

INTERACTIONS BETWEEN SEA TURTLES AND FISHERIES IN BRAZIL. AN OVERVIEW WITHIN THE SCOPE OF PROJETO TAMAR MONITORING AREA (1990 – 2012)

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Projeto TAMAR/ICMBIO has been involved in sea turtles conservation in Brazil since 1980 and currently operates a network of 22 research stations distributed along of 1100Km.

Researches aimed to reduce the impact of coastal fisheries in sea turtles have been prioritized since 1990. In the end of 2001 TAMAR created the Brazilian National Action Plan to Reduce the Incidental Capture of Sea Turtles in Fisheries and started actions also toward to oceanic fisheries. Under this Plan each fishery has been understood as the management unit of the problem: “sea turtle and fisheries interaction”.

Seeking to better understand why and how the sea turtles interact with fisheries, each fishery has been characterized according 12 criteria. However, here, all fisheries were joined in major categories of gear: a) trawl nets, b) gillnets, c) traps, d) hooks and lines, e) Seines. The fishing effort is quite different and is not being considered here. We analyzed almost 22 years of data from TAMAR’s database information system (SITAMAR).

Trawl nets involve trawls for shrimp, squid and fishes. 210 turtles were captured (90.5% alive; 9.5% dead). 173 *Chelonia mydas* (96% alive, 4% dead), 24 *Caretta caretta* (66.7% alive, 33.3% dead), 3 *Eretmochelys imbricata* (66.7% alive, 33.3% dead) and 10 *Lepidochelys olivacea* (60% alive, 40% dead).

Gillnets include coastal set gillnets, fixed gillnets, encircling gillnets and pelagic driftnet. 5384 turtles were captured (75% alive; 24.8% dead; 0.2% in condition not informed - cni); 4891 *C. mydas* (75.4% alive, 24.5% dead; 0.1% cni), 130 *C. caretta* (77.7% alive; 20.8% dead; 1.5% cni); 99 *E. imbricata* (69.7% alive; 30.3% dead); 27 *L. olivacea* (70.4% alive; 29.6% dead); 237 *D. coriacea* (68.8% alive; 30.8% dead; 0.4% cni)

Traps include corrals, pound nets and pots. A total of 8367 turtles were captured (97.4% alive; 2.6% dead). 8005 *C. mydas* (97.3% alive; 2.7% dead); 130 *C. caretta* (alive); 75 *E. imbricata* (98.7% alive; 1.3% dead); 155 *L. olivacea* (98.7% alive; 1.3% dead); 2 *D. coriacea* (alive)

Hooks and lines include: longlines and handlines. A total of 4784 turtles were caught (75.3% alive; 7.8% dead; 16.9 cni). 168 *C. mydas* (79.8% alive; 8.9% dead; 11.3% cni); 2935 *C. caretta* (86.5% alive; 6.8% dead; 6.7% cni); 5 *E. imbricata* (80% alive; 20% dead); 615 *L. olivacea* (47.6% alive; 20.7% dead; 31.7% cni); 1061 *D. coriacea* (59.6% alive; 2.9% dead; 37.5% cni)

Seine nets include only beach seines and captured 72 turtles (94.4% alive and 5.6% dead). 66 *C. mydas* (95.5% alive; 4.5% dead); 1 *C. caretta* (alive); 4 *E. imbricata* (alive); 1 *L. olivacea* (dead).

The mortality rate of sea turtles in fisheries as gillnets or longlines is higher when compared with others like corrals or pound nets, which also capture many turtles. Thus, TAMAR has prioritized to monitor specific fisheries and has tested and implemented mitigation measures among fishermen, which contribute to reduce sea turtles capture and mortality.