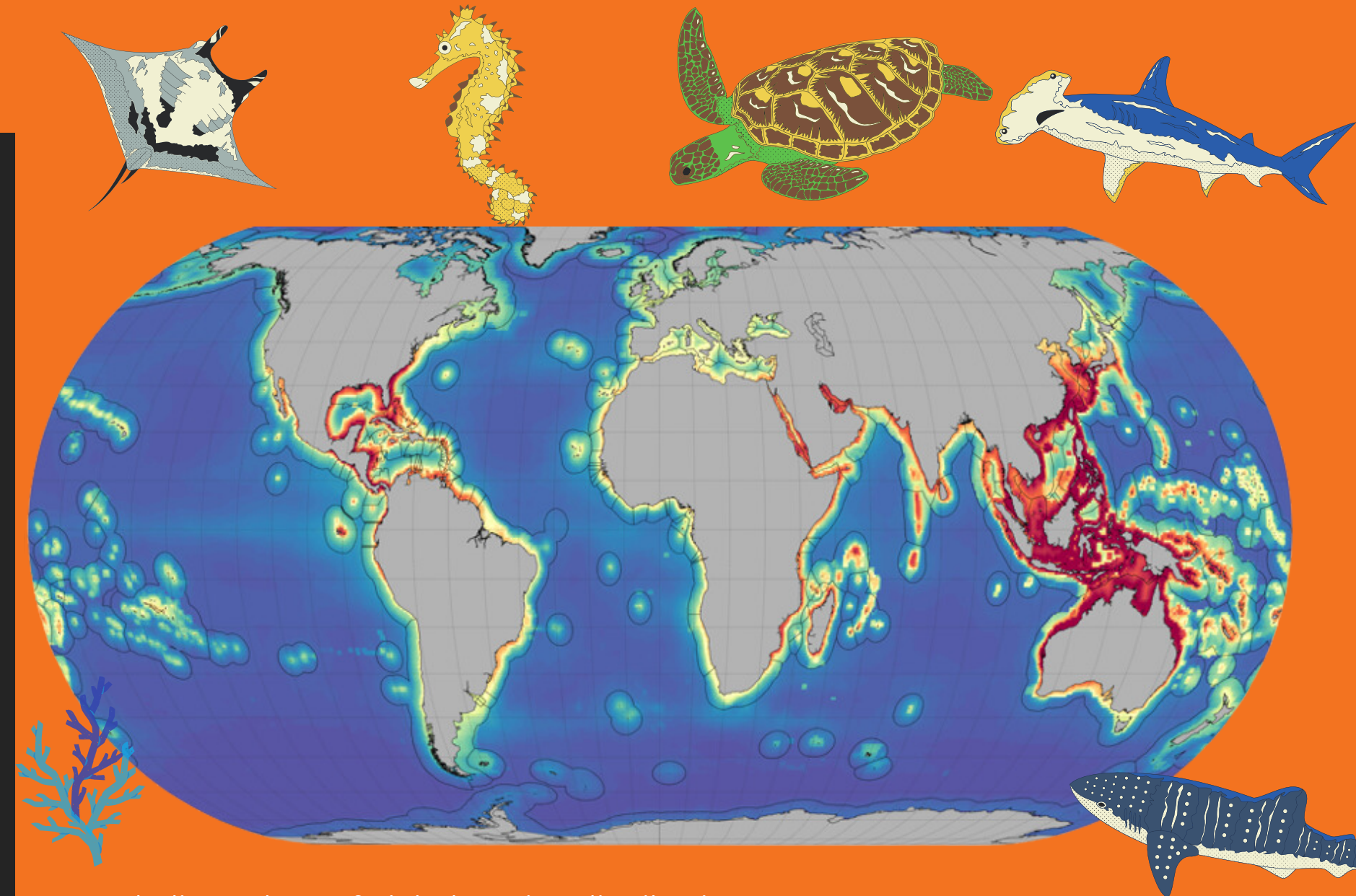
Evaluating the distribution of marine diversity is now crucially needed in order to have an optimal conservation approach.

Given the lacunar knowledge scientist have gathered spatially, ecologically and trophodynamically, the use of explorative statistical methodology (i.e. machine learning) has increased in the last decade. Ensemble modelling approach such as species distribution models have allowed to approximate a climatology of marine biodiversity distribution.

However, most of the approach used only consider annual average; without considering the effect of seasonality while a large majority of marine species perform seasonal migration.

The subject of this PhD will be to develop within the AQUAMAPS/AQUAX consortium a new species distribution workflow (preferably on R) to capture the effect of seasonality on species distribution and hence global biodiversity.

The candidate will be located at Univ. Miami within the AquaX laboratory and will be part of the Fishbase Consortium initiative (fishbase.org)



Annual Climatology of global marine distribution
for 35.000 species (from invertebrates to mammals)
source : aquamaps.org.

We are searching for a candidate with skills in programming (R or Matlab), with knowledge on marine ecology, exploratory and spatial statistics and of course **love of marine biodiversity**

