



**INTER-AMERICAN CONVENTION FOR THE
PROTECTION AND CONSERVATION OF SEA TURTLES**

CIT-CCE5-2012-Tec.3

**EASTERN PACIFIC LEATHERBACK TURTLES (*DERMOCHELYS CORIACEA*): A
SUMMARY OF CURRENT CONSERVATION STATUS, CHALLENGES, AND
OPPORTUNITIES**

2012

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Eastern Pacific Leatherback Turtles (*Dermochelys coriacea*): A Summary of Current Conservation Status, Challenges and Opportunities

Background

Leatherbacks are distributed circumglobally, with nesting sites on tropical sandy beaches and migratory and foraging ranges that extend into temperate and sub-polar latitudes. However, Wallace et al. (2010) defined Regional Management Units (RMUs) for all marine turtle species that are functionally equivalent to IUCN subpopulations, thus providing the appropriate demographic unit for Red List assessments. There are seven leatherback RMUs (hereafter subpopulations): Northwest Atlantic Ocean, Southeast Atlantic Ocean, Southwest Atlantic Ocean, Northeast Indian Ocean, Southwest Indian Ocean, East Pacific Ocean, and West Pacific Ocean.

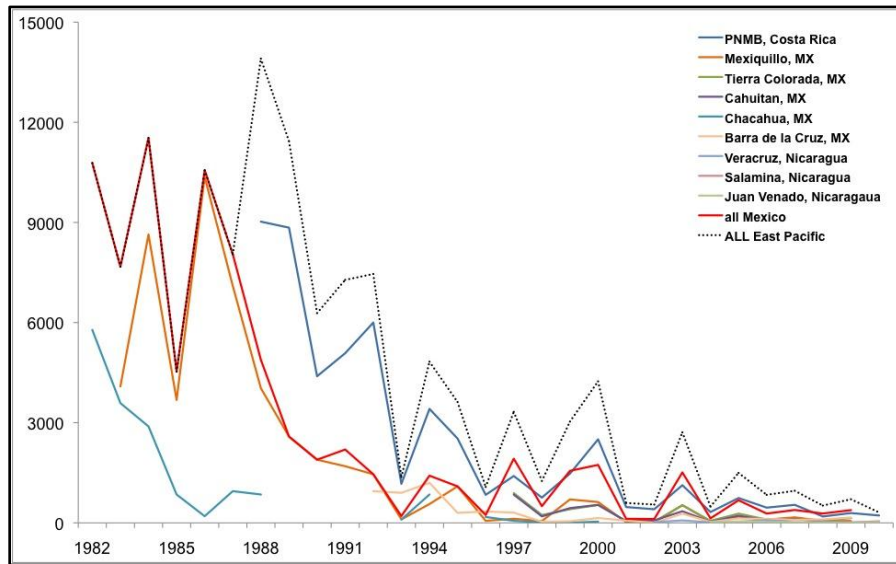
The East Pacific (EPO) leatherback subpopulation nests along the coast of Mexico, Central, and South America, and its area of occupancy extends from Baja California Sur, Mexico, to central Chile (40°S) and westward to 130°W (see map). Primary nesting sites are found in the states of Michoacán, Guerrero, and Oaxaca, in México and in the province of Guanacaste, Costa Rica. Secondary nesting sites occur throughout México and Costa Rica, but also Nicaragua. Scattered nesting also occurs in Guatemala, El Salvador, Panama, Colombia, and Ecuador. EPO leatherback feeding areas have been documented off Panama, Colombia, Ecuador, Peru, and Chile (Shillinger et al. 2008; 2011).



Conservation Status and Threats

Long-term monitoring projects on primary nesting beaches used by the East Pacific (EPO) leatherback subpopulation have documented a precipitous decline in the numbers of nesting females and their activities. Spotila et al. (2000) re-evaluated the global population size and projected extinction of the EPO subpopulation without effective conservation action to reduce sources of mortality. In 2000, the IUCN changed the status of the species from “endangered” to “critically endangered” due to a global analysis of available data that demonstrated that the decline was greater than 80% over the past 10 years and the only 2 existing analysis of the populations to date (Sarti Martínez, A.L. 2000). More recently, comprehensive reviews of long-term nesting abundance in Mexico (Sarti Martínez et al. 2007) and Costa Rica (Santidrián Tomillo et al. 2007)—which together comprise nearly 90% of *all* EPO leatherback nesting—concluded that nesting had **declined more than 90% since the 1980s** (see figure below). A recent global synthesis of conservation status by the IUCN Marine Turtle Specialist Group (MTSG) determined that EPO leatherbacks were one of the most threatened marine turtle subpopulations in the world (Wallace et al. 2011).

Drivers of this observed population decline—both anthropogenic (e.g. fisheries bycatch, egg harvest) as well as environmental (e.g. food resource limitation)—have been described in detail (for review see Wallace and Saba 2009).



Comprehensive egg harvesting occurred for decades before protection programs existed, in the early 1980s at nesting beaches throughout the region, particularly at the major index nesting beaches in Mexico and Costa Rica, and it continues at unprotected sites throughout the region. The other major suggested cause of the decline of this

subpopulation was—and continues to be—unsustainably high mortality due to incidental capture in fishing gear, particularly in high seas and coastal feeding areas off South America (see Wallace and Saba 2009 for review).

Long-term monitoring and conservation programs at the most significant nesting beaches in Mexico and Costa Rica have essentially eliminated or significantly reduced threats from human consumption of eggs and nesting females (Sarti Martínez et al. 2007; Santidrián Tomillo et al. 2007) and ongoing efforts at important sites in Nicaragua are increasing in effectiveness (Urteaga et al., in press). However, in spite of these major advances in leatherback conservation, the abundance of this subpopulation remains perilously low, and continues to decrease slowly toward extinction (see above figure).

Although threats on nesting beaches persist in places where protection is absent or inadequate, bycatch is still considered the major obstacle to population recovery. The latent impacts of high mortality in swordfish driftnets off Chile in the 1990s are likely further hindering recovery, as possibly thousands of adult leatherbacks were killed annually (Frazier and Montero, 1990; Eckert and Sarti, 1997), which eliminated a significant portion of the breeding population and, therefore, their future offspring as well. In addition, ongoing leatherback bycatch in small-scale fisheries in South America (Alfaro-Shigueto et al. 2007; 2011) continues to impact adults and subadults, the two life stages with the largest per-individual impacts on marine turtle population dynamics (Wallace et al. 2008).

Conservation Solutions

The Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) adopted a Resolution on the Conservation of Leatherbacks (*Dermochelys coriacea*) (CIT-COP2-2004-R1), which provides countries with a strong foundation to work on actions that will aid the recovery of this species. Regional efforts can be strengthened by working together with the IUCN Marine Turtle Specialist Group (MTSG) East Pacific Ocean leatherback working group.

Members of the MTSG that formed a working group on the leatherback of the East Pacific Ocean region have recently undertaken development of an action plan to stabilize and reverse the decline of this species in the region. This work has already identified several feasible actions that can be taken on nesting beaches, in key marine areas, and in policy/governance arenas to address threats and promote recovery. In particular, the Action Plan is being organized around three goals:

- 1) Secure nesting beaches and increase hatchling production
- 2) Reduce mortality due to fisheries bycatch
- 3) Use international policy instruments to leverage regional conservation

Therefore, it is recommended that IAC Parties implement to the fullest extent the existing Leatherback Resolution, thus providing the countries the framework to implement actions in line with those identified by the MTSG and thus promote their recovery and reverse the decline of this species in the region.

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