**Project Update: May 2022**

HIGHLY THREATENED SPECIES
During out extensive fishery surveys in the past 2 months, we have boarded several commercial and small-scale fishing vessels in Triport (Vlorë) to investigate the diversity, frequency, threats and post-release survival rates in non-target endangered and critically endangered elasmobranch species (based on the regional IUCN assessment). In the last 2 months, a total of 39 individuals (one endangered and three critically endangered species) were revealed in both bottom trawlers and longlines.

Besides 30 highly threatened species described in this document, 410 individuals of 19 species were reported (predominantly *Galeus melastomus*, *Scyliorhinus canicula*, *Scyliorhinus duhameli*, *Mustelus punctulatus*, *Raja clavata* and *Raja asterias*). Already dead by-catch was sampled for further laboratory studies, including histopathological examination, toxicological assessment and nanoplastics.

Sandbar shark, *Carcharhinus plumbeus* (Nardo, 1827)

Fig. 1: Female sandbar shark sampled for further morphological, pathological and toxicological examination at our laboratories. © A. Gajić / Sharklab ADRIA.

IUCN Global: Endangered (A2bd)
IUCN Mediterranean: Critically endangered (A4d)

During the monitored commercial trawling at the insular shelf off the Sazan island between 100 and 150 m deep, sandbar shark was accidentally captured. Upon landing specimen showed no signs of life, so resuscitation was approached. Despite we managed to revive dozens of smoothens and catsharks, this time the action didn't provoke a response and animals was sampled for studies (Fig. 1). Furthermore, during out extensive fishery analysis, we have witnessed one *Carcharhinus plumbues* which was most likely mistaken for *Mustelus* spp. And sold for 2.5 USD per kilogram.

Conducted research is to be published in one paper, while we continue to investigate the occurrence of the species.

Shortfin mako shark, Isurus oxyrinchus Rafinesque, 1810

Fig. 2: Young-of-the-year shortfin mako shark (Isurus oxyrinchus) discarded dead by local fisherman in Vlorë County, southern Albania. © A. Gajić / Sharklab ADRIA.

IUCN Global: Endangered (A2bd)
IUCN Mediterranean: Critically endangered (A2bd)

During our study, we have sampled one and observed two shortfin mako sharks (*Isurus oxyrinchus*) Fig. 2 of which two young-of-the-year (YOY) and one adult female. All individuals were caught by bottom longlines between 100 and 400 m deep. While our team managed to save large female and one YOY, another one was already dead upon the landing and was sampled for further pathological, toxicological and parasitological studies. Observed individuals were recorded in the southern Albania, between Himarë and Spille village. Studies on mako sharks are still in progress, and one paper is anticipated to be published concerning the original findings and observations.

Sandy ray, *Leucoraja circularis* (Couch, 1838)

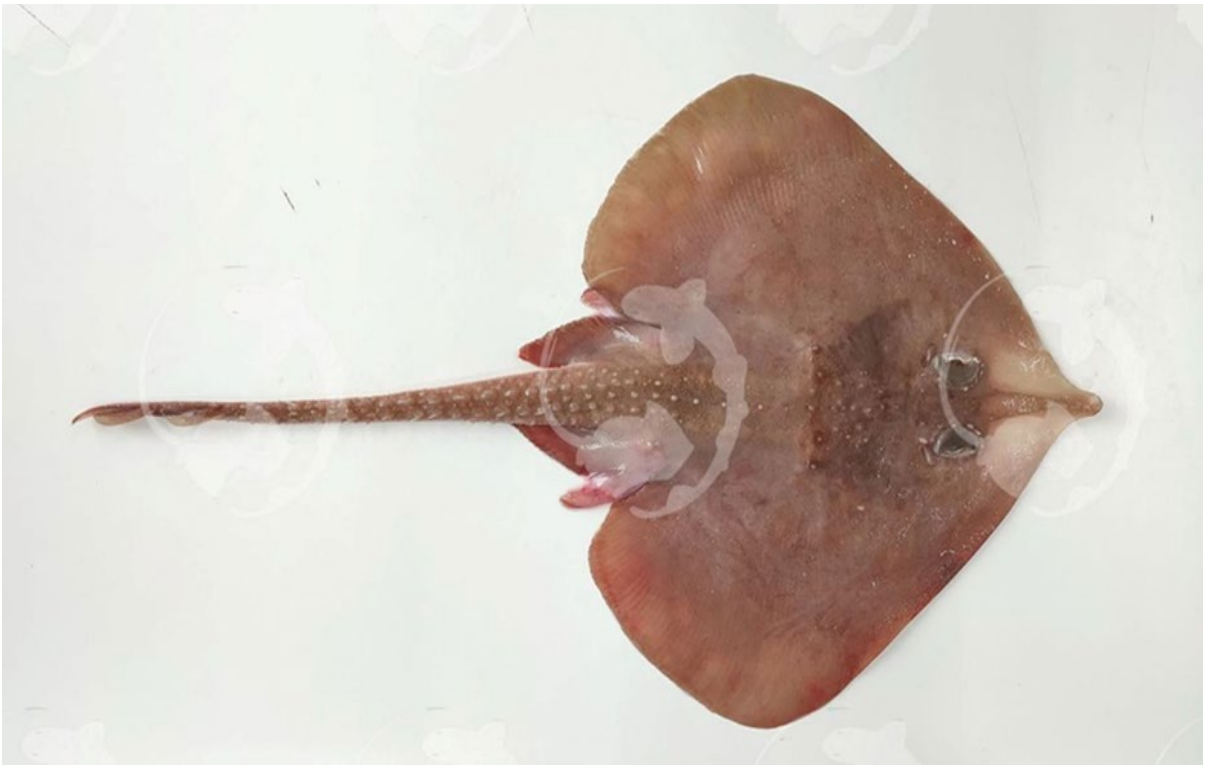

Fig 3: Subadult female Leucoraja circularis (Couch, 1838), caught by bottom longline at the depth between 330 and 370 m, outside the Karaburun peninsula, Vlorë County, Albania. © A. Gajić.

IUCN Global: Endangered (A2bcd)
IUCN Mediterranean: Critically endangered (A2bcd)

During the studied period, only one subadult female (Fig. 3) of *Leucoraja circularis* was observed. The individual was caught by bottom longline about 3 nm off the Karaburun peninsula at the depth between 330 and 370 m. Local fisherman has successfully recognised the species after our workshops and further reported and kept the sample for additional studies. This indicates the importance of the fisherman engagement and empowerment of citizen science, as well as the success of our workshops. Data on the species is to be published along with several other rare deep-sea skates.

Bull ray, *Aetomylaeus bovinus* (Couch, 1838)

Fig. 4: Emina Karalić examining the adult female Bull ray in Triport, Vlorë. © A. Gajić.

IUCN Global: Critically endangered (A2d)
IUCN Mediterranean: Critically endangered (A2c)

During the past two months a total of 24 individuals, including new-borns, juveniles and adults were reported (Fig. 4). All observed individuals were measured and weighted. As the bull rays are targeted in southern Albania and frequently sold on the local fish markets, thus several fishermen allowed us to sample internal organs for further histopathological examinations. Gross lesions were observed at four individuals and the samples of liver parenchyma, spleen and certain parts of digestive system (cardiac and pyloric stomach) are currently being processed in our labs.