



IOSEA
Marine Turtle MOU

IOSEA Marine Turtle MOU
5th Meeting of the Northern Indian Ocean Marine Turtle Task Force
online, 6-8 May 2025



Country – Pakistan

Conservation Efforts for Marine Turtles

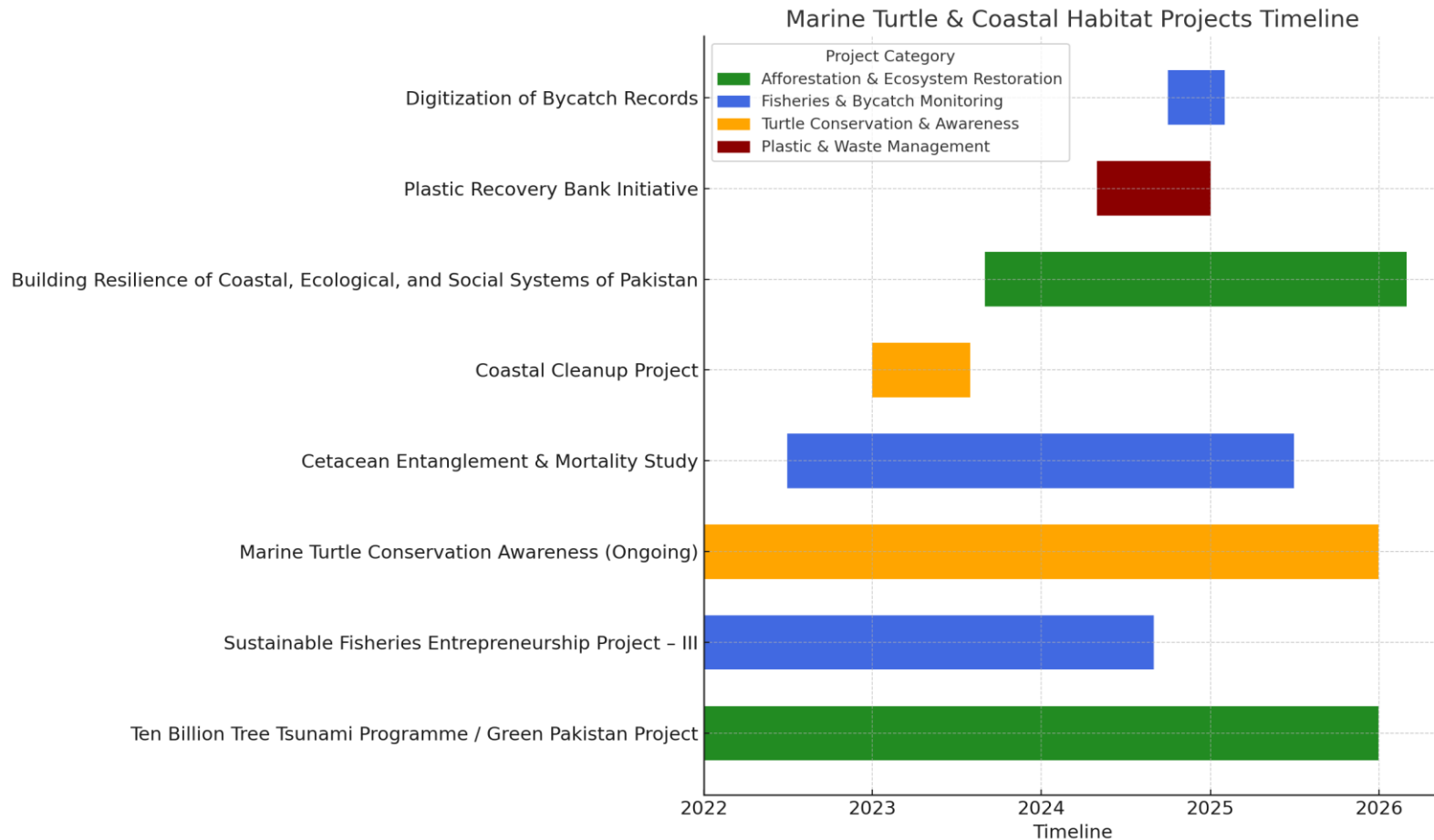
- *Muhammad Samar Hussain Khan, Conservator Wildlife, Ministry of Climate Change, Pakistan*
- *Shoaib Abdul Razzaque, WWF Pakistan*



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1. New research or conservation projects related to marine turtles and/or their habitats





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2. Large infrastructure developments affecting marine turtles and/or their habitats (proposed or underway)

- There are two hotspots: Hawksbay-Sandspit beach, Karachi (Sindh), and Daran beach (Balochistan), which are the main Green Turtle nesting grounds in Pakistan.
- The Green turtle habitat on Hawksbay has already constructed Huts on the beach, and Daran is a remote beach.
- No large infrastructure development reported in the key habitat areas.



COUNTRY UPDATE: Pakistan



3. Changes in national policy, laws, or management frameworks affecting marine turtles and/or their habitats

- Marine turtle species are “Protected” under different national laws which prohibit their catch, killing, capturing and trade.
- On 11th February, 2025, the Marine Fisheries Department of Pakistan under the Exclusive Fishery Zone (Regulation of Fishing) Rules 1990, issued a notification regarding mitigation measures to ensure fishery management, reduce bycatch and conservation of marine biodiversity.
- The referred notification prohibits the capture of all marine turtles reported in Pakistan throughout the year.



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3. Changes in national policy, laws, or management frameworks affecting marine turtles and/or their habitats

- Declaration of Churna Island as a Marine Protected Area (MPA) by the Balochistan Province on September 4, 2024
- Declaration of some more Marine Protected Areas is under consideration



Churna Island – Zahoor Salmi



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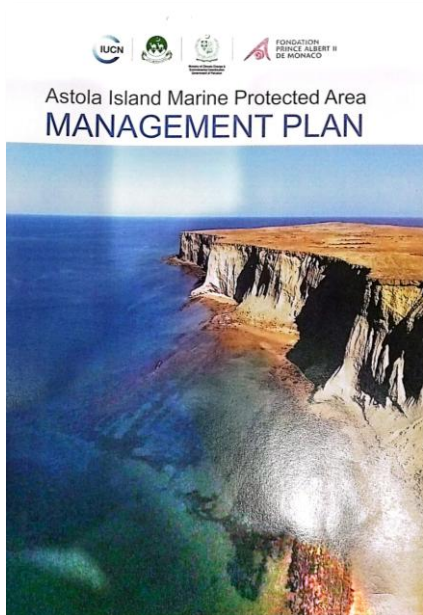
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3. Changes in national policy, laws, or management frameworks affecting marine turtles and/or their habitats

Astola Island Marine
 Protected Area
Management Plan
 Endorsed





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4. Emerging Threats or Challenges

- Site-specific pressures, like coastal development at Hawksbay
- Fishery-related threats, such as bycatch, entanglement, and discarded gear
- Illegal trade and direct exploitation of hatchlings
- Predation by feral dogs, especially on eggs and juveniles
- Climate change impacts on hatchling sex ratios and potential disease outbreaks
- Knowledge gaps, such as lack of data on genetics, diseases, and accidental catches
- Logistical and resource limitations (e.g., in monitoring and rehabilitation)

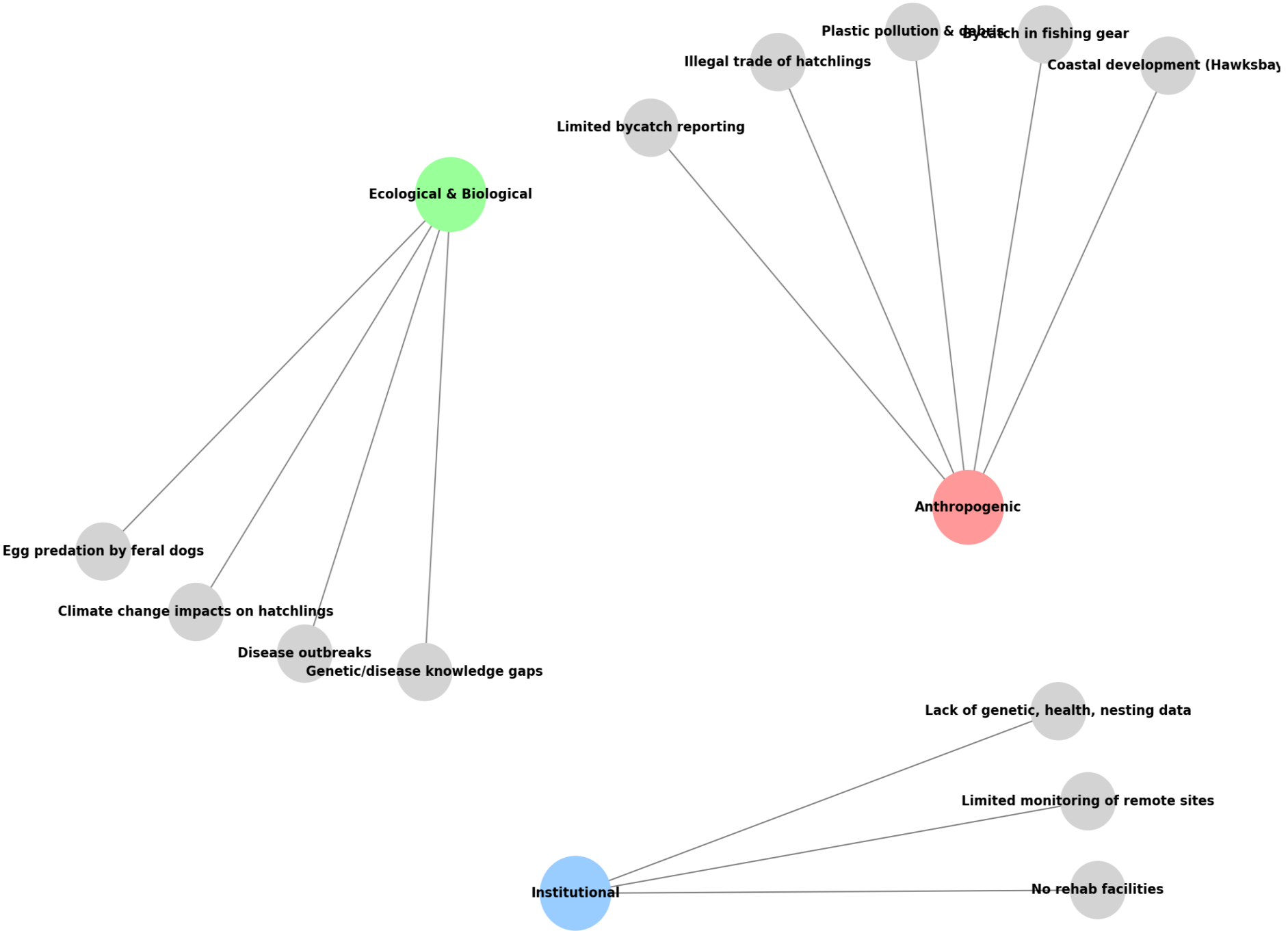


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4. Emerging Threats or Challenges

Threat Word Cloud: Marine Turtles in Pakistan



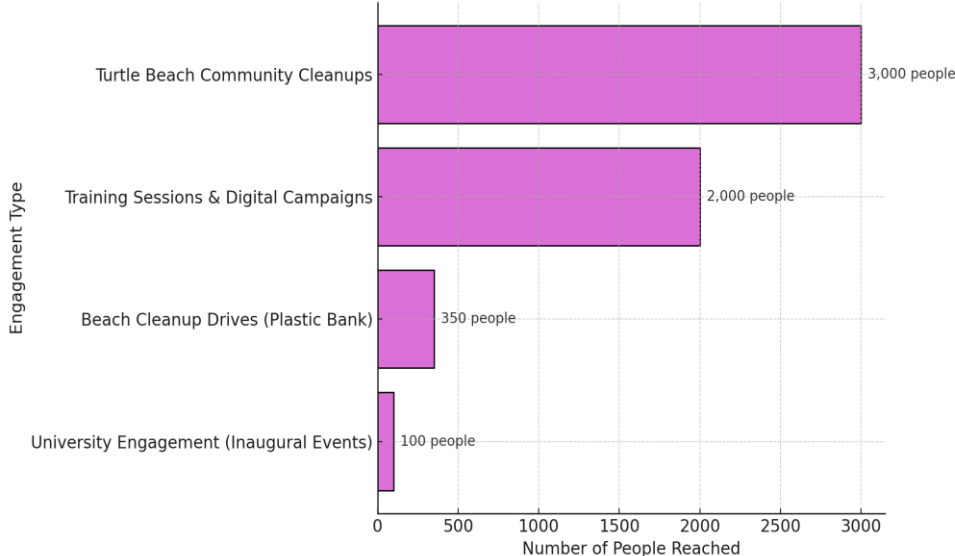




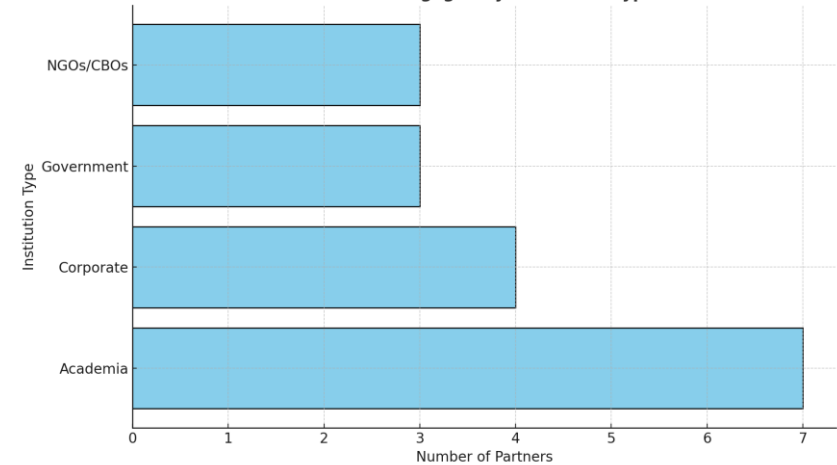
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5. Achievement/Success Story – Habitat Protection

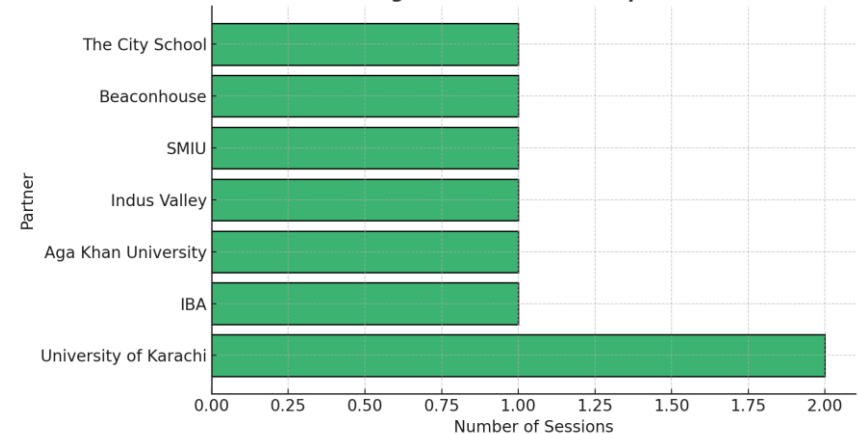
Community Outreach and Engagement Across All Initiatives



Partners Engaged by Institution Type



Training Sessions Conducted per Partner

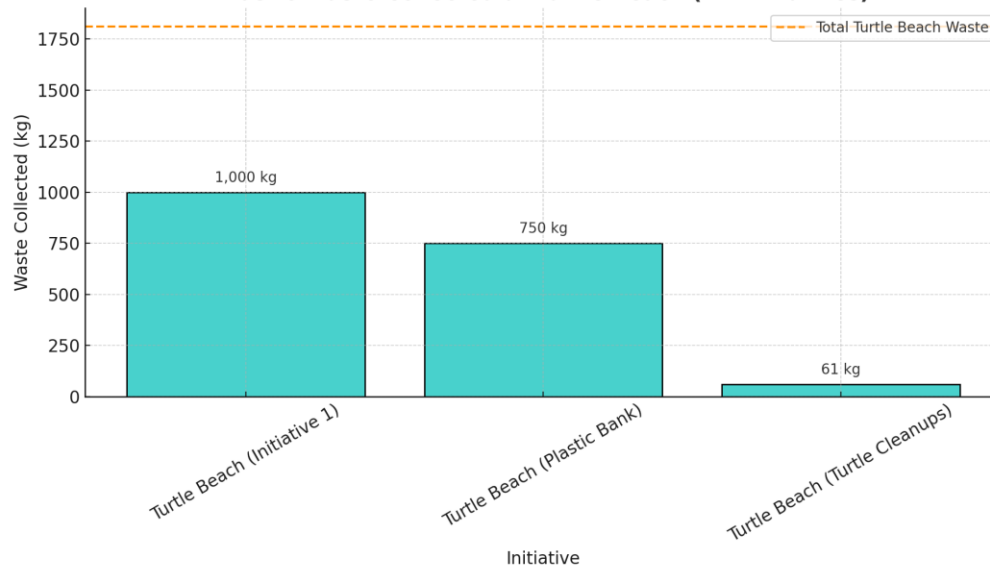




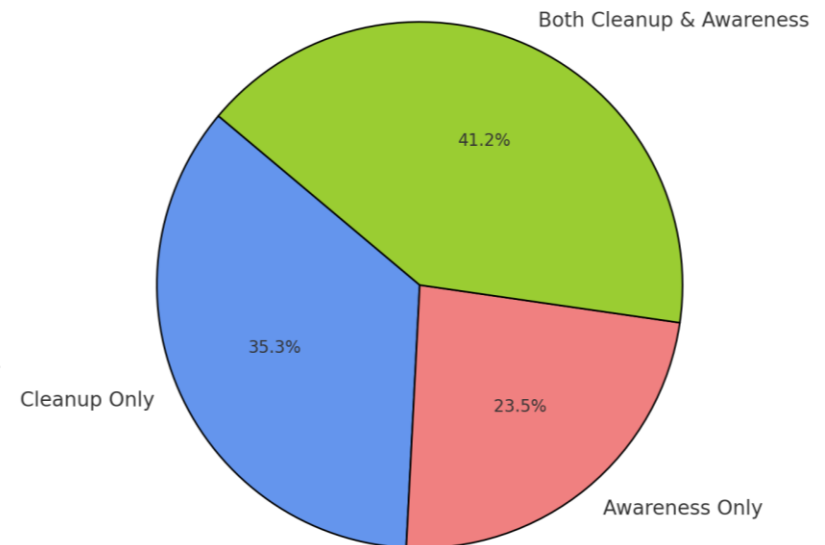
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5. Achievement/Success Story – Habitat Protection

Plastic Waste Collected at Turtle Beach (All Initiatives)



Partner Roles in Plastic Waste Collection





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5. Achievement/Success Story – Habitat Protection



Plastic waste collected at Karachi Fish Harbour ~ approximately 2.5 million kilograms. The litter boom system was transferred to Karachi Fish Harbour Authority for long-term use.

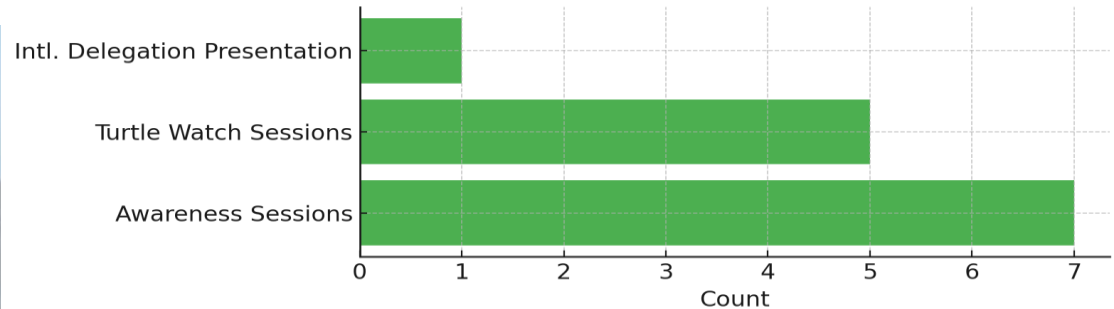


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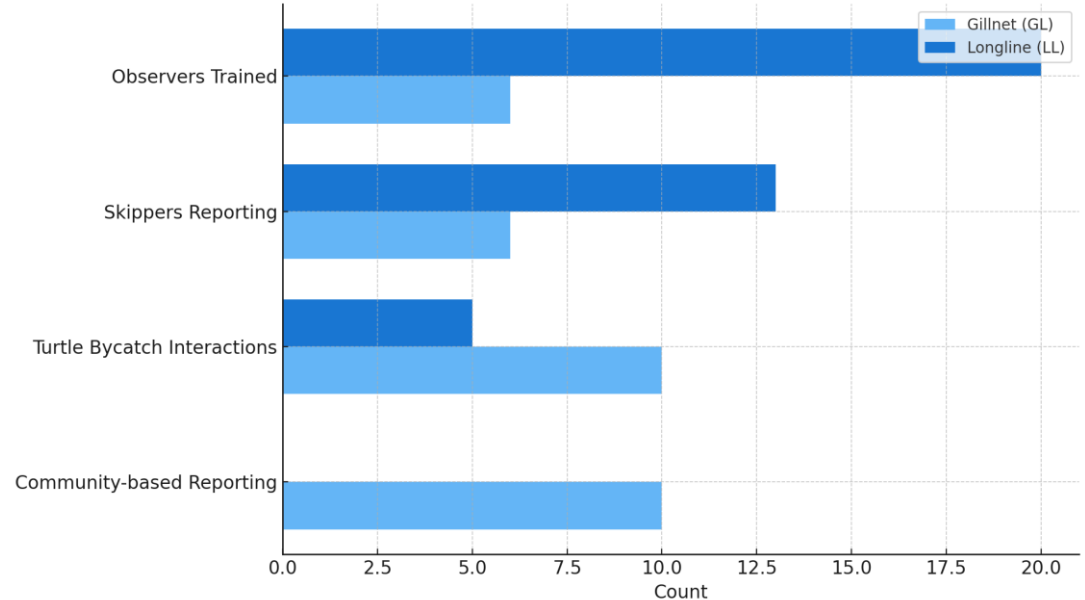
5. Achievement/Success Story – Species Protection



Awareness & Outreach Activities



Bycatch Monitoring Activities (GL vs LL)





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5. Achievement/Success story – Research & Knowledge Sharing



Safe Handling and Release of Marine Turtles.



WWF - Pakistan ✓
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2,052 views Jun 16, 2024 #Seaturtles #habitatloss

Celebrating World Sea Turtle Day



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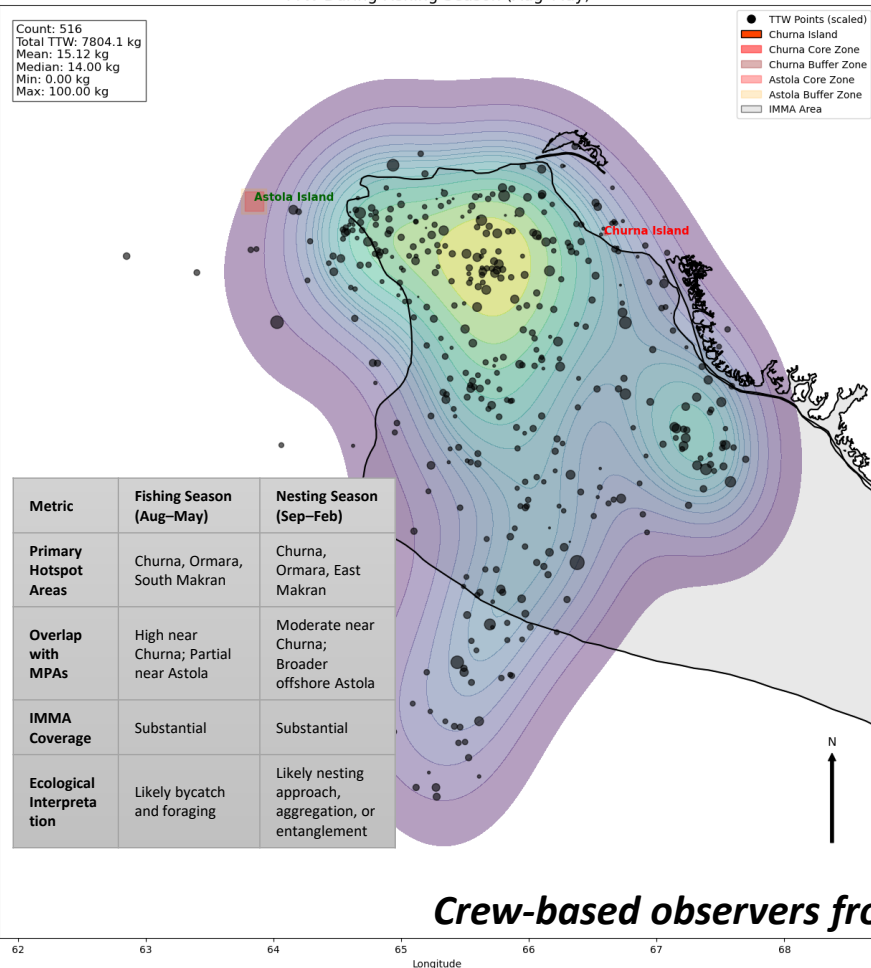


MoCC & WWF-Pakistan at BigC 2025

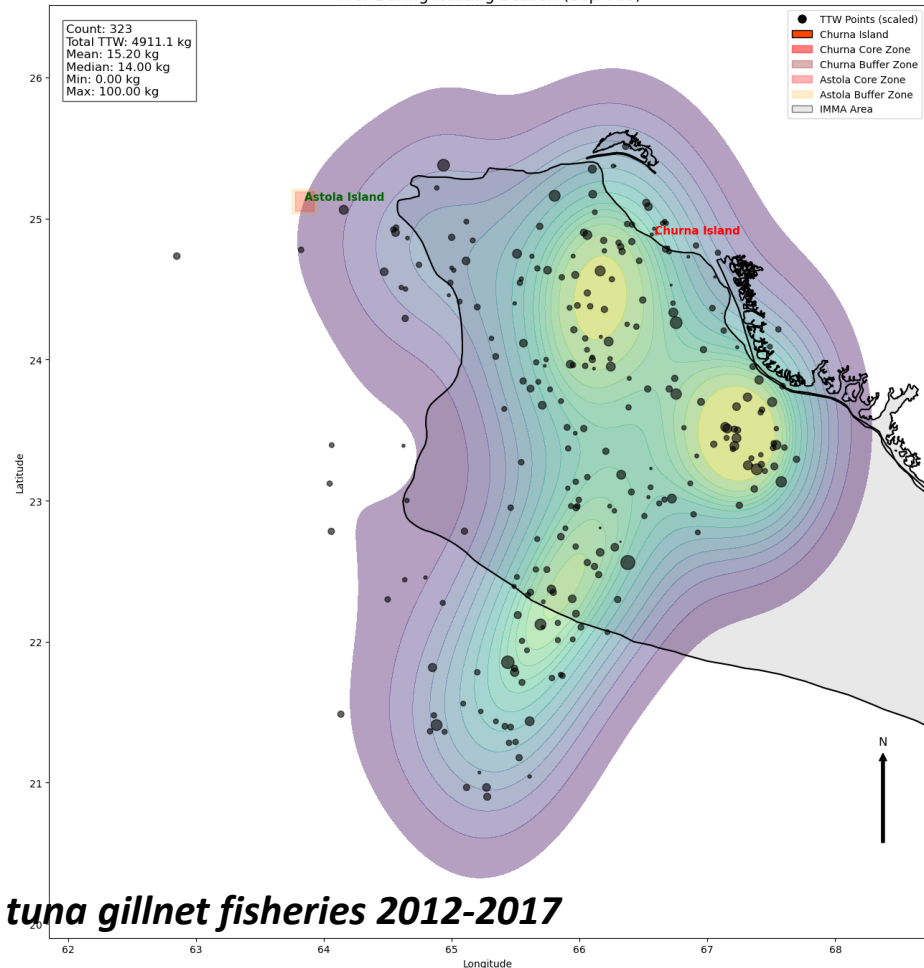


5. Achievement/Success story – Research & Knowledge Sharing

TTW During Fishing Season (Aug-May)



TTW During Nesting Season (Sep-Feb)

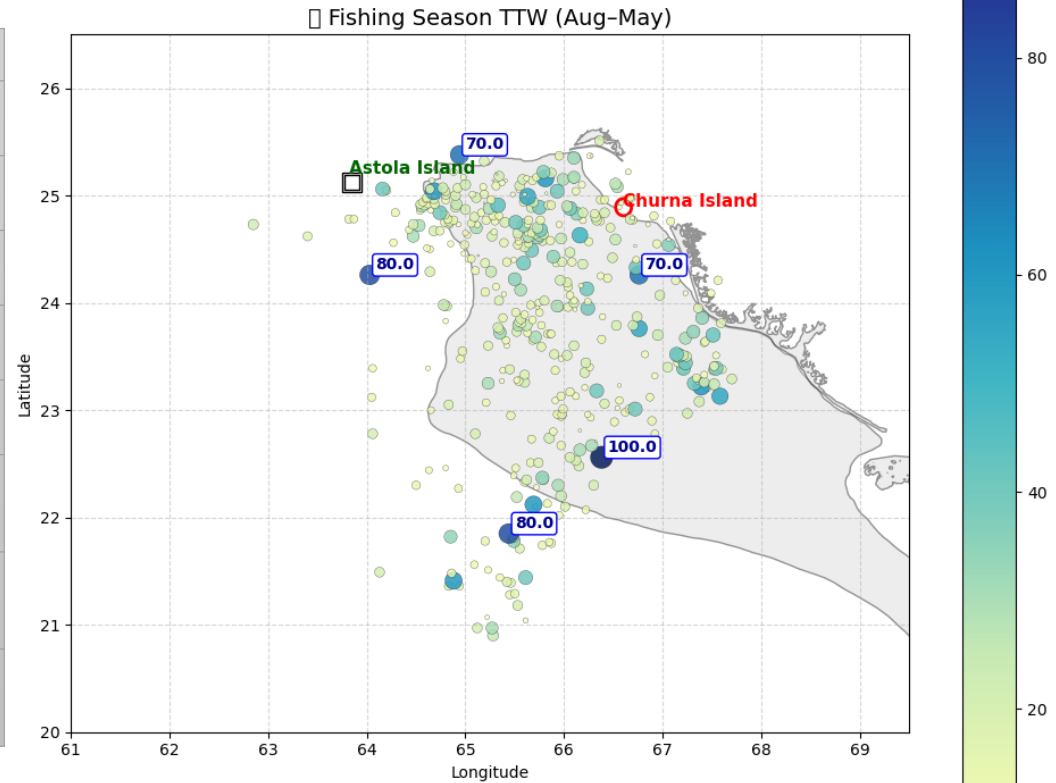


Crew-based observers from tuna gillnet fisheries 2012-2017



5. Achievement/Success stor

Metric	Fishing Season (Aug–May)	Nesting Season (Sep–Feb)	TTW Difference (Fishing – Nesting)
Number of Aggregated Points	High; widespread TTW aggregation	Moderate; more spatially concentrated	Matches fishing & nesting grid points
Total TTW (Summed)	~7,804 kg	~4,911 kg	Differential values from –90 to +100 kg
Mean TTW per Location	Moderate to high across more cells	Similar mean; fewer but denser locations	Highlights dominant season at each site
Top 5 TTW Hotspot Sites	Around Churna, Ormara, South Makran	Around Churna, Ormara, East Makran	Mix of sites with strong seasonal shifts
Spatial Pattern	Broad coverage including offshore & nearshore areas	Clustered offshore and near nesting beaches	Clearly shows seasonal dominance zones
IMMA Coverage	Substantial; most points lie within IMMA boundary	Substantial; especially along central and east coast	Strong IMMA inclusion of both seasonal patterns
MPA Overlap (Churna & Astola)	High near Churna; partial at Astola	Moderate near Churna; weaker around Astola offshore	Reveals gaps or mismatches in current protection zones
Ecological Interpretation	Likely reflects bycatch and foraging	Likely reflects nesting approach or aggregation	Indicates where and when protection effort should shift

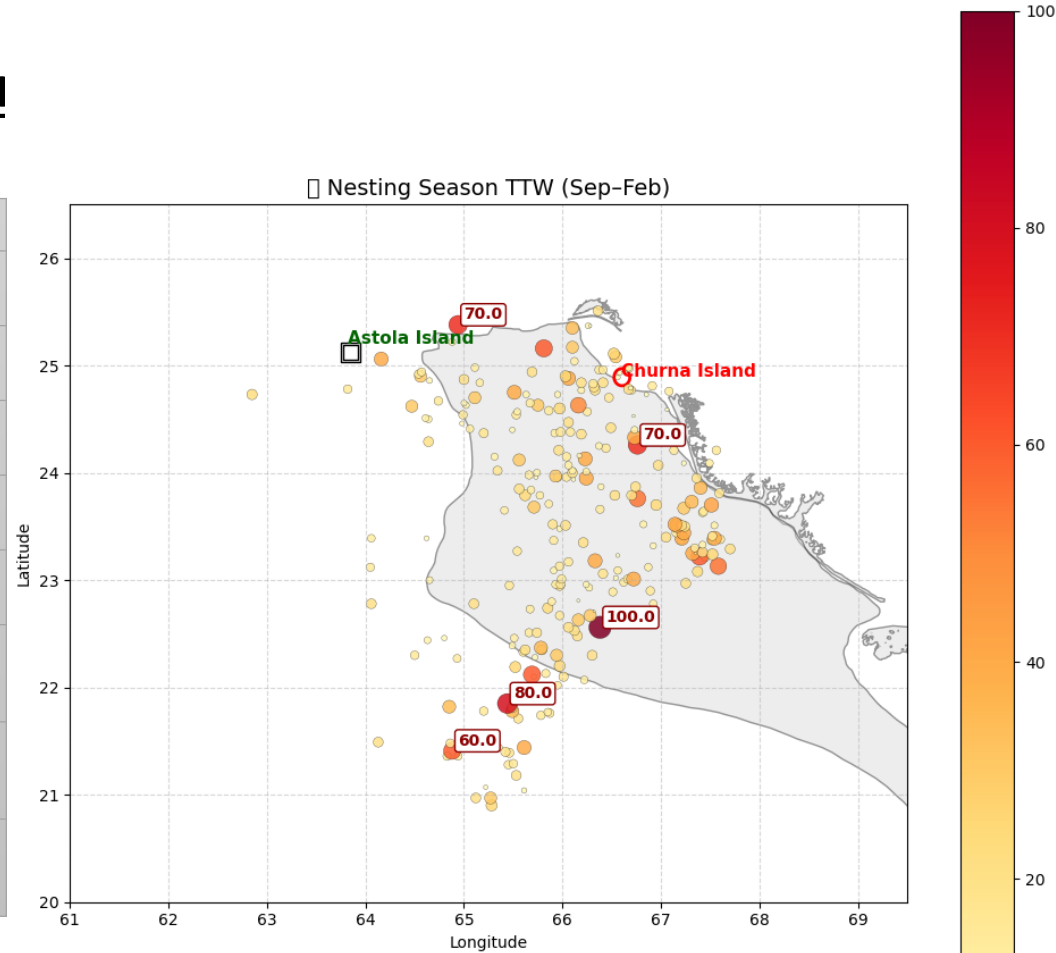


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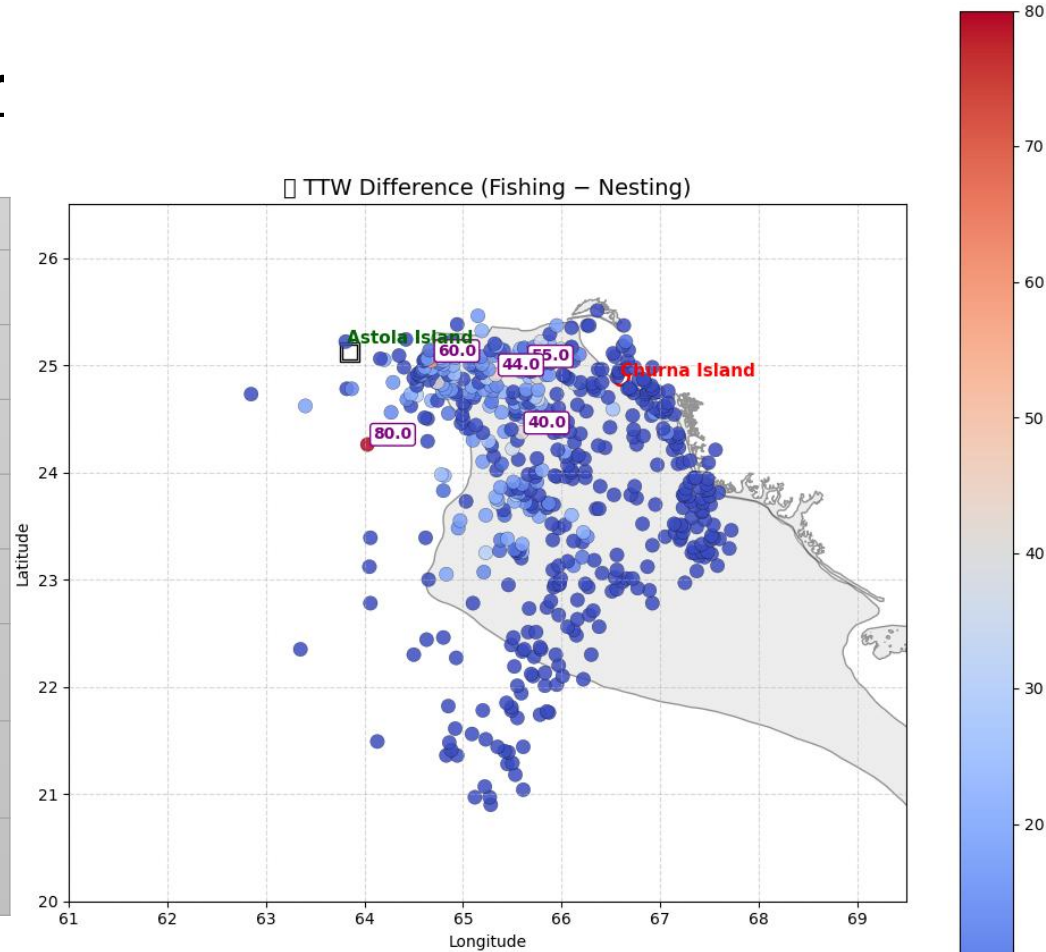


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5. Achievement/Success story – Research & Knowledge Sharing

- **Contribution of 1 abstract, 1 video and 2 papers;**
- Contributed to the 42nd International Sea Turtle Symposium (ISTS) through: Abstract submission on turtle safe handling and release protocols. Field-based training video display showcasing WWF's practical rescue and release efforts.
- Trials for Efficient Electronic Monitoring of Fishing Operations in Gillnet Tuna Fisheries of Pakistan – Presented at IOTC.
- Published paper 'Assessment of Plastic Pollution in Coastal Areas of Karachi' Highlights entanglement and ingestion risks to turtles from marine plastic debris, reinforcing habitat-level conservation needs.



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Together Possible