

## Task 2.2.2 (PI's 2.3.1, 2.3.2, 2.3.3)

Analyze data from the monitoring program to quantify the level of interaction with protected species.

### *Preliminary Report of the main interactions between fishing and protected species*

#### BACKGROUND

Many fisheries occur in the areas where ETP (Endangered, Threatened or Protected) species also occur and the possible impacts may be poorly understood. The direct impacts include entanglement, capture and mortality, behavioral or migratory changes. The indirect impact due to competition for resources, loss of habitats and pollution.

Information on catch composition and level of the fishing gears interaction is still being processed and will not be available for this report. However, the MSC Fisheries Standard mentions the need to identify those "in-scope" species that are recognized by national threatened species legislation or species that are listed in binding international agreements such as the Convention on International Trade in Endangered species (CITES). Species classified as "out-of-scope" (amphibians, reptiles, birds and mammals) that are listed in the International Union for Conservation of Nature (IUCN) Redlist as vulnerable, endangered, critically endangered (see table I).

Even though there is a presence of species that can be classified as ETP (mainly sharks, rays, and marine turtles) in the area where the Marismas Nacionales shrimp fishery takes place, due to the characteristics of the fishing gear (atarraya) it is highly unlikely that there is an interaction that is causing direct impacts to ETP species. However, this will be further evaluated when the data from the biological monitoring are available.

Table I Species listed as "vulnerable," "endangered" or "critically endangered" by IUCN and appendix I or II of CITES.

Familia	Scientific name	IUCN	CITES
<b>ACIPENSERIDAE</b>	<i>Acipenser medirostris</i>	Vulnerable	
<b>CARCHARHINIDAE</b>	<i>Carcharhinus limbatus</i>	Vulnerable	
	<i>Carcharhinus obscurus</i>	Endangered	
	<i>Carcharhinus leucas</i>	Vulnerable	
	<i>Carcharhinus longimanus</i>	Critically Endangered	II
	<i>Negaprion brevirostris</i>	Vulnerable	II
	<i>Carcharhinus brachyurus</i>	Vulnerable	II
	<i>Rhizoprionodon longurio</i>	Vulnerable	II
	<i>Carcharhinus falciformis</i>	Vulnerable	II
	<b>SPHYRNIDAE</b>	<i>Sphyrna lewini</i>	Critically Endangered
<i>Sphyrna mokarran</i>		Critically Endangered	II
<i>Sphyrna zygaena</i>		Vulnerable	II
<i>Sphyrna tiburo</i>		Endangered	II

<b>TRIAKIDAE</b>	<i>Galeorhinus galeus</i>	Critically Endangered	
<b>ALOPIIDAE</b>	<i>Alopias superciliosus</i>	Vulnerable	II
	<i>Alopias pelagicus</i>	Vulnerable	II
	<i>Alopias vulpinus</i>	Vulnerable	II
<b>LAMNIDAE</b>	<i>Isurus oxyrinchus</i>	Endangered	II
	<i>Isurus paucus</i>	Endangered	II
	<i>Carcharodon carcharias</i>	Vulnerable	II
<b>DASYATIDAE</b>	<i>Hypanus dipterurus</i>	Endangered	
<b>MOBULIDAE</b>	<i>Mobula thurstoni</i>	Endangered	II
	<i>Mobula tarapacana</i>	Endangered	II
	<i>Mobula mobular</i>	Endangered	II
	<i>Mobula birostris</i>	Endangered	II
<b>RHINCODONTIDAE</b>	<i>Rhincodon typus</i>	Endangered	II
<b>CALLIONYMIDAE</b>	<i>Callionymus comptus</i>	Vulnerable	
<b>EPINEPHELIDAE</b>	<i>Mycteroperca jordani</i>	Vulnerable	
	<i>Hyporthodus acanthistius</i>	Vulnerable	
<b>ISTIOPHORIDAE</b>	<i>Istiophorus platypterus</i>	Vulnerable	
	<i>Makaira nigricans</i>	Vulnerable	
<b>SYNGNATHIDAE</b>	<i>Hippocampus ingens</i>	Vulnerable	
<b>CHELONIIDAE</b>	<i>Lepidochelys olivacea</i>	Vulnerable	I
	<i>Chelonia mydas</i>	Endangered	I
	<i>Eretmochelys imbricata</i>	Critically Endangered	I
	<i>Caretta caretta</i>	Vulnerable	I
<b>DERMOCHELYIDAE</b>	<i>Dermochelys coriacea</i>	Vulnerable	I

References:

<https://www.iucnredlist.org/es>

<https://cites.org/esp/app/index.php>