Sea Turtle Bycatch in Coastal Net Fisheries in Brazil

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Brazil has more than 8.000 Km of coastline and five sea turtle species regularly occur along the coast (loggerheads, greens, olive ridleys, leatherbacks and hawksbills). All of them are included in the Brazilian red list and at IUCN´s list. Full legal protection for all species occurring in Brazil was enacted in 1986. Among the different fisheries found in the country, the coastal net fisheries are the most complex group of fisheries due to its diversity and large distribution along the coast. According to The National Action Plan to Reduce Sea Turtle Incidental Capture in Fisheries" - Tamar/Fishery Program (Marcovaldi *et al* 2002), 17 different coastal net fisheries were identified in Brazil. Other relevant coastal fisheries interacting with sea turtles are pound net and corrals. These fisheries have evidenced interaction with sea turtles in different levels. The first assessment was done for the coastal gillnet and pound nets, in the state of São Paulo and for the corrals in the state of Ceará. The methodology included: interviewing fishermen; spreadsheet boards filled out by the captains and the boat´s crew and an on board observer program. These fisheries showed high interactions with sea turtles, namely juvenile green turtles for the coastal gillnets (2002 – 2007. n = 1874 green; mean ccl = 40,3 cm), pound net (1991 – 2007. n = 4.517 green; mean ccl = 40,6 cm) and corrals (1993 – 2007. n = 670 green; mean ccl = 60,66). Strandings might suggest indirect interactions with costal fisheries. In the areas where TAMAR is present, there have been more than 7 thousand records, and green turtles are by far the most common in all places, except for Sergipe state. There adult olive ridleys are found stranded especially during the nesting season. This is of special concern since long term trend analyses have shown a 10 time fold increase on this nesting population.

In 2008, the Brazilian Government created a technical working group, composed of experts from different areas: net fisheries, sea turtles, sea birds, cetaceans, as well as representatives of fishermen. The main objective was to improve the regulations for the different types of net fishing, aiming to mitigate the interactions between net fisheries and endangered species. Accordingly, TAMAR identified and proposed "close areas" for some regions, where high catch rates on foraging aggregations of juvenile green turtles (e.g. coastline of the state of Bahia) have been recorded. Still, TAMAR is seeking to increase sampling effort to coastal gillnets to reach robust CPUEs estimates; Identify critical areas for testing, adjusting and implementing proper mitigation actions, as in the state of São Paulo, where a study to evaluate sea turtle catch rates in coastal gillnets between diurnal and nocturnal periods are underway. In spite of these strategies to mitigate the interactions with sea turtles, TAMAR has always prioritized actions towards

integrating the fishermen and fishing enterprises to sea turtle conservation, through creating a sense of awareness with emphasis on reporting sea turtle captures, handling and adequate release of live turtles. TAMAR has been working with over 400 volunteer fishermen and according to TAMAR data base these fishermen helped save more than 10.000 turtles incidentally caught in different fisheries, along 28 years of cooperation.