Exhibit R-024

IUCN, 2010 Red List of Threatened Species, "Dermochelys coriacea," *available at* http://www.iucnredlist.org/details/46967807/0

August 16, 2010

Dermochelys coriacea

NOT EVALUATED (NE) | DATA DEFICIENT (DD) | LEAST CONCERN (LC) | NEAR THREATENED (NT) | VULNERABLE (VU) | ENDANGERED (EN) | **CRITICALLY ENDANGERED (CR)** | EXTINCT IN THE WILD (EW) | EXTINCT (EX)

Summary | Classification Schemes | Images & External Links | Bibliography | **Full Account**

Taxonomy [top]

Kingdom	Phylum	Class	Order	Family
ANIMALIA	CHORDATA	REPTILIA	TESTUDINES	DERMOCHELYIDAE

Scientific Name:	*Dermochelys coriacea*
Species Authority:	(Vandelli, 1761)
Common Name/s:	English – Leatherback, Leathery Turtle, Luth, Trunkback Turtle French – Tortue Luth Spanish – Baula, Canal, Cardon, Tinglada, Tinglar, Tortuga Laud
Synonym/s:	*Testudo coriacea* Vandelli, 1761

Assessment Information [top]

Red List Category & Criteria:	Critically Endangered A1abd ver 2.3
Year Assessed:	2000
Assessor/s	Sarti Martinez, A.L. (Marine Turtle Specialist Group)
Evaluator/s:	Crouse, D. & Abreu, A. (Marine Turtle Red List Authority)

Justification:
The main procedure for evaluating the status of sea turtles is through surveys of reproduction activity at nesting beaches. Decline in nesting has been documented to be much greater than 80% in most of the populations of the Pacific, which has been considered the species' major stronghold. In other areas of its range, the observed declines are not as severe, with some populations showing trends towards increasing or stable nesting activity. Analysis of published estimates of global population sizes (Pritchard 1982, Spotila *et al.* 1996), suggest a reduction of over 70% for the global population of adult females in less than one generation. The populations in the Pacific Ocean, the species' stronghold until recently, have declined drastically in the last decade, with current annual nesting female mortalities estimated at around 30% (Sarti *et. al.* 1996, Spotila *et al.* 2000). In some areas, formerly abundant rookeries have almost disappeared. For the Atlantic Ocean, the available information demonstrates that the largest population is in the French Guyana but the trends there are unclear. Some of the Caribbean nesting populations appear to be increasing but their sizes are very small when compared to those that nested in the Pacific coasts less than 10 years ago.

History:	1996 – Endangered (Baillie and Groombridge 1996) 1994 – Endangered (IUCN) 1990 – Endangered (IUCN 1990) 1988 – Endangered 1986 – Endangered (IUCN Conservation Monitoring Centre 1986) 1982 – Endangered

Geographic Range [top]

Range Description:	The Leatherback turtle has a worldwide distribution. It is found from tropical to sub-polar oceans; nests on tropical (rarely subtropical) beaches. Very little is known about the distribution of post-hatchlings and juveniles. Leatherbacks smaller than 100 cm curved carapace length seem limited to regions warmer than 26°C. Sightings of turtles less than 145 cm show that some juveniles remain near to the coast in St. Lucia, E. Trop. Pacific, Mexico, Barbados, USA (east and west coast-Georgia, S. Carolina, Texas, Rhode Island, California) Puerto Rico, Amer. Samoa, Bonaire, Chile, Spain, Venezuela, Scotland, and England (Eckert 1999).
Countries:	**Native:** Albania; Angola; Antigua and Barbuda; Aruba; Australia; Bahamas; Bahrain; Barbados; Benin; Brazil; China; Colombia; Congo, The Democratic Republic of the; Costa Rica; Côte d'Ivoire; Cuba; Dominica; Dominican Republic; Ecuador; El Salvador; Eritrea; Fiji; French Guiana; Ghana; Grenada; Guadeloupe; Guatemala; Guyana; Haiti; Honduras; India; Indonesia; Italy; Liberia; Malaysia; Martinique; Mexico; Mozambique; Myanmar; Netherlands Antilles; Nicaragua; Panama; Papua New Guinea; Puerto Rico; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Senegal; Solomon Islands; South Africa; Sri Lanka; Suriname; Taiwan, Province of China; Thailand; Togo; Trinidad and Tobago; Turks and Caicos Islands; United States; Venezuela; Virgin Islands, British; Virgin Islands, U.S. **Possibly extinct:** Israel
FAO Marine Fishing Areas:	**Native:** Atlantic – northeast; Atlantic – northwest; Atlantic – southeast; Atlantic – southwest; Atlantic – eastern central; Atlantic – western central; Indian Ocean – eastern; Indian Ocean – western; Mediterranean and Black Sea; Pacific – southeast; Pacific – southwest; Pacific – western central; Pacific – eastern central; Pacific – northwest; Pacific – northeast

Population [top]

Population:	The first attempt to evaluate the world population was done by Ross in 1979 (Ross 1982), estimating than 29,000 to 45,000 adult leatherback existed in the world, not counting the rookeries of the Eastern Pacific which had not been discovered yet. Pritchard estimated in 1982 that the world population consisted of 115,000 adult females, and considered that the Mexican population supports up to 60% of the global total. In 1996, Spotila and collaborators provided the most recent global estimation, compiling published data, unpublished information and personal comments from 28 leatherback nesting sites, estimating that 20,000 to 30,000 adult females existed at that time in the world. This represents a reduction of the global population of 78% from Pritchard's estimation in 14 years, less than a single generation. Based on the number of nestings known to date, it has been mentioned that some of the most important populations have collapsed. For example, the rookery in Malaysia, which from 10,155 clutches in 1956 fell to 37 in 1995 in the same stretch of beach. The East Pacific leatherback population has been estimated to have collapsed to about 1,690 adult females, down from 4,638 in 1995 (Spotila *et al.* 2000) with the Mexican population, which is in serious danger of collapse in spite of protection efforts applied for over a decade (e.g., number of nests have fallen from 5,080 to less than 100 annually in one of the main rookeries of the Pacific coast); and those in Costa Rica dropping from 1,646 nest to less than 500 nest in the main nesting beach on the Pacific coast. In the Pacific basin, only the Indonesian population remains as still somewhat abundant (2,983 nests in 1999 in a single beach from 13,000 nests in 1984) but with uncertain status and future prospects, since civil problems have hampered the continuation of monitoring and protection activities in the area, along with significant fisheries pressures that impacts the population. There are areas in the Atlantic in which the number of nests per season has increased in the past few years, as is the case of the US Virgin Islands. However, these populations are relatively minor. Others populations in the Atlantic have decreased or fluctuated such as those in French Guyana or Surinam. In these two, the beach dynamics hinder an accurate evaluation of the population status, since whole beaches disappear, forcing females to search for alternative suitable nesting beaches. Along with this, the leatherback population is shared between Surinam, Guyana, French Guyana and maybe Trinidad and Brazil. Until a true international cooperation program exists, it won't be possible to have thorough evaluations of such population. For the coast of Africa, there are historical records for South Africa. In the Indian Ocean, the population is increasing but cannot be considered a large population, with around 100 nests per season in 56 km. in the last four years. Recent reports mention that west Africa has an important population with around 10,400 nest per season, but the total area occupied for the leatherbacks is not well known and there is no available historical information. J. Fretey mentioned (pers. comm.) that this population could be currently the most important in the world.
Population Trend:	Decreasing

Habitat and Ecology [top]

Habitat and Ecology:	**Main Habitats**: Nest on sandy beaches. The juveniles may remain in tropical waters warmer than 26°C, near the coast, until they exceed 100 cm in curved carapace length. When adults, they are pelagic and live in open ocean, sometimes in temperatures below 10°C. There are very few sighting of males near the coast during the breeding season, only the females are near to the coast during the breeding season and go to the beach to nest. **Generation Length**: The estimate of age to maturity for the species used by most authorities is based on a skeletochronological analysis by Zug and Parham (1996), that placed it at around 13-14 years. However, population-wide estimates of age are not currently practical and thus average age of parents are not known. Considering that most authorities agree that the life-span of leatherbacks is 30 years or more, then age to maturity plus one half of the reproductive life span (22 years) is taken as a reasonable approximation of generation length. If density dependence applies, the severely depleted status (see below) would argue that current growth rates are higher than natural and natural generation time may be longer than 22 years. **Degree of fragmentation**: Genetic analyses have shown that the Pacific populations are very closely related, and distinct from those of the Atlantic, suggesting a degree of reproductive independence. However, the lineages in the two ocean basins are not as highly differentiated as found for analogous assemblages in other cheloniid species (Dutton *et al.* 1999).
Systems:	Terrestrial; Marine
List of Habitats:	10 Marine Oceanic 10.1 Marine Oceanic - Epipelagic (0-200m) 12 Marine Intertidal 12.2 Marine Intertidal - Sandy Shoreline and/or Beaches, Sand Bars, Spits, Etc 13 Marine Coastal/Supratidal 13.3 Marine Coastal/Supratidal - Coastal Sand Dunes

Threats [top]

Major Threat(s):	The main threats have been a prolonged harvest of eggs and the incidental capture in oceanic fisheries. In some areas the egg harvest and illegal poaching has removed more than 95% of the clutches, and this has been recognized as the main cause for the collapse in the Malaysia population (Chan and Liew 1996). Fishing activities using longline and driftnets are an important threat since juvenile and adult are captured in migratory routes (Zug and Parham 1996). In some areas females are killed on the nesting beaches for oil extraction. Leatherback hunts, which have been stripped of their traditional customs and controls, are also a serious threats (Suarez and Starbird 1996). Oceanic pollution, basically by plastics is another cause of mortality. Phthalates, derived form plastics have been found in the leatherback egg yolk (Juárez-Cerón 1998).
List of Threats:	9 Pollution 9.2 Industrial & military effluents 9.2.3 Type Unknown/Unrecorded

Conservation Actions [top]

Conservation Actions:	Extraction of sea turtles and their products has become illegal in most countries. In many, there are conservation programmes to protect egg clutches and nesting females from poaching. International trade of all sea turtle products and sub-products is forbidden under CITES. However, the use of the Leatherback meat, oil or eggs is allowed in some nations, as part of internal traditional customs or rituals. While many international instruments (CMS, CBD, SPAW to name a few) require the protection of sea turtles in international waters, lack of effective monitoring in pelagic fishing operations still causes significant bycatch mortality. As an unprecedented action, the United States government recently closed a very large area in the northern Pacific to the US longline fishery in order to protect leatherbacks from incidental capture. Because of the decline in the world's populations of the leatherback turtle, full protection of

all nesting beaches to eliminate poaching, avoid degradation of critical habitat, and increment hatchling recruitment (through enhancing hatching success and incrementing the number of nesting protection programs) will be necessary. However, as pointed out by Sarti *et al*. (1996) and Spotila *et al*. (2000) recovery of this population cannot be achieved by increasing hatchling production alone because of the very high mortalities as fisheries' bycatch. Due to the very drastic observed population declines in last few decades, pelagic and coastal fishing practices that impact leatherbacks must be changed or eliminated urgently to minimize leatherback mortality in these habitats. Further, because the migratory routes of leatherbacks cross territorial waters of many nations or occur in the high seas, international collaboration focused on sea turtle conservation is essential. In regions such as the Caribbean, where populations are shared and the dynamic nature of the nesting habitats provokes shifts in nesting sites, greater collaboration and data sharing will be necessary to derive a better understanding of population sizes and trends.

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