

**UPDATED SUMMARY REGARDING HAMMERHEAD SHARKS
CAUGHT IN THE TUNA FISHERIES IN THE EASTERN
PACIFIC OCEAN**

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Outline

- Recommendations from RFMOs.
- Status of information on *Sphyrna* collected in the EPO by different tuna fisheries
- Capture and spatial distribution of *Sphyrna* in the tuna purse - seine fishery
- Some details on the evolution of the data collecting of *Sphyrna* in the tuna purse seine fishery in the last two decades

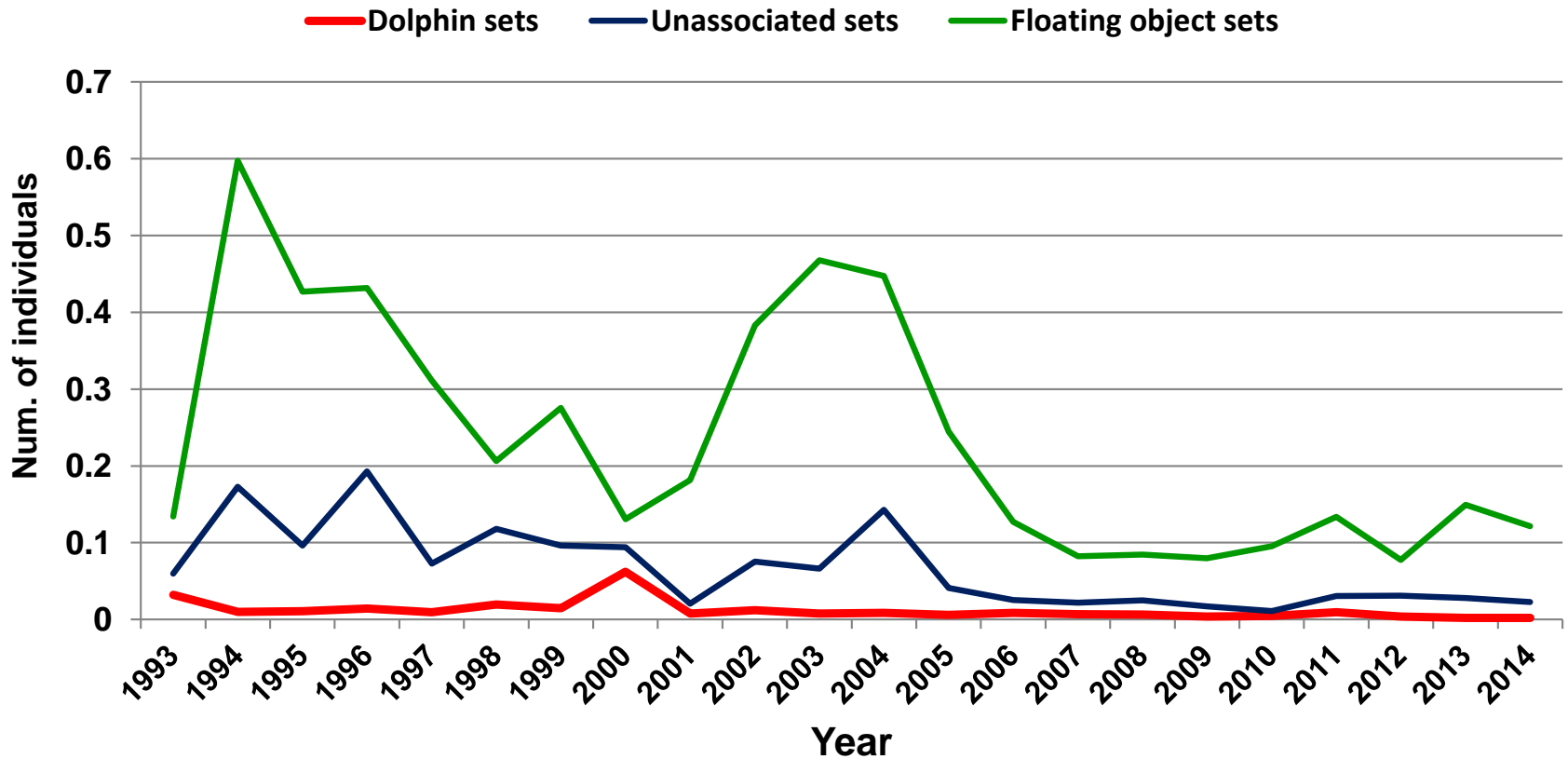
RFMO's Recommendations

- **ICCAT (2010-08):** Recommendation by ICCAT on hammerhead sharks (family *Sphyrnidae*) caught in association with fisheries managed by ICCAT.
- **IOTC (2014-S18-PropC):** On a scientific and management framework on the conservation of shark species and on the protection of hammerhead sharks (family *Sphyrnidae*) caught in association with fisheries managed by IOTC
- **IATTC (IATTC-85 PROP E-1):** Resolution on the conservation of hammerhead sharks (family *Sphyrnidae*) caught in the IATTC convention area

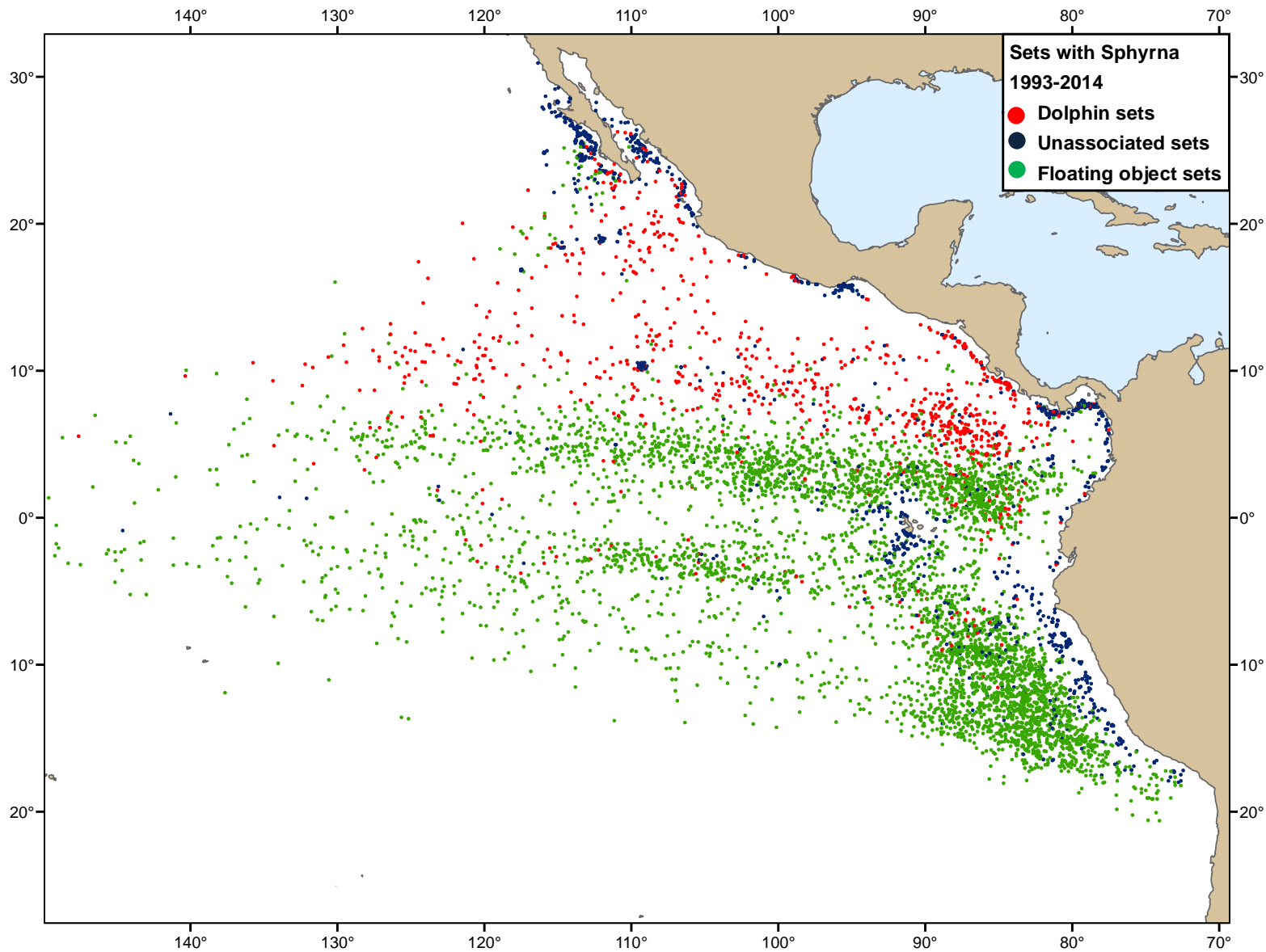
Captures of *Sphyrna* in different tuna fisheries

- Artisanal fisheries
 - Capture data not detailed enough for statistical analyses.
 - Popping grounds may be coastal (Wakabayashi and Iwamoto 1981; IOTC 2007).
 - Adults and juveniles are targeted by small-scale coastal artisanal fisheries in the EPO, using different gear types (Hall and Roman 2013).
- Industrial LL fisheries
 - Scarce information.
 - ~ 1% among shark captures in Chinese BET LL fishery (Xiaojie et al. 2006).
 - Zero capture in Japanese BET LL fishery (Okamoto and Bayliff 2003)
- Purse-seine fisheries
 - Data collected by observers since 1993. Total length recorded by size category.
 - 2005: Identifications down to species. Total length recorded at nearest centimeter. Sex was recorded.

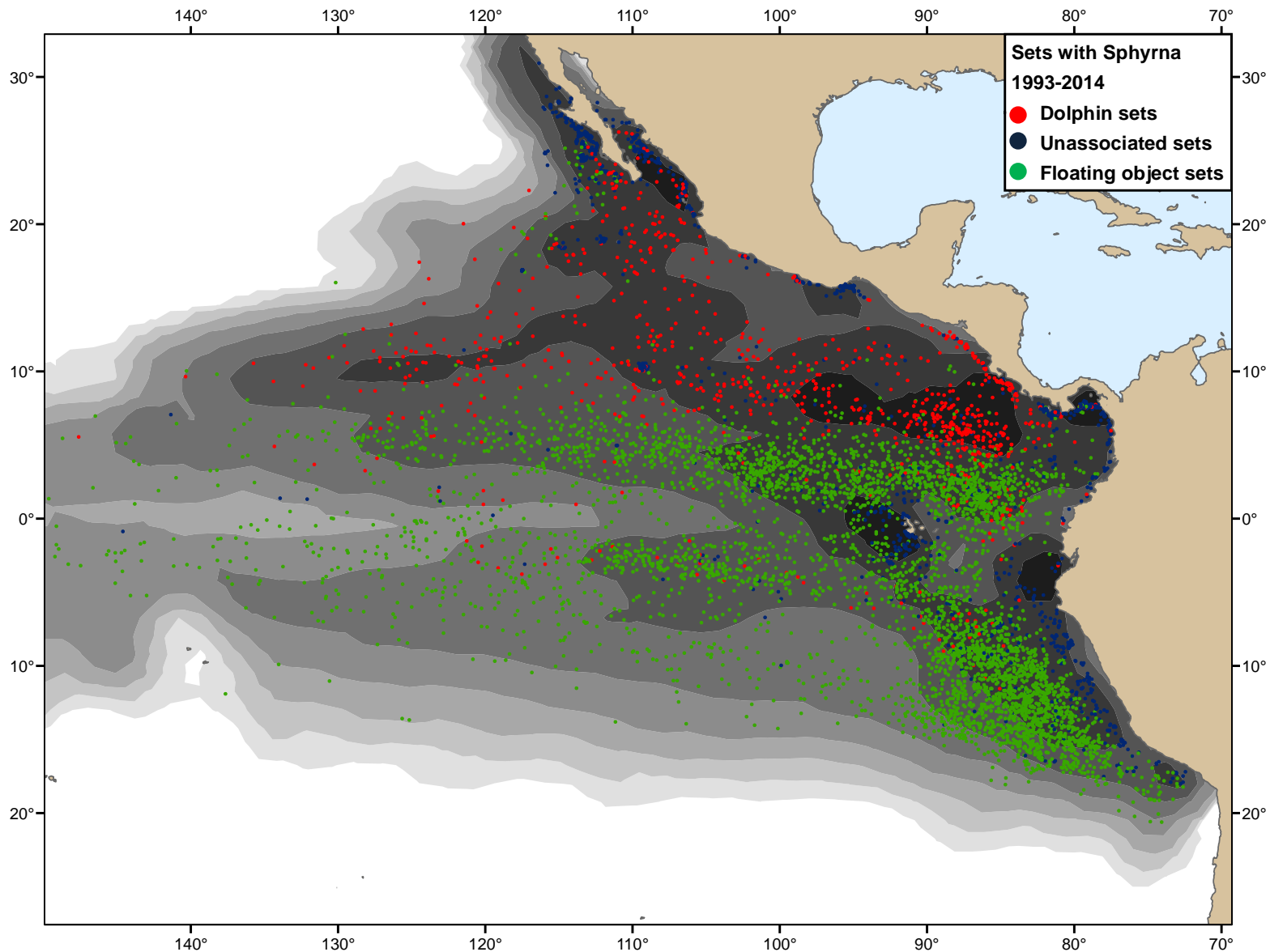
Capture per set of *Sphyrna* in the tuna purse-seine fishery



Spatial distribution of sets with *Sphyrna* captured by the tuna purse-seine fishery

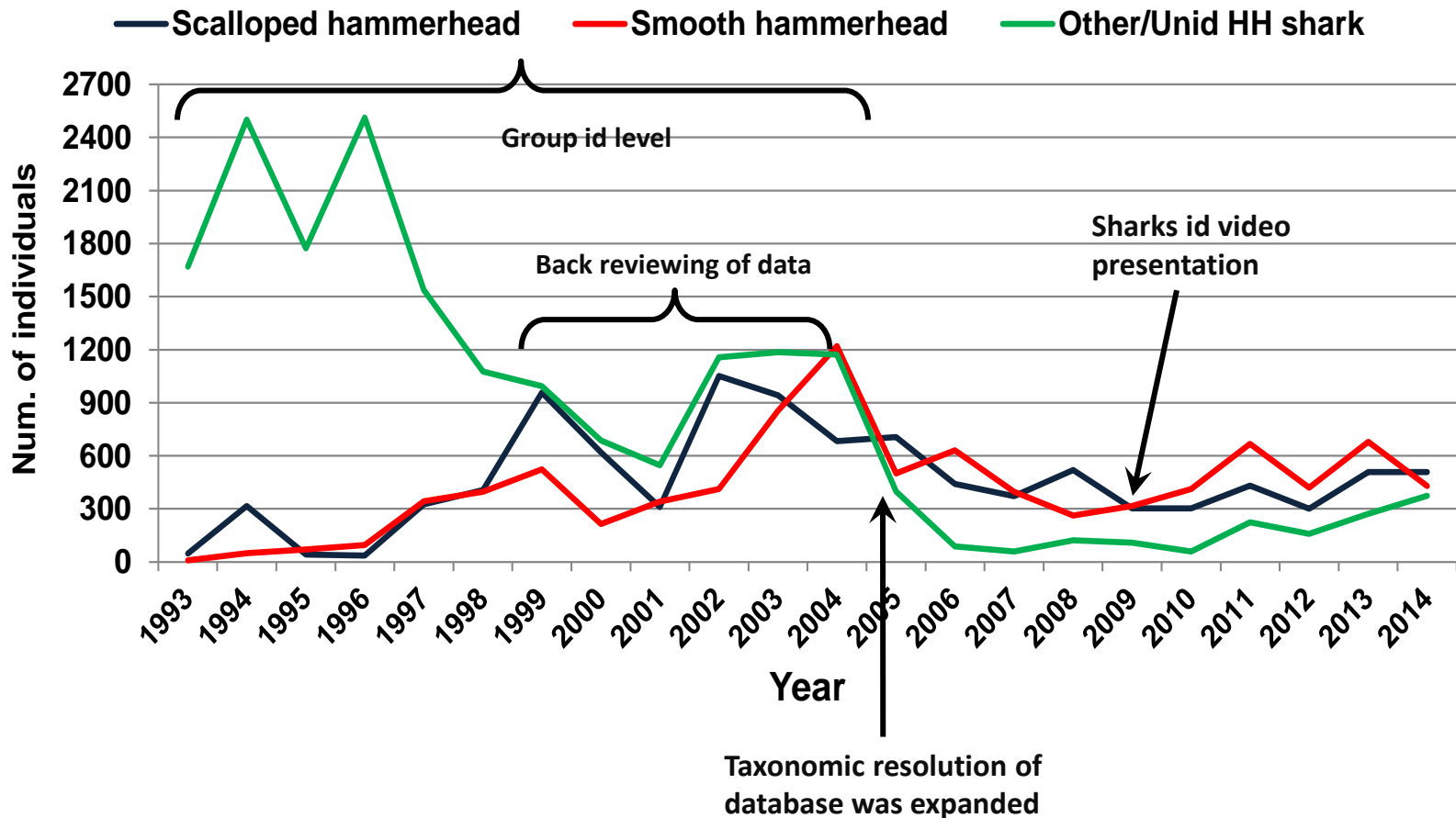


Spatial distribution of sets with *Sphyrna* captured by the tuna purse-seine fishery

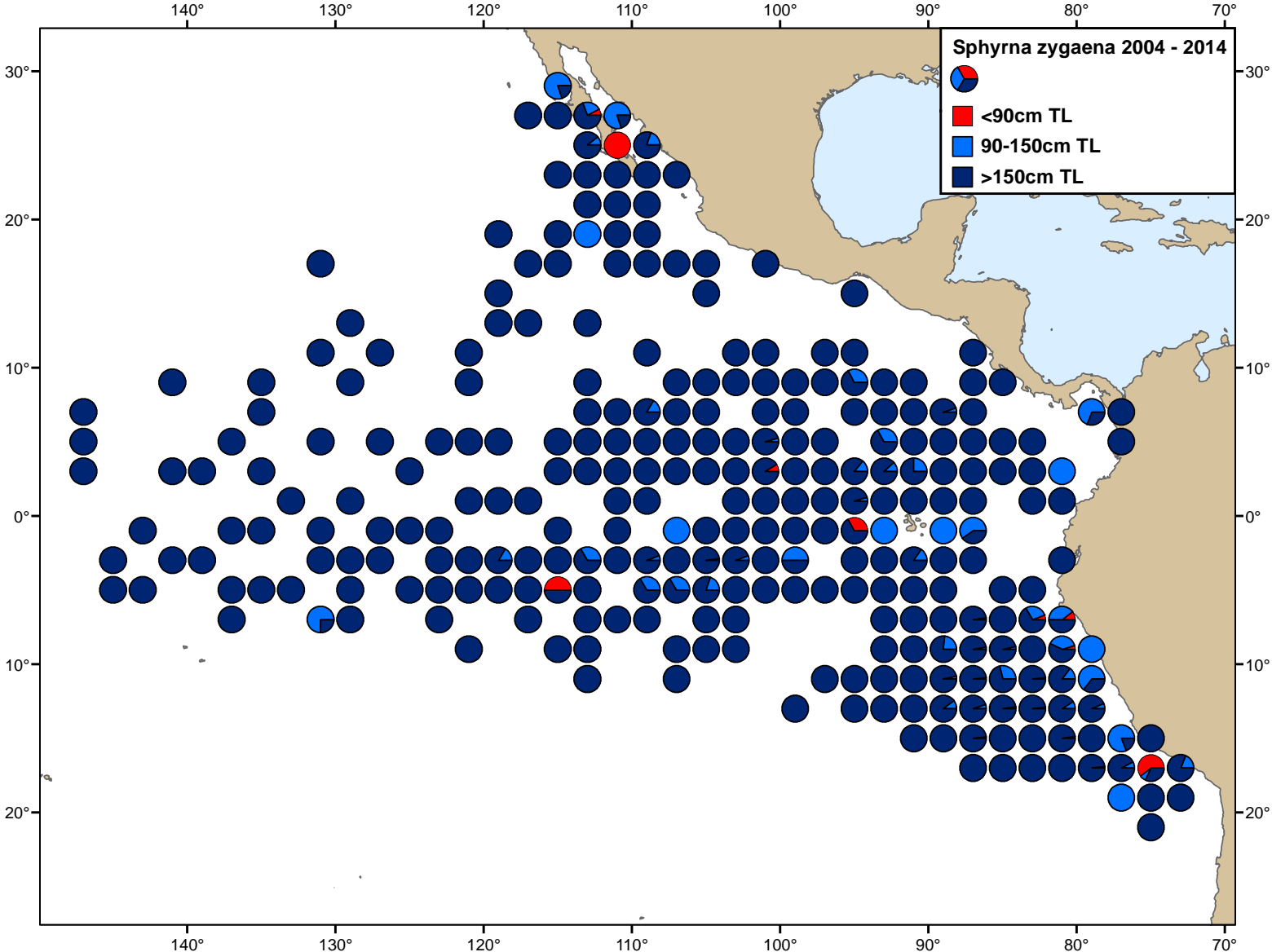


Hammerhead capture data in the tuna purse-seine fishery (set types combined)

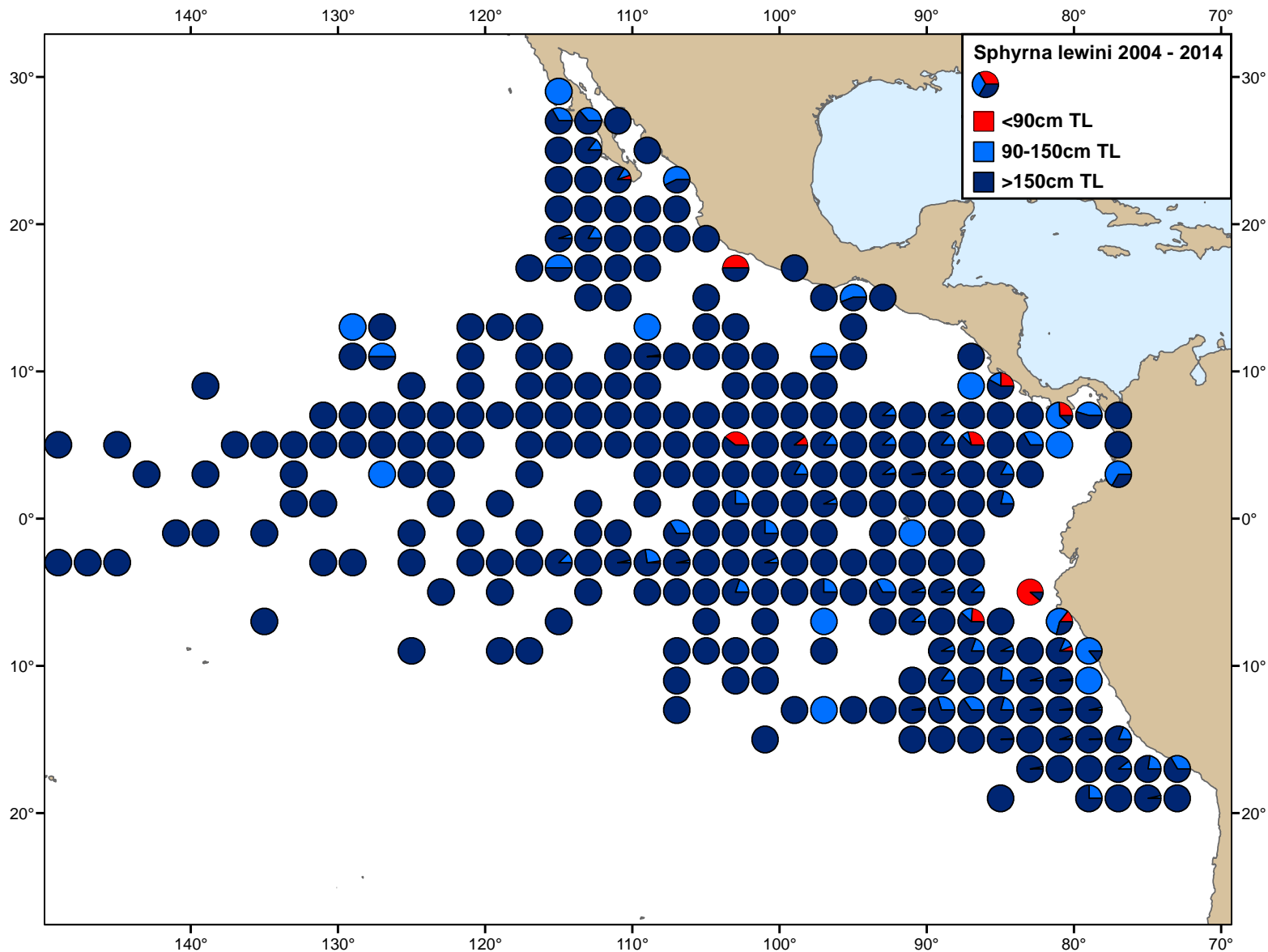
Smooth hammerhead (*S. zygaena*) and Scalloped hammerhead (*S. lewini*) are the predominant species



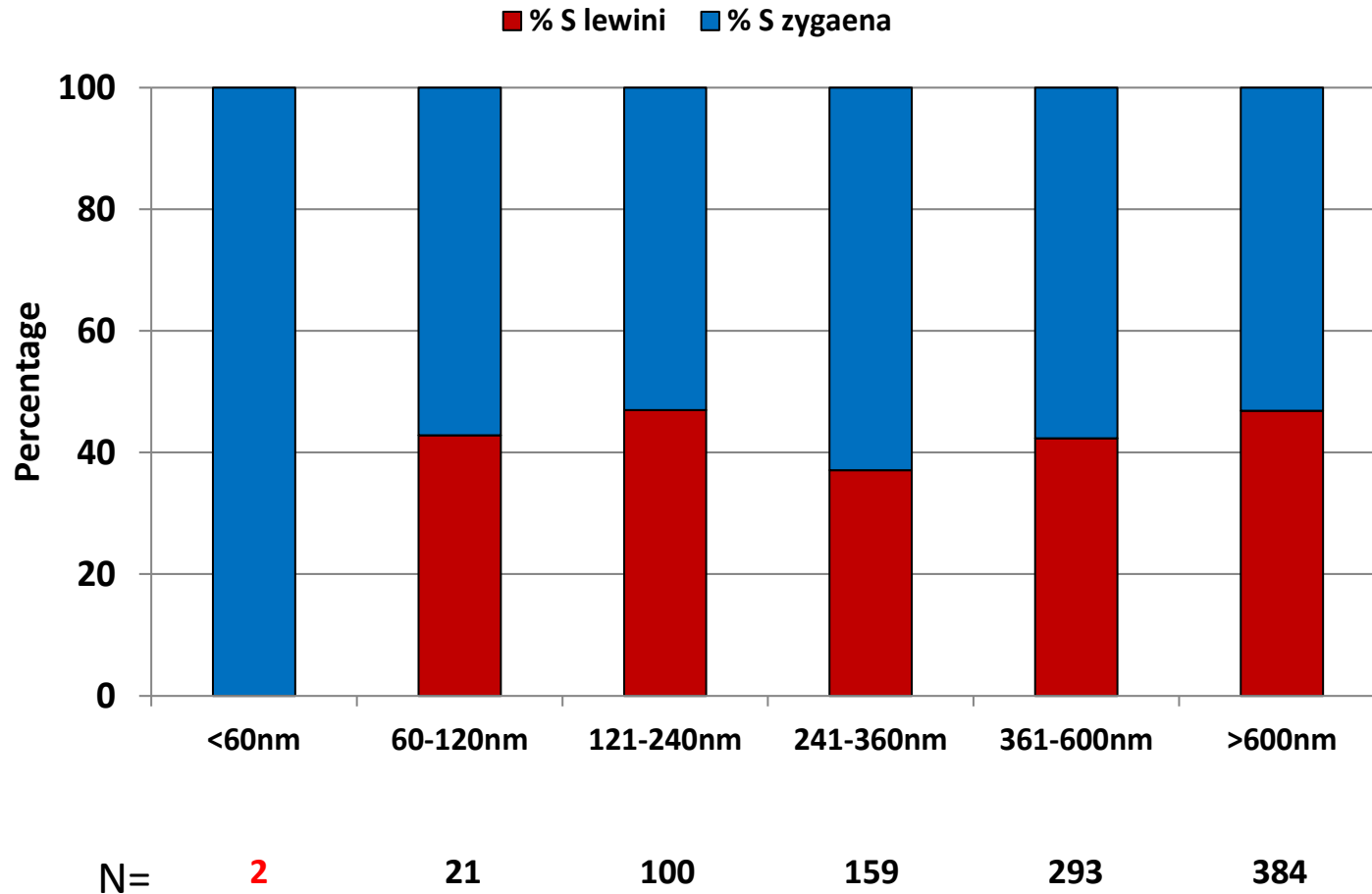
Spatial distribution of size category of *S. zygaena* captured by the tuna purse-seine fishery



Spatial distribution of size category of *S. lewini* captured by the tuna purse-seine fishery



Percentages of *S. zygaena* and *S. lewini* captured on OBJsets according to distance to continent or islands; 2009 - 2014



Conclusions

- The tuna purse seine observer database records *Sphyrna* captures data since 1993. By 2005 data is recorded down to species
- *S. zygaena* and *S. lewini* are the predominant *Sphyrna* species captured by the tuna purse seine fishery
- Captures of *Sphyrna* in the industrial longline fishery targeting bigeye tuna may be low
- *Sphyrna* capture data, specially the artisanal fishery may be necessary to better understand the potential impact to these populations
- Capture of *Sphyrna* represents less than 0.5 individuals per set
- *Sphyrna* caught in the tuna purse-seine fishery are > 150 cm TL