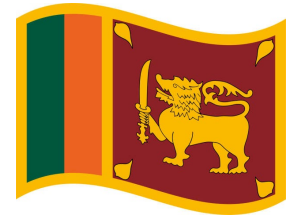




IOSEA
Marine Turtle MOU

IOSEA Marine Turtle MOU
4th Meeting of the Northern Indian Ocean Marine Turtle Task Force
Baa Atoll, Maldives & online, 7-9 March 2023



Conservation of Sea Turtles



SRI LANKA



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Chairman,
Bio Conservation Society (BCSL),
Marine Turtle Specialist –IUCN/SSC-
MTSG.



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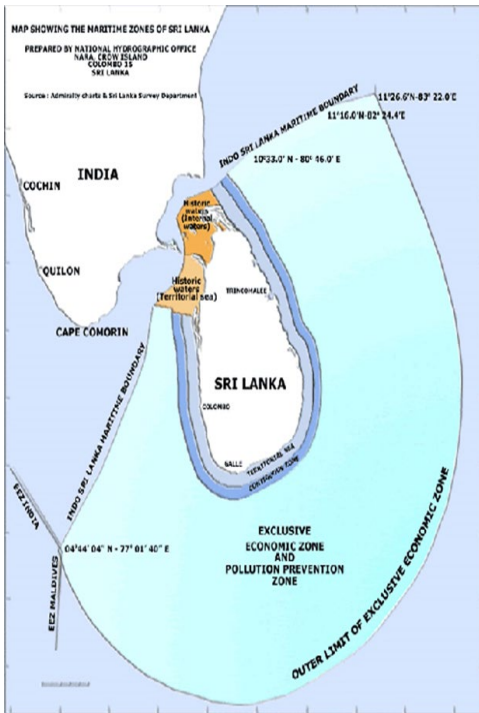
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- DWC has legal authority under FFPO (Fauna and Flora protection ordinance) and main legal body
- Established Marine Unit in 2015

Mandate - Establish protection, conservation and sustainable use of marine and coastal resources



Total Number of Fully Marine Protected Areas	9
Total Number of Marine Associated Protected Areas	19
Total Extent of Fully Marine and Associated Protected Areas	405,928.57 ha
Total Coastal Lengths of Marine Protected Areas	418.74 km

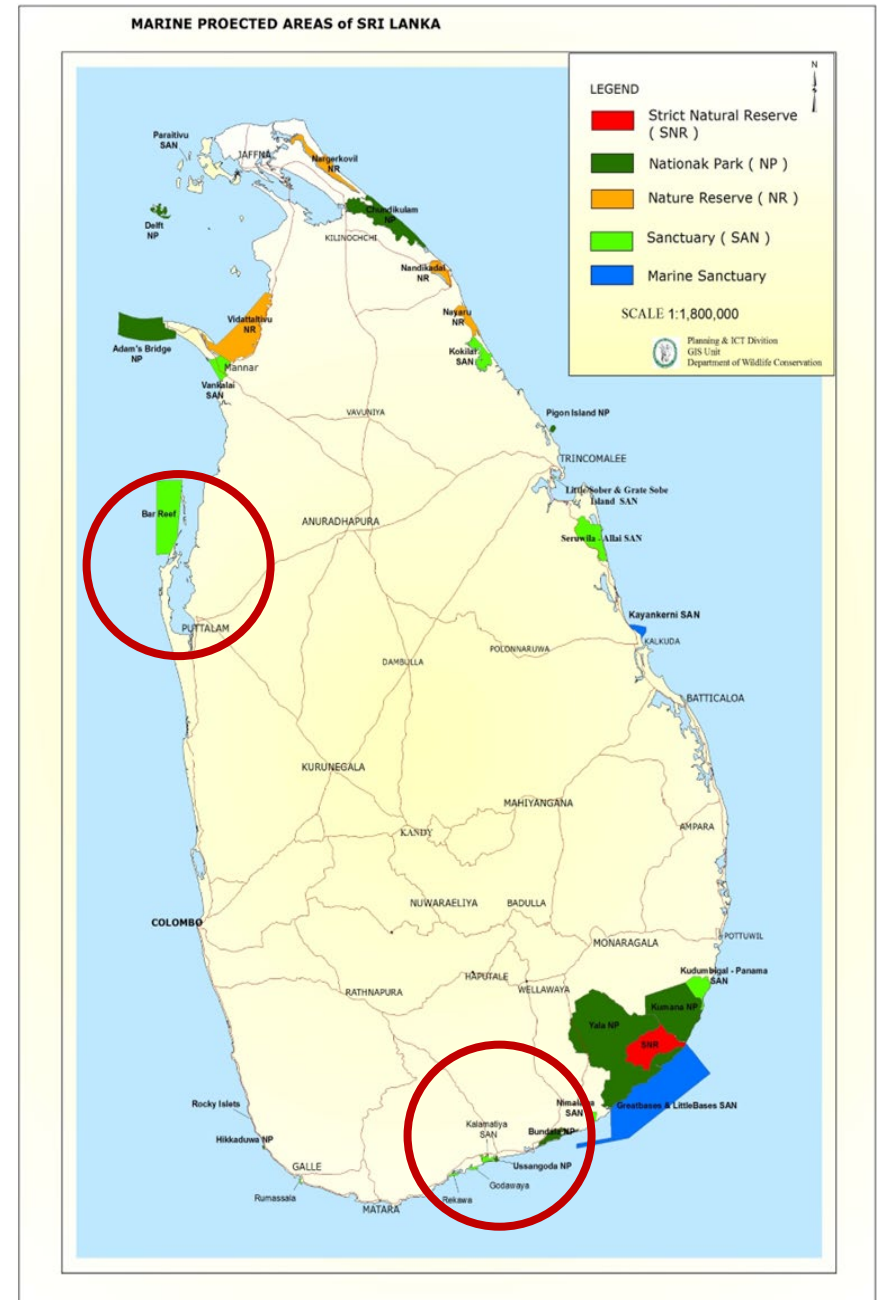


COUNTRY UPDATE: SRI LANKA

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

1. Collecting data on turtle nesting

- Rekawa/Kalametiya Sanctuary
- Bundala National Park
- Kumana (kirigalbe) Sanctuary
- Kalpitiya Bar reef Sanctuary

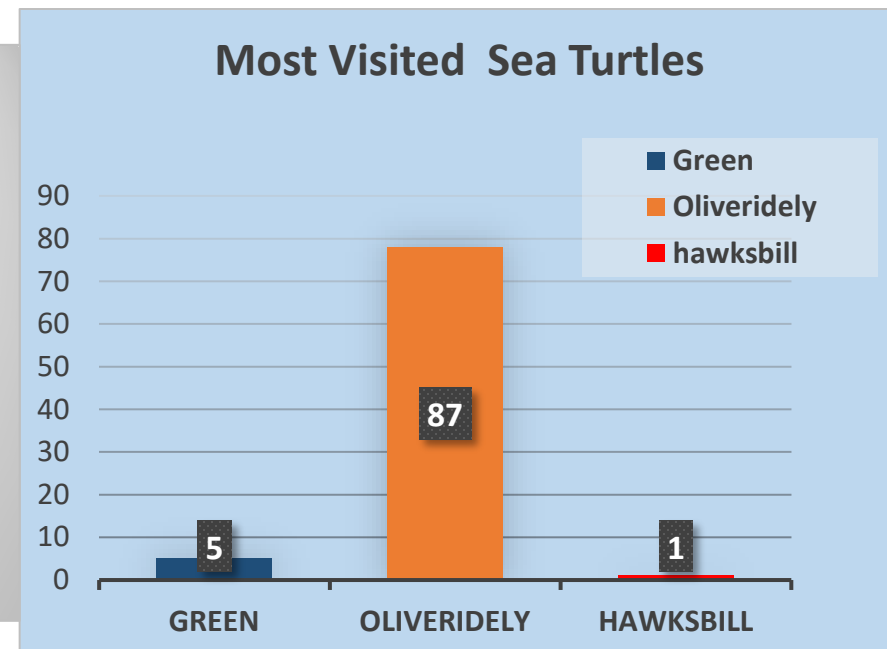




COUNTRY UPDATE: SRI LANKA

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

Kumana National Park–Nesting Data

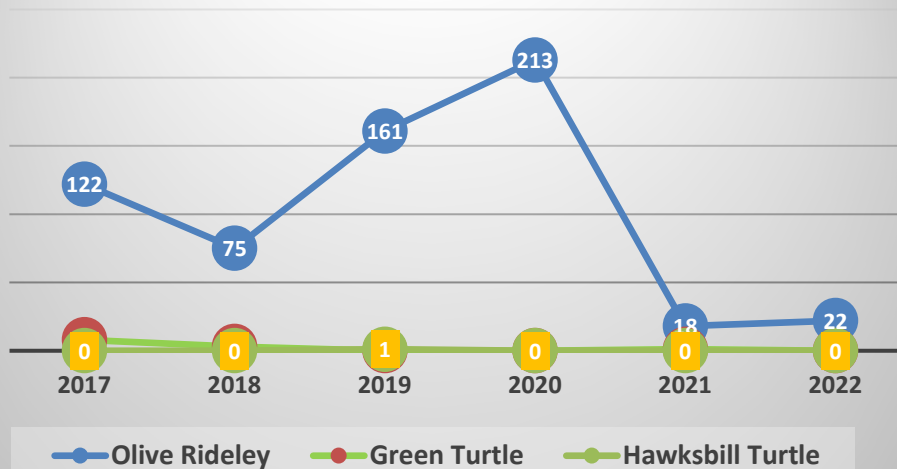




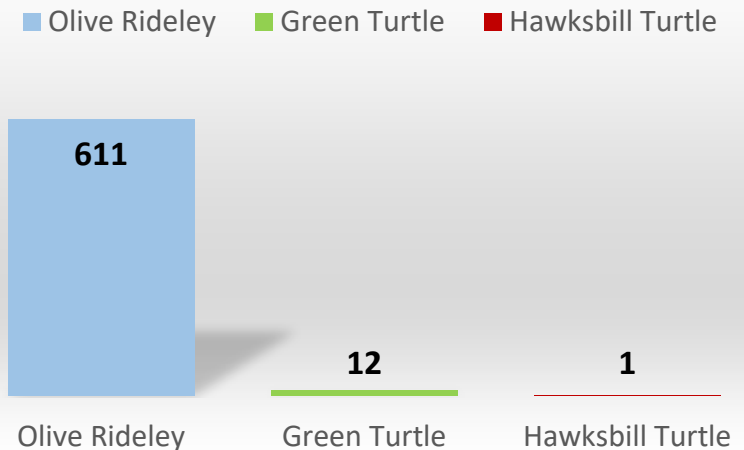
1. New research or conservation projects related to marine turtles and/or their habitats

Bundala National Park –Nesting Data

Year Round Sea Turtle Arrival



Most Visited Sea Turtles



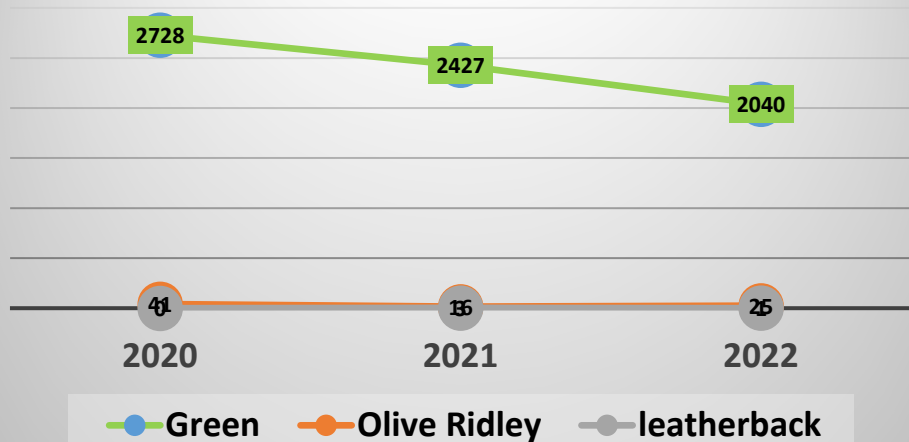


COUNTRY UPDATE: SRI LANKA

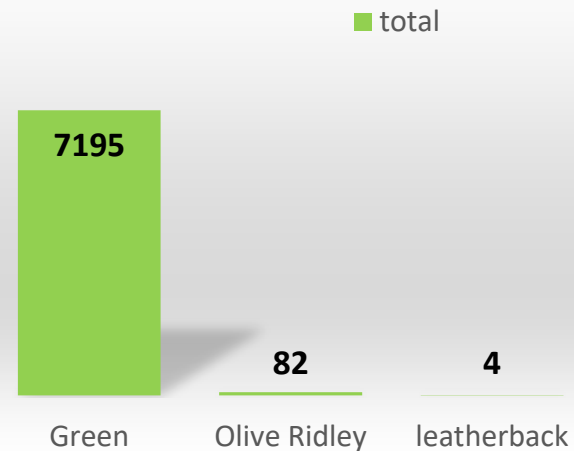
1. New research or conservation projects related to marine turtles and/or their habitats

Rekawa Sanctuary – Nesting Data

Year Round Sea Turtle Arrival



Most Visited Sea Turtles





COUNTRY UPDATE: SRI LANKA

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

	Proposed MPAs	Area (ha)
1	Mirissa whale sanctuary	113,262.32
2	Thalawila sanctuary	7970 ha
3	Wilpatthu west sanctuary	46,500 ha
4	Silawathura coral and seagrass bed sanctuary	38,300 ha
5	Shipwreck sanctuary – phase 1	15,000 ha
6	Kalpitiya whale sanctuary	44,000 ha
7	Trinco whale sanctuary	51,000 ha
8	Iranathiv Island Sanctuary (sea grass and corals)	



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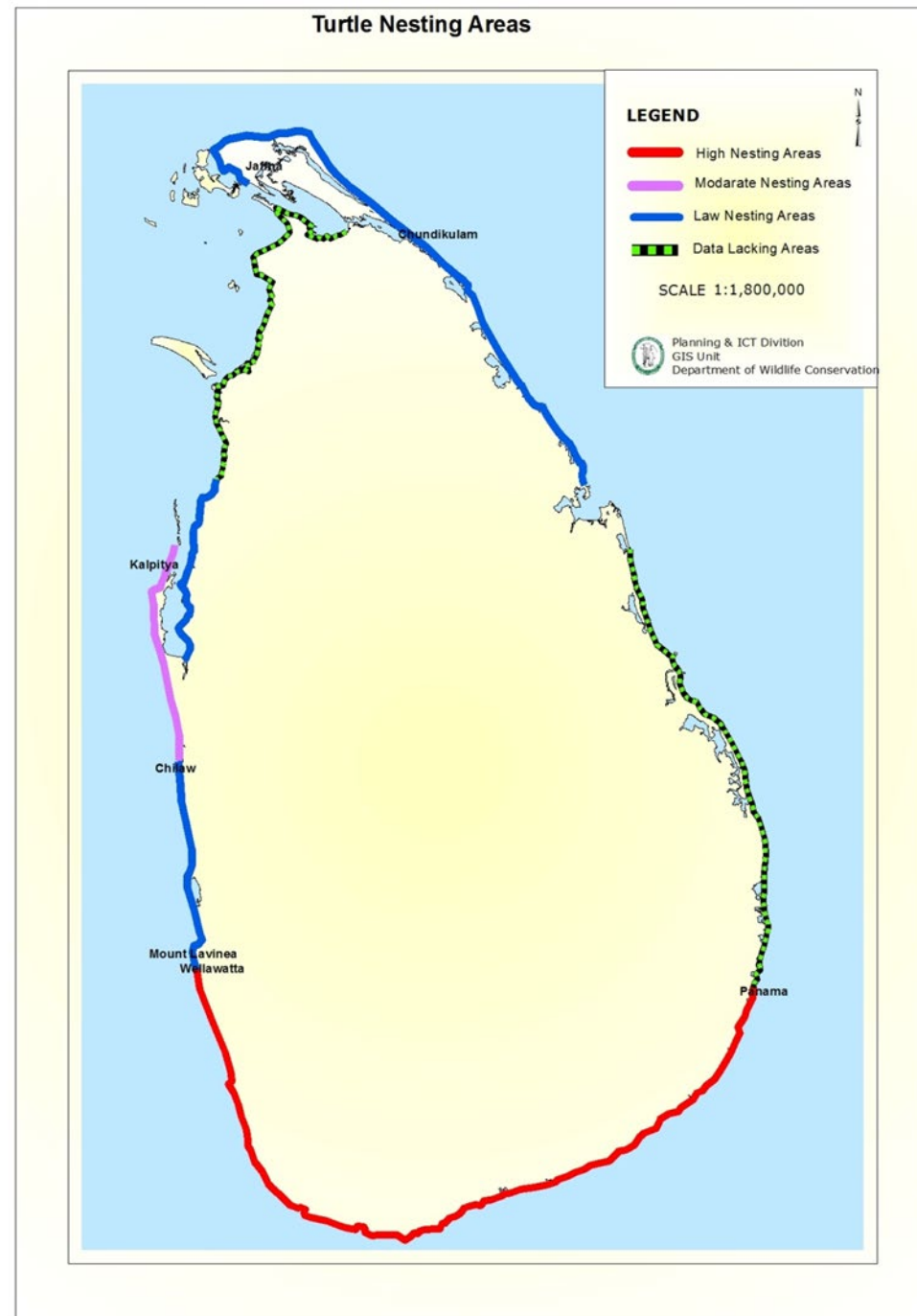
COUNTRY UPDATE: SRI LANKA

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

2. Proposed:

Conducting a survey on turtle nesting in all Marine protected areas in Sri Lanka

- Select the best method and the teams for the survey
- Training the survey team and the officers
- Implementation/start the survey beginning of May
- Prepare a map





COUNTRY UPDATE: SRI LANKA

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

3. Proposed :

Initiate extensive monitoring and research programme on the sea turtles

- **Implement a satellite monitoring /tagging system for turtles**
- **Project proposal writing and obtaining the funds**
- **Prepare a documentary for turtles**
- **Genetic analysis of turtles and genetic diversity study program**



COUNTRY UPDATE: SRI LANKA

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

Proposed :

1. Establishing marine turtles conservation and treatment centers in the North Western Region (Kalpitiya) and Eastern Region (Ampara) for the rescue, treatment, rehabilitation and disease surveillance of marine turtles



- Treatment and rehabilitation facility
- Staff training
- Improvement capacity of DWC staff in biology, medicine, pathology, rescue, rehabilitation, and other fields related to the conservation of marine turtles

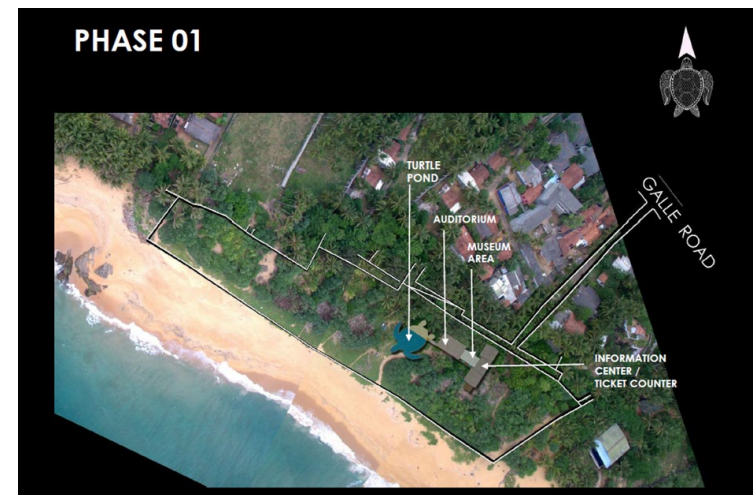


2. Large infrastructure developments affecting marine turtles and/or their habitats (proposed or underway)

Underway :

2. Establishing a turtle research and rehabilitation center at Dodanduwa

- Provide research opportunities
- Turtle rehabilitation and treatment facilities





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

- 1. Regulation of the present turtle hatcheries as part of Turtle Conservation Initiatives (TCI) and convert them to sea turtle conservation centers.
Hatchery survey (September)**
- 2. Implement regulations and promote best practices among Turtle Hatcheries**

Register the turtle hatcheries which are practiced under the DWC upgrade guidelines.

Implement the best Monitoring system of turtle hatcheries with the participation of experts

Print and distribute approved guidelines to registered hatcheries



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

3. The Vankalei Ramsar site and the Vedithalathiwe National Park is going to declare as one Protected area and that whole area is going to be declared as one Ramsar site.

4. The Adams bridge National Park also going to be declared as a Ramsar Site.





COUNTRY UPDATE: SRI LANKA

4. Emerging threats or challenges (incl. caused/aggravated by the pandemic)

- Oil spills and water pollution due to Ship disasters and anthropogenic activities
- Bycatch by fishing activities
- Collection of eggs
- Natural Predators

Eggs- Wild Boar, Jackal, Mongoose

Hatchlings- Crabs, House crows





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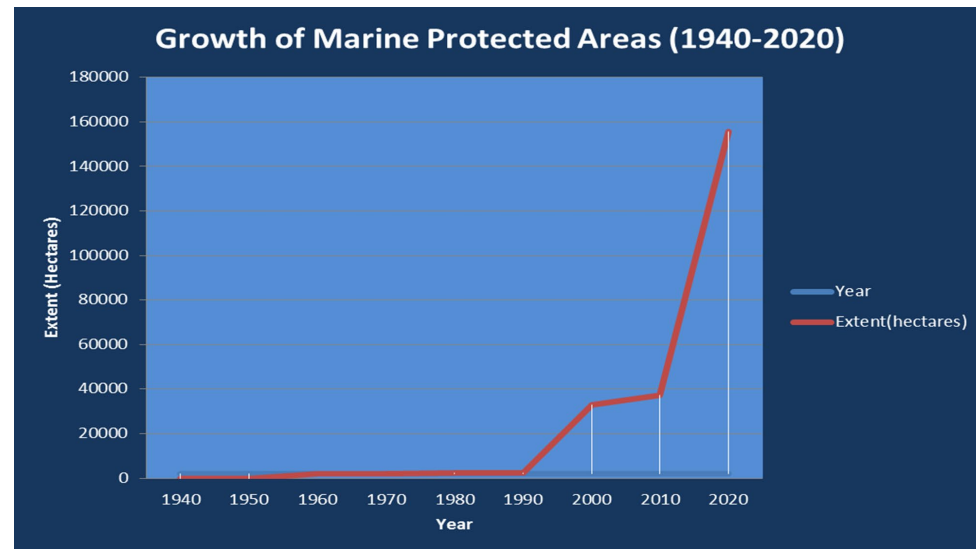
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 Marine Turtle MOU

COUNTRY UPDATE: SRI LANKA

5. Achievement/Success story

1. In-situ conservation

- In-situ conservation is operated by DWC declaring marine protected areas
- Initiated the process of Declaration of Iranathiv Island and surrounding waters as a sanctuary.
- The declaration of Mirissa sanctuary is pending approval of the cabinet of Ministers. Progress 99%





COUNTRY UPDATE: SRI LANKA

5. Achievement/Success story

2. Ex-situ Conservation

Ex-situ conservation of marine turtles is carried out mainly by private turtle hatcheries in Sri Lanka and DWC Turtle Conservation Centers





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COUNTRY UPDATE: SRI LANKA

5. Achievement/Success story

3. Research & Training

4. Education & Awareness

5. Law Enforcement





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5. Achievement/Success story

6. Turtle conservation activities by the community





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5. Achievement/Success story



7. Study on mortality of eggs and hatchlings of sea turtles in Kirigalbe Beach of Kumana National Park with relation to beach guarding by M.R. Perera, Wildlife Ranger, Department of Wildlife Conservation



- Survivorship of the clutch is much higher in guarded nests

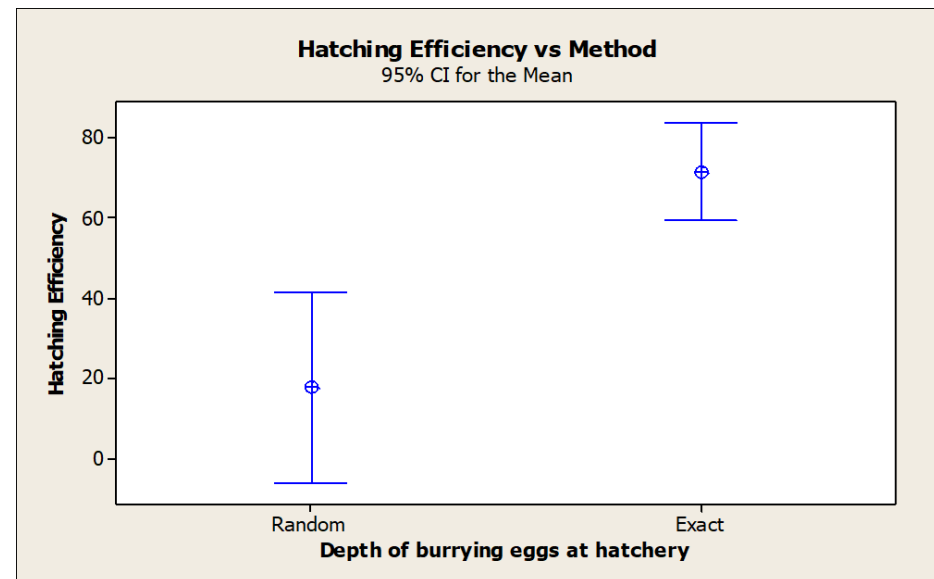
	Guarded plot	Unguarded plot
Amount of success nets	14 (100%)	0%
Unsuccessful efforts	01 (5.88%)	16 (94.12%)
Destroyed nest	0%	11 (100%)



5. Achievement/Success story

7. Study on mortality of eggs and hatchlings of sea turtles in Kirigalbe Beach of Kumana National Park with relation to beach guarding by M.R. Perera, Wildlife Ranger, Department of Wildlife Conservation

- High hatchlings effectiveness could be obtained in ex-situ conditions by using mother turtles' nesting depth
- Mother turtle's maximum nest distance was 22m from the sea





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COUNTRY UPDATE: SRI LANKA

5. Achievement/Success story

8. World Wildlife Day – 3rd March 2023



BBC NEWS | සිංහල



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ITN news.

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X-Press Pearl Disaster vs Marine life

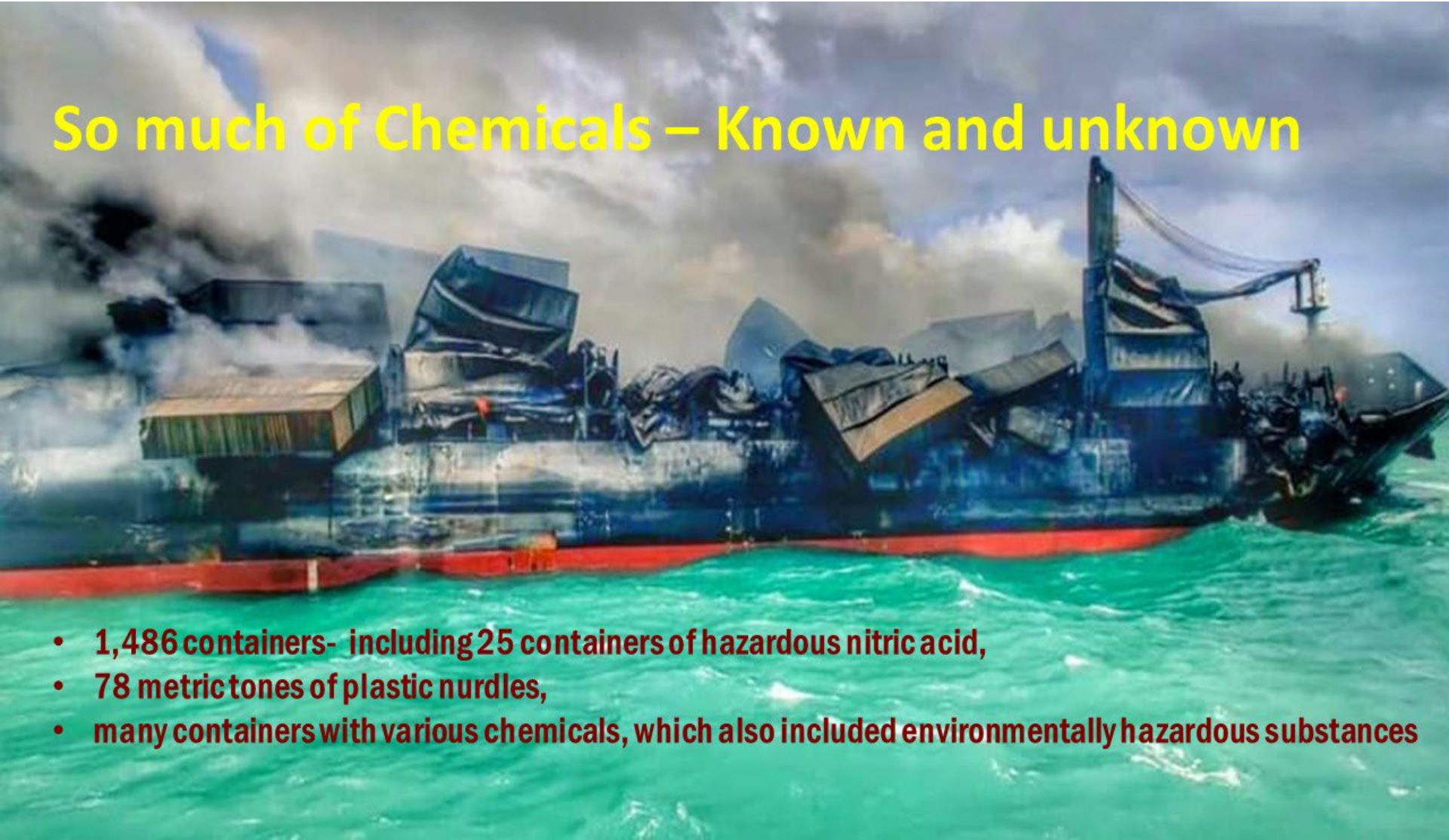




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So much of Chemicals – Known and unknown



- **1,486 containers- including 25 containers of hazardous nitric acid,**
- **78 metric tones of plastic nurdles,**
- **many containers with various chemicals, which also included environmentally hazardous substances**



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Plastic nurdles



It was believed that largest release of plastic to the ocean in a single time – UN officials





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Nearly 400 Sea turtles carcasses in 2021





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Over 50 marine mammals carcasses



Humpback



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Largest fish in the world - Whale shark

தேவநீலம் - இயிங்கல சுறா



Various small fishes

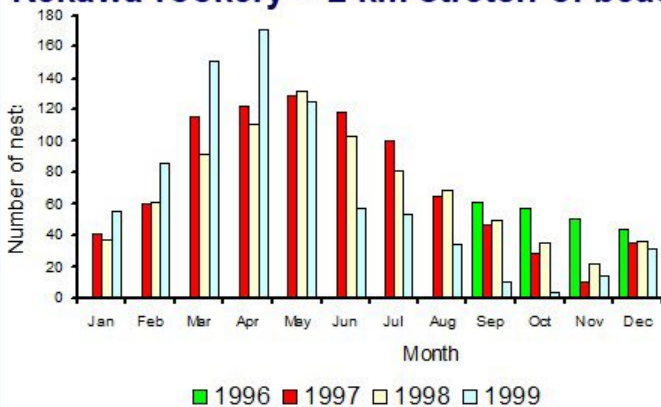




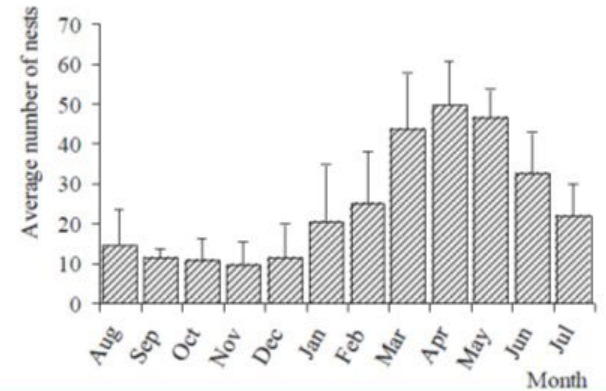
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Rekawa rookery – 2 km stretch of beach

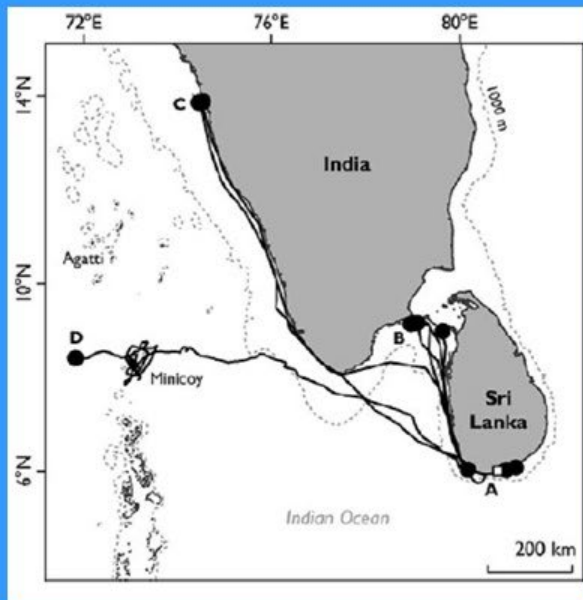


Kosgoda rookery – 1 km stretch of beach



Peak nesting season for sea turtles in Sri Lanka

Satellite tagging - nesting green turtles



Five out of 10 turtles went to Gulf of Mannar passing Colombo
 So the incident happened during peak nesting season and peak migration season

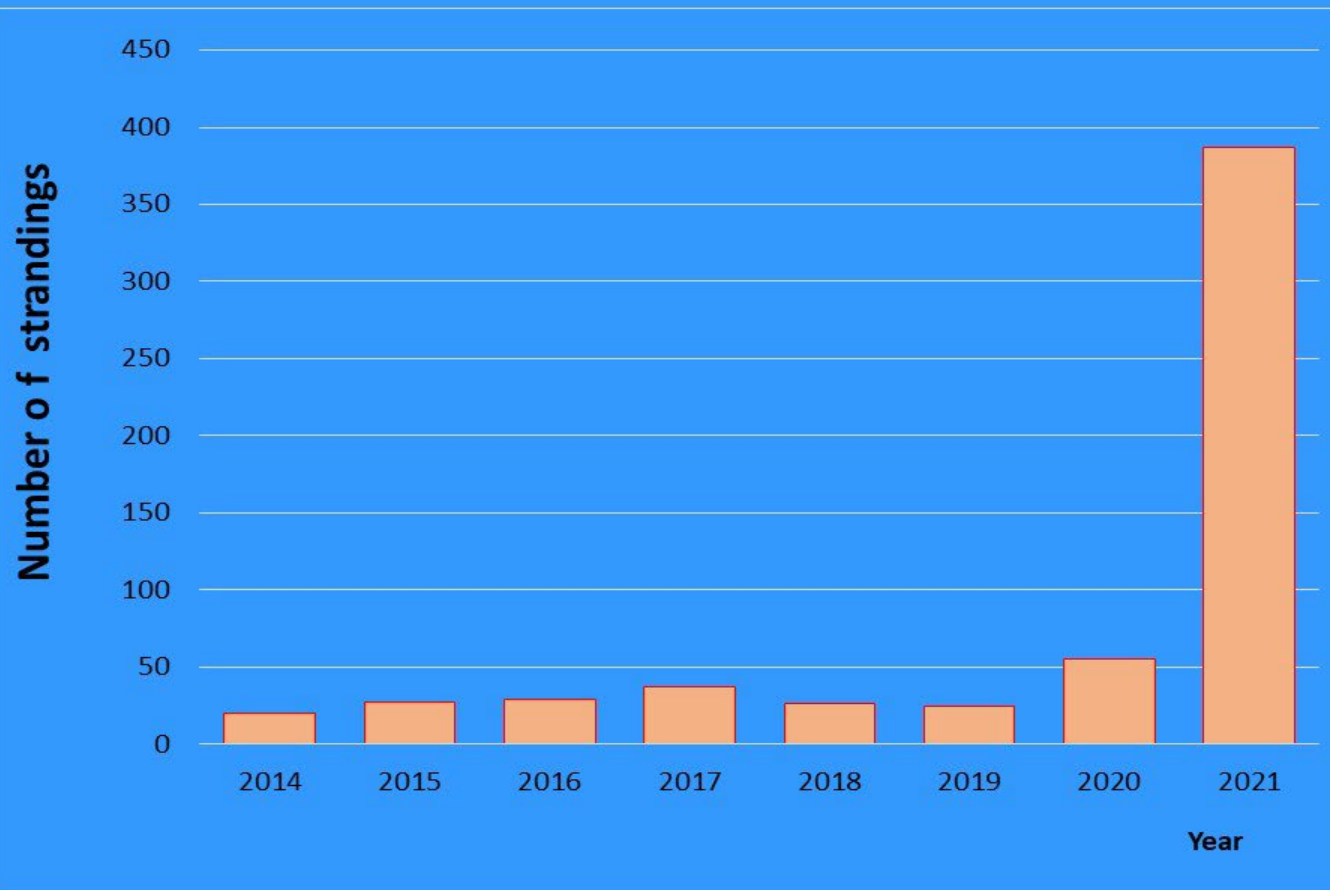
and
 in the migratory route





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Sources: Ekanayake, 2015; Unpublished data: Department of Wildlife Conservation (DWC) and Bio Conservation Society (BCSL)

- * Only 20% of the carcasses will washed to the beach
- * It can be estimate over 2000 turtles dead



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Sea turtles - endangered species.

Sea turtle sex-determination by environmental temperature

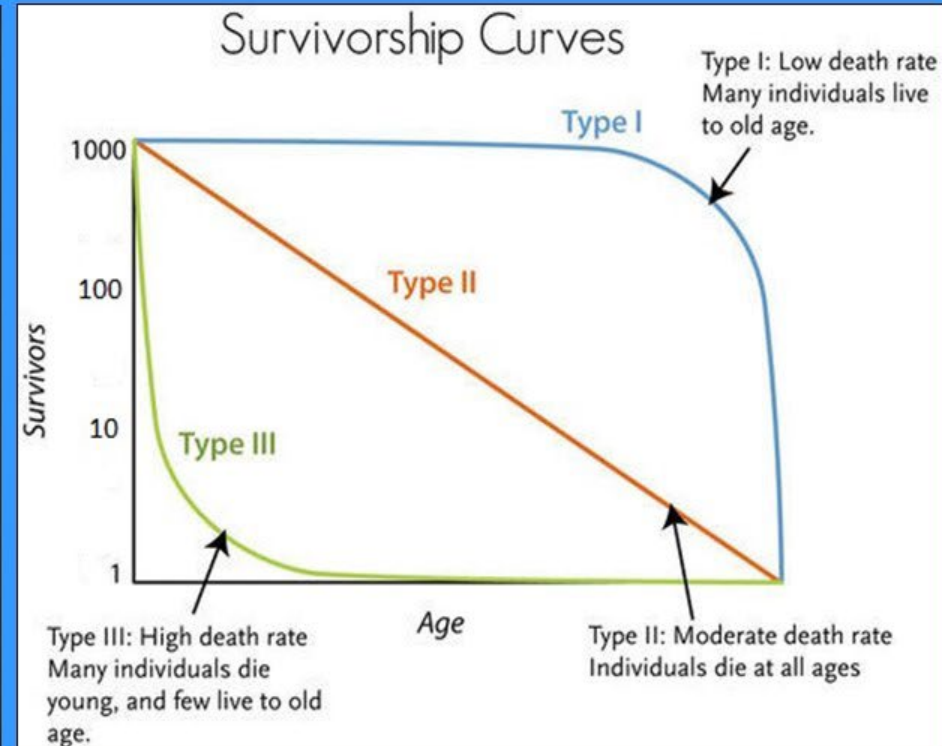
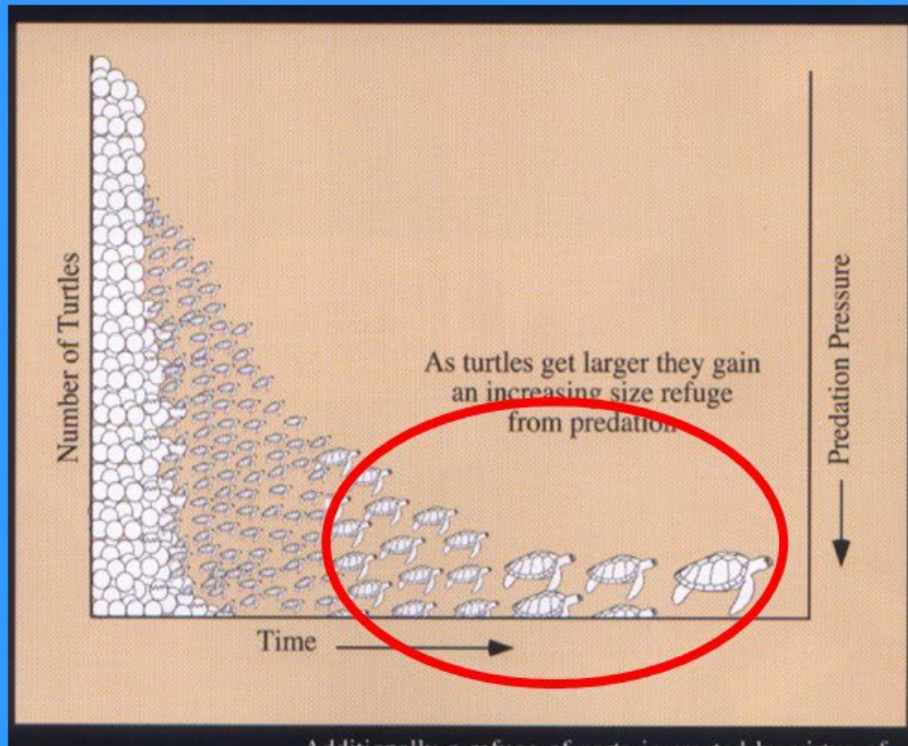
According to scientific researches, micro-plastics can also change the temperature and other characteristics of sand, which will affect eggs being incubated by sea turtles.



Rekawa beach



Survivorship



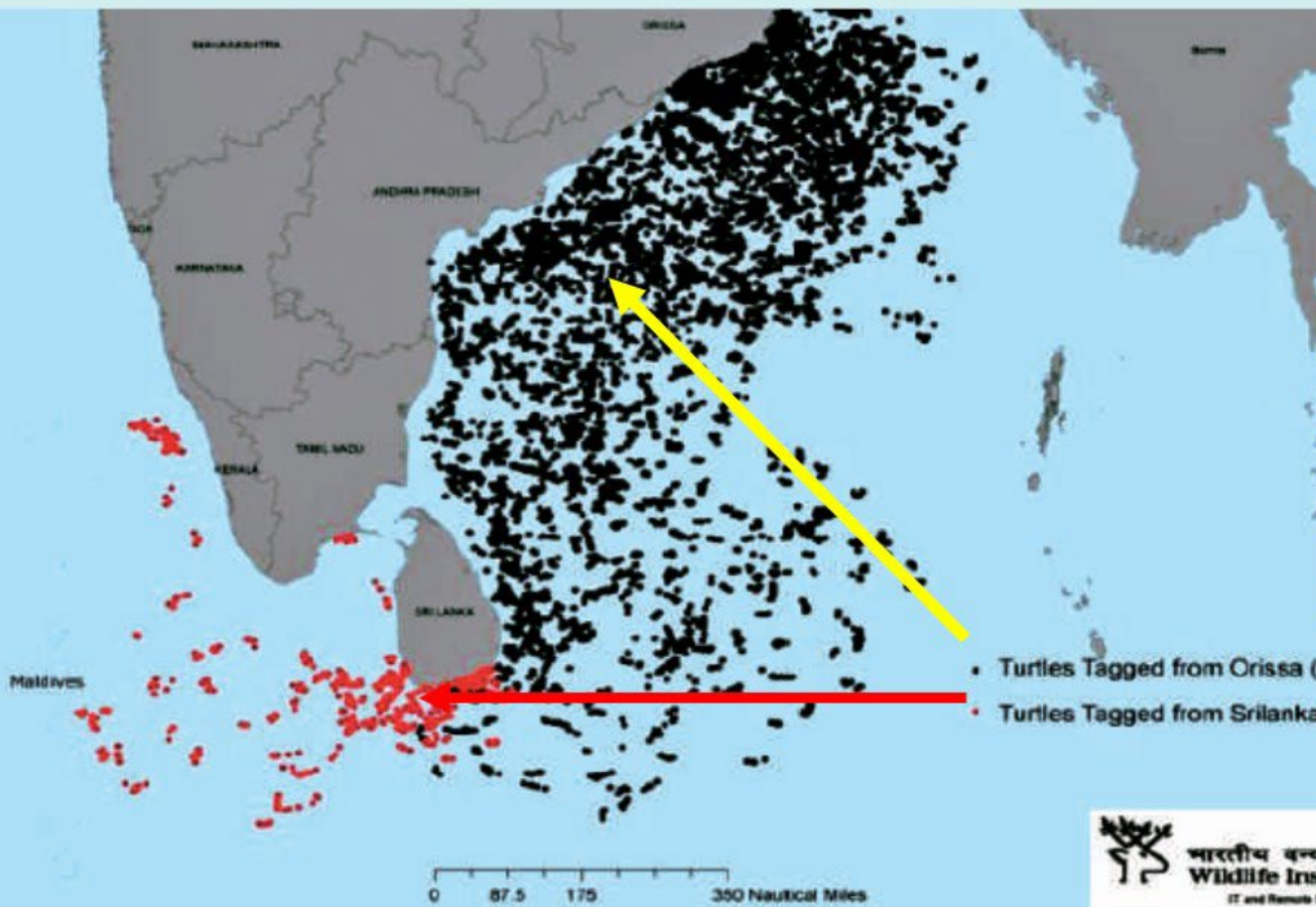


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Overall marine habitat utilization of Olive Ridleys nesting in India and Sri Lanka

Satellite tags – WWF India



- Turtles Tagged from Orissa (n = 32)
- Turtles Tagged from Sri Lanka (n = 5)

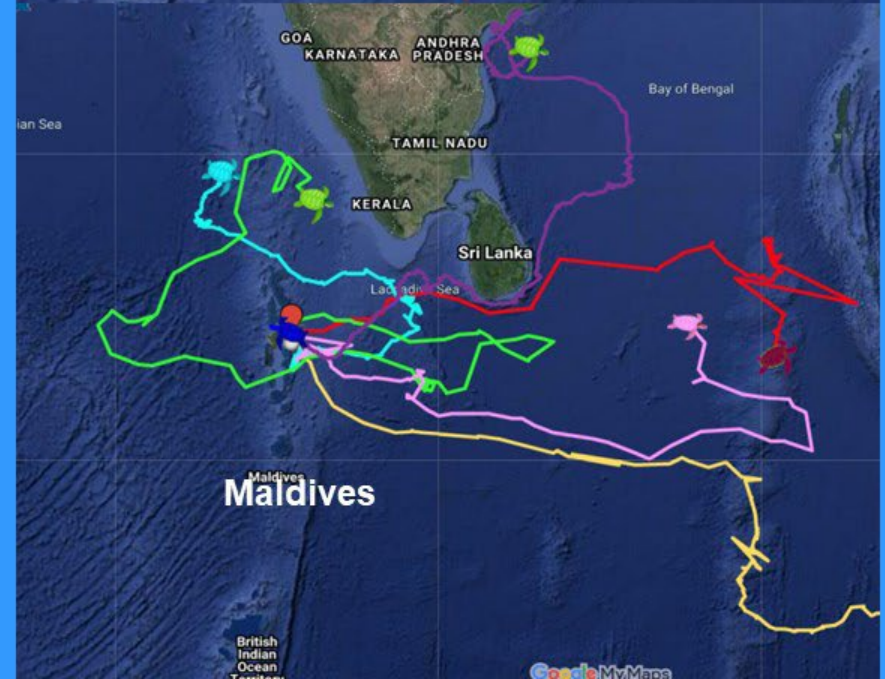
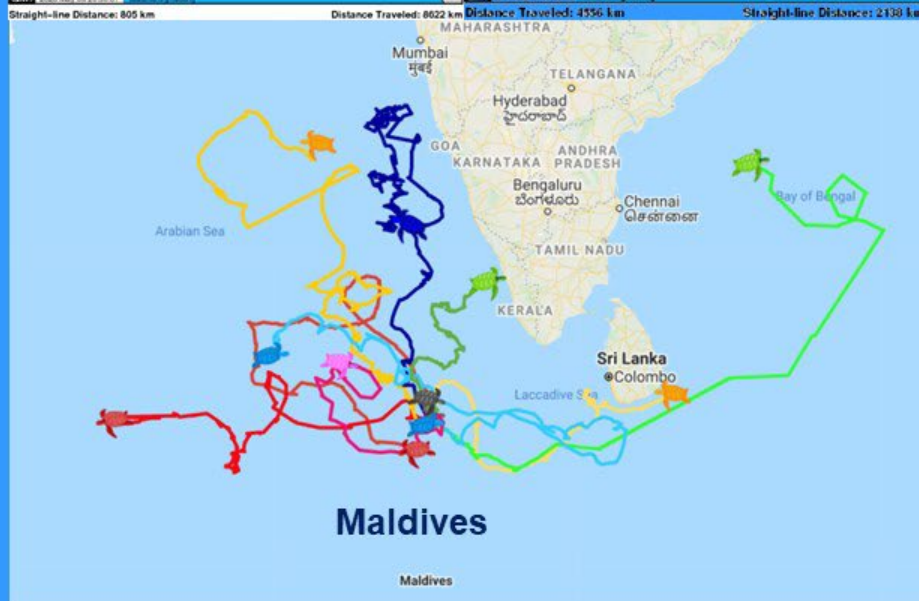
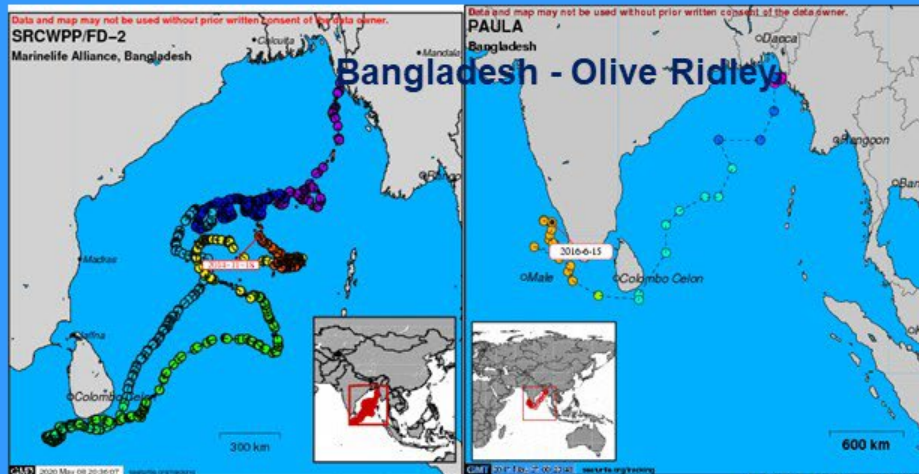


2009 - 120,357
 nests
 2010 - 344,260
 nests
 2020 - 300,000
 nests
 2021 - 350,000
 nests



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THANK YOU

