Introduction

- High biodiversity
- Productive fisheries
- Migratory corridor
- Estuarine ecosystems
- Gap in data collection and taxonomic analysis
- Negatively affected by fisheries

Material and Methods

DNA extraction, amplification and sequencing: NADH 2

Geneious: Sequence alignment and Blast

Summary statistics and Haplotype Network

Physical Examination: Length and sex

Results

Fig.1. Species composition given as a proportion of the 200 sharks samples collected as by-catch from artisanal fisheries from landings during 2016 – 2017.

Fig.2. Size and gender structure in the four more abundant landed species (left) population structure per locality (juveniles – red/ adults – blue) (right)

Accumulative number of juveniles (regardless of the species) indicates the importance of the region as nursery grounds that overlaps with artisanal fishery areas.

Fig.3. Nucleotide diversity (Pi) and Haplotype diversity (Ho) of the 200 sharks samples collected as by-catch from artisanal fisheries from landings during 2016 - 2017

S. lewini and C. falciformis shark’s estimated length are under the minimum maturity size reported by the IUCN for Eastern pacific populations.

In general low nucleotide diversity was found for all species. Two species of Mustelus presented high haplotype diversity as can also be observed in Fig 4.

Fig.4. Haplotype distribution for M. lunulatus, M. henlei and S. lewini for the different fishing grounds in the Eastern Tropical Pacific.

Conclusions

Mustelus lunulatus and henlei showed high genetic diversity, despite being caught in great abundance in artisanal fisheries, being this an indicative of high resilient populations.

S. lewini and C. falciformis presented low genetic diversity showing higher vulnerability to fishing pressures.

This region could be considered as a potential nursery area due to the high abundance of juveniles of different species, but further analysis should be performed regarding residency and habitat use.