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Zoo Outreach Organisation



CITSCI WITH TNFJU

Report : Citizen Science Workshop, Tuticorin, Tamil Nadu

The citizen science workshops are a part of 10CEAN initiative run by Zooreach and this component of the project known as 'Conservation of Critically Endangered Hammerhead sharks of India via Participatory Science' is funded by WCT-Biodiversity, Ecosystems and Endangered Species Grants Programme (WCT-BEES Grants). The aim is to train students belonging to fisheries or zoology background in documentation of sharks and bycatch species in nearby harbours and to collect data from fisher community, which would then be uploaded on the Citizen Science website developed.

In such series of workshops, this one was the 8th and final one, in terms of project duration. The intention is to make the students aware of the scenario the sharks are facing in the oceans and why it is important to conserve these groups. This workshop was conducted in Tuticorin District, Tamil Nadu, on 26 June 2025, at Tamil Nadu Dr. J. Jayalalitha Fisheries University (TNJFU).

Theory of the Workshop

The workshop started with the inauguration speech by the head of the Department of Fisheries Biology and Resource Management, R. Durairajah, who introduced the workshop to the students and enlightened them about citizen science and its usage. He then handed over the session to, T. Ravikumar, assistant professor, who also welcomed the participants.

The theory started with the introduction of Zooreach and the various projects under it. It then delved into relevant topics which consisted of an attitude survey, to warm up into the workshop, where various pictures were presented to the students and were asked how they feel about it. The responses were varied, with some liking the pictures and others being mostly neutral in their responses. After a series of pictures came the information on the shark fisheries in India. The trade drivers in India and international markets were mentioned. Followed by a small activity to visualize the decline of total shark populations



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in the oceans. Even though the students were hesitant to participate at first, they circled back to this point and mentioned the visual representation was an important tool to use to create an impact of the said information. Usha then slowly moved the topic of various threats to the sharks – such as slow reproduction, fishing pressures and demands, habitat destructions, and lower prey base.

The next part in the workshop was to explain the various body parts of the cartilaginous fishes, which the sharks and rays belongs to (elasmobranchs). Explanations weren't necessary as the students were already familiar with a fish's anatomy due to their course subject.

In the next part photographic guides were given, points to remember while taking a species' photograph, use of a scale and must have body parts of the fish in a photograph for it to be

accurately identified. Especially in the context of sharks – to photograph the fins, teeth, and gills. Then the workshop moved on to hammerhead sharks, which are the focal species of the project.

This part of the workshop was conducted by P. Kritika, where she explained the different types of hammerhead sharks found in Indian waters and their different morphological features, which can be used to identify the species, if witnessed in field.

The head shapes and other identifying characteristics such as dorsal fin shape & length and anal fin shape & length. Following which, Usha continued with the workshop. Then, an observation exercise was done with pictures from various harbours of fish landing and asking the students what they see in those different pictures, done to show how and what could be the observations that can be made in the field.

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With that the workshop ended, R. Durairaja presented the end notes and the vote of thanks was given by K. Karuppasamy, assistant professor.

Harbour Visit

Along with two professors from the college staff and five students, we went to the Tuticorin Fishing Harbour, where the landing starts at 8:30 PM and then continues till midnight or beyond, if the catch is on the greater side.

There weren't any sharks witnessed in the harbour that night, but a number of bony fishes and cephalopods were landed, which were fresh. And a lot of by-catch was also landed which on one look, seemed like a single species bycatch (mainly consisting of anchovies). From the sources, the fishermen here go for one day fishing.



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The students were given instructions on how to take picture of sharks, for accurate identification after which they scanned the harbour for an hour, observing the species present. A discussion with the students was conducted at the end of the visit to learn their observations, and points to remember when visiting a harbour. With that ended the final workshop of the citizen science project. Given below is a list of species documented by the team during the harbour visit.

Acknowledgments

I would like to express my sincere gratitude to Dr. B. Ahilan, dean and Dr. R. Durairajah, head of the Department of Fisheries Biology and Resource Management, Tamil Nadu Dr. J. Jayalalitha Fisheries University (TNJFU), for making this workshop possible. I am also thankful to Mr. K. Karuppasamy, assistant professor, for his valuable assistance in the identification and verification of the fish species documented in this report.

	Common name	Scientific name	Family
1	Giant Trevally	<i>Caranx cf. ignobilis</i>	Carangidae
2.	Grouper	<i>Epinephelus cf. undulosus</i>	Serranidae
3.	Common Ponyfish	<i>Leiognathus cf. equula</i>	Leiognathidae
4.	Yellowfin Surgeonfish	<i>Acanthurus sp.</i>	Acanthuridae
5.	Sand Lance	<i>Bleekeria cf. murtii</i>	Ammodytidae
6.	Flute Fish	<i>Fistularia sp.</i>	Fistulariidae
7.	Scrawled Filefish	<i>Aluterus cf. scriptus</i>	Monacanthidae
8.	Unicorn Leatherjacket	<i>Aluterus cf. monoceros</i>	Monacanthidae
9.	Barracuda	<i>Sphyraena cf. flavicauda</i>	Sphyraenidae
10.		<i>Lethrinus cf. nebulosus</i>	Lethrinidae
11.	Angel Fish	<i>Pomacanthus cf. imperator</i>	Pomacanthidae
12.		<i>Xyrichtys sp.</i>	Labridae
13.	Stipenose Guitarfish	<i>Acroteriobatus cf. variegatus</i>	Rhinobatidae
14.	Yellow-striped Scad	<i>Selaroides cf. leptolepis</i>	Carangidae
15.	Diamond Trevally	<i>Alectis cf. indica</i>	Carangidae
16.	Sweetlips	<i>Plectorhinchus sp.</i>	Haemulidae
17.	Short-nosed Tripodfish	<i>Triacanthus cf. biaculeatus</i>	Tricanthidae
18.	Crescent Grunter	<i>Terapon cf. jarbua</i>	Terapontidae
19.	Blue-spotted Stingray	<i>Neotrygon cf. kuhlii</i>	Dasyatidae
20.	Pilot Fish	<i>Naucrates cf. ductor</i>	Carangidae
21.	Snakefish	<i>Trachinocephalus cf. myops</i>	Synodontidae
22.	Commerson's Sole	<i>Synaptura cf. commersonii</i>	Soleidae
23.	Tenpounder	<i>Elops cf. machnata</i>	Elopidae
24.		<i>Pardachirus sp.</i>	Soleidae
25.	Cobia	<i>Rachycentron cf. canadum</i>	Rachycentridae
26.	Seer Fish	<i>Scomberomorus cf. commerson</i>	Scombridae
27.	Freckled Goatfish	<i>Upeneus cf. tragula</i>	Mullidae

Kritika P, Researcher at 10OCEAN initiative & Zoo Outreach Organisation.

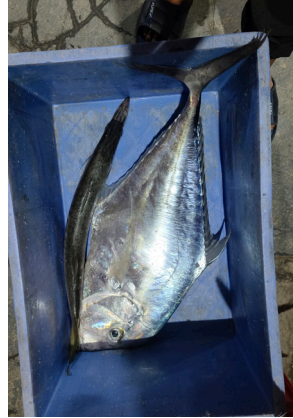
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¹ *Acanthurus* sp.



¹ *Acroteriobatus* sp.



¹ *Alectis* sp.



¹ *Aluterus* cf. *scriptus*



² *Aluterus* sp.



¹ Bycatch crates



¹ Cephalopods



² *Elops machanata*



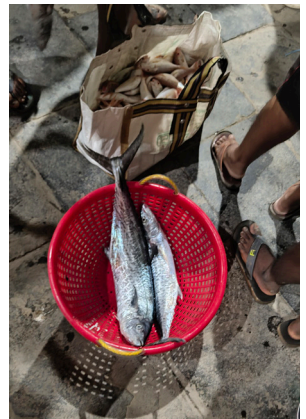
¹ *Leiongathus* sp.



¹ *Naucrates ductor*



¹ *Rachycentron canadum*



¹ *Scomberomorus commersoni*



¹ *Synaptura* sp.



¹ *Terapon* sp.



¹ *Trachinocephalus myops*



¹ *Upeneus* sp.

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¹*Bleekeria murtii*



²*Caranx ignobilis*



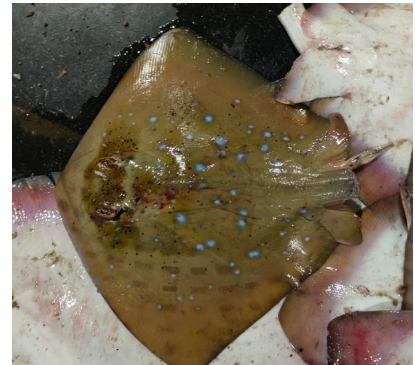
²*Epinephelus* sp.



¹*Fistularia* sp.



²*Lethrinus* sp. (on the right)



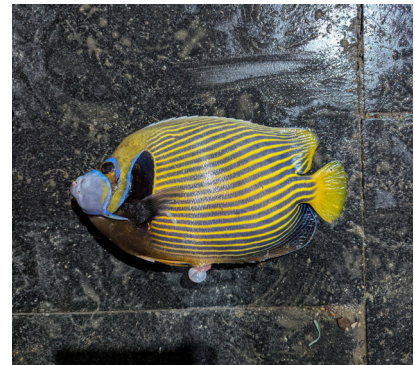
¹*Neotrygon* sp.



¹*Pardachirus* sp.



¹*Plectorhinchus* sp.



²*Pomacanthus imperator*



¹*Selaroides leptolepis*



¹*Sphyraena* sp.



²*Triacanthus* sp.

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