

Sea Turtle Report 2016-2017

(Lepidochelys Olivacea) Olive Ridley Sea Turtle

**Protection and Conservation
By
Andhra Pradesh Forest Department
And
Visakha Society for Protection and
Care of Animals**



The Salient Feature of 2016-2017 Sea Turtle Protection and Conservation are:

- **A whopping 100% increase in nestings from 343 in 2015-2016 to 705 in 2016-2017.**
- **A phenomenal rise in hatchlings from 32,742 in 2015-2016 to 65,044 in 2016-2017.**
- **Success rate of hatchlings = 83% in 2016-2017 compared to 82% in 2015-2016.**

MYSTERY: WHAT PROPORTION OF MALE TO FEMALE SEA TURTLES IS NECESSARY TO MAINTAIN A HEALTHY POPULATION?

Conservation priorities are based upon how healthy and stable a population is. For sea turtles, it is still unknown what constitutes a healthy population. Understanding the proportion of males to females necessary for a population to stabilize and grow will help guide conservation efforts on a global scale.



21st Year of Community Based Sea Turtle Protection and Conservation at the Visakha Urban Coast a Joint Initiative of Andhra Pradesh Forest Department and Visakha Society for Protection and Care of Animals.

Special Thanks to

- 1. Andhra Pradesh Forest Department ---Visakhapatnam.**
- 2. Mr. Philip Wollen & Ms. Trix Wollen, The Winsome Kindness Constance.**
- 3. Greater Good Organization.**
- 4. NetAP.**

We are in the 21st year of our Sea Turtle Protection and Conservation in this Visakha Urban Coast from a mere 23 Nests sighted in 1996-97 to 800 nests in 2016/2017.

The Hudhud Cyclone has been a blessing in disguise in the sense the success rate in the hatchlings has improved because the old sand was replaced with new sand and completely non polluted sand. The Visakhapatnam Urban Coast is seeing a steady increase in nestings each year and the increase in success rate of Hatchlings despite observing the hundreds of carcasses all along the coast mainly of non – implementation of Turtler Excluder Device in the Fishing Nets used by Mechanized boats and trawlers. While our field protection is going strongly there is the need of simultaneous protectionary measures of the species in the ocean for better conservation of this endangered species.

Under this background we have decided to increase the number. of hatcheries from 3 to 5 nos. namely **R.K. Beach, Lumbini Beach, Jodugudullu Palem, Peda Nagayapalem Beach and Tantidi Beach** covering a distance 60 Kms total.

MYSTERY: WHERE DO SEA TURTLES SPEND THEIR FIRST YEARS OF LIFE?

The moment hatchlings dive headfirst into the sea, they embark on a mysterious journey into the open ocean fraught with hazards, not to be seen again for several years. Where they go and how they get there remains a great mystery and unveiling the details of this enigmatic period is essential to reducing mortality during their vulnerable first years.

Habitat Status :

Based on our field applications over two decades we now clearly demarcate the real potential areas due to which the turtles are losing out.

And they are :

- 1) Loss in Habitats,
- 2) Deaths Caused by Trawling activities.
- 3) The irresponsible pollutions caused by industries.

These are the main reason attributable towards the possible extinction of these endangered species. It must be remembered that the Protection and Conservation of the Sea Turtles occupy the largest efforts across the world than any other species.

The above three major causes must be addressed immediately to save them at the earliest possible. We need to understand practically that habitat once lost can never be regained making the most sensitive of all the causes. Therefore, all stakeholders need to see that while protecting the present nesting beaches, it is also important to conduct specific surveys and researches to regain the possible beaches. The other factors as pollution and non-implementation of Turtle Excluder Device are very much within the reach of the implementing authorities to save the species. These efforts need more concerted efforts to achieve the objective and we are hoping that all related departments will address and show concern for the dire necessity of protecting this species sustaining in the oceanic bio-diversity.

FUN FACT: Unlike other turtles
Sea turtles cannot retract their legs and head into their shells.

WHY IS IT DIFFICULT TO PROTECT THE SEA TURTLES?

The sea turtles of Visakhapatnam face a severe threat from a lot of sources: the tragedy is that a species that has thrived for millions of years, surviving undersea catastrophes such as volcanoes and tsunamis: things that other larger creatures like dinosaurs haven't survived is now endangered, its population declining in a span of very few years.

The List of hindrances at our coast is :

1. BEACH EROSION.
2. DREDGING .
3. EXCESSIVE BEACH LIGHTING.
4. TOURISM DEVELOPMENT ACTIVITIES.
5. FISHING NETS ARE TURTLE UNSAFE.
6. NATURAL PREDATORS.
7. LAND POLLUTION: BLACK SAND.
8. SAND MINING.
9. BEACH FIRE.
10. POLLUTION IN THE OCEAN.
11. UNTREATED SEWAGE FILTH AND WATER.
12. PLASTIC BAGS CONTAMINATION.
13. VIOLATION OF CENTRAL REGULATION ZONE RULES.
14. UNAUTHORIZED CONSTRUCTIONS.

MYSTERY: HOW DO SEA TURTLES SENSE THEIR ENVIRONMENT?

Marine turtles can locate translucent jellyfish at the surface of the ocean and identify sharks as potential predators. How they accomplish these feats is still largely unknown. Understanding sea turtles' basic sensory abilities will aid in mitigating many of the hazards they face around the world.

WHAT CAN YOU DO ABOUT IT?

TIP: 1

Plant more trees. The roots of the trees will hold the sand together and reduce sand erosion.

TIP: 2

Building *rock cliffs* which erode at a slower pace than the sand which is loosely packed together

TIP: 3

Construct wave barriers in order to reduce the impact of waves on the shore.

TIP: 4

Soft Engineering methods – Replacing materials lost through erosion or the introduction of materials similar to those naturally occurring on the coastline.

TIP: 5

Volunteer at VSPCA during sea turtle season to make the project more successful.

TIP: 6

Do not use plastic bags on the beach. Beach cleaning is every ones responsibility. Take a step towards the environment protection.

TIP: 7

Donate to VSPCA by logging on to www.vspca.org/donate .

This is how you can do your bit in contributing towards animal welfare.

FUN FACT: Temperatures of the sand where the turtles nest determine the sex of the turtle: below 85 degrees Fahrenheit (30°C) is predominately male; above 85 degrees Fahrenheit (30°C) is predominately female.

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Special Observation:

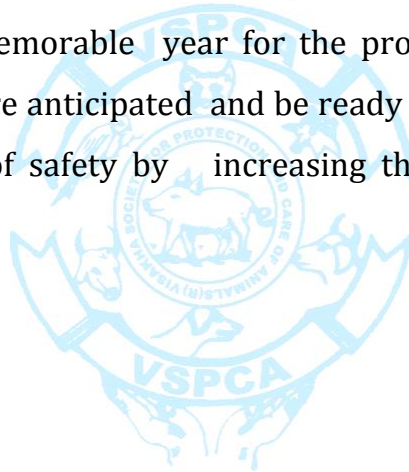
This season 2016-17 has seen a whopping 100% increase in the nestings ie., 78,494 accordingly the hatchlings have also seen a tremendous increase of 100% ie., eggs 65,044.

We clearly would like these abnormal increases attributing towards the “**Imprint Technology**” that the hatchlings possesses and thus they return to the place of birth for nestings. Female hatchling after attaining maturity around 16 to 20 years of age return to the place of birth to lay eggs. . We have noticed far more juvenile nestings this year indicating that this has been their first nestings. It also increases our responsibilities to see that the nesting habitats are kept in order for the ensuing seasons. With every gain in the years of maturity their number of nesting quotas increases every year. and we are hoping for much more nestings in coming season of 2017 -18.

FUN FACT: Green sea turtles can stay under water for as long as five hours even though the length of a feeding dive is usually five minutes or less. Their heart rate slows to conserve oxygen: nine minutes may elapse between heartbeats.

Our Appeal:

Under the above very encouraging results we request to all the stake holders, implementing authorities and all related departments to contribute their cooperation and extending all possible support directly and indirectly to pave the way for receiving more number. of nestings. In particular we request Fisheries Department to strictly take measures to implement The Turtler Excluder devices. We are hopeful that Andhra Pradesh Forest Department --- Visakhapatnam will extend strong support as always with their expertise towards making the coming season 2017-18 a more memorable year for the protection and conservation as more number of nestings are anticipated and be ready to welcome our friends from the ocean making places of safety by increasing the number of hatcheries to protect more.



MYSTERY : WHAT CAUSES FIBROPAPILLOMAS?

Fibropapillomas represent a pandemic of tumorous growths on sea turtle populations from the Caribbean to the Pacific. The cause of this debilitating, often fatal illness and the reason for its rapid spread around the world is one of the areas of greatest concern for researchers and conservationists.

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**INSPIRE OF SEVERAL CHALLENGES
WE RECEIVED NESTING ABOVE OUR EXPECTATIONS AND RELEASED
65,044 HATCHLINGS. BELOW IS THE DATA FROM THIS YEARS
CONSERVATION RECORD**

EXSITU PROTECTION - VISAKHAPATNAM.

Zones	Area Covered	Nest	Eggs Received	Un Developed Eggs	Dead Hatchlings	Hatchlings Released
Zone-1	R.K. Beach --- area covered - Coastal Battery to Vuda Park	240	27,365	3,283	1,303	22,781
Zone-2	Jodugudllupalem area covered -	181	20,669	2,319	788	17,562
Zone-3	Lumbini Park	154	16,694	2,350	854	13,490
Zone-4	Peddanagaya palem	72	7,810	1,197	475	6,138
Zone-5	Tanthidi	58	5,956	628	255	5,073
TOTAL		705	78,494	9,777	3,675	65,044

GLOBAL WARMING AND SEA TURTLES!

When sea turtle eggs are incubating, the surrounding temperature affects the sex of the hatchlings, with higher temperatures producing more females. As sand becomes warmer due to climate change, the ratio of females to males becomes out of balance, affecting breeding activities when they reach adulthood. Also, the artificial lighting coming from beachside communities confuses turtles who normally follow the moon and stars' reflection off the waves to make it back to water, making them more vulnerable to predators, dehydration and road kill. In some countries, turtle shells are traded on the black market and turtles and their eggs are harvested for food.

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Zone-1 (R. K. Beach)		
No of Released%	Total No of Released/Total No of Eggs X 100	83%
No of Dead %	Total No of Dead/Total No of Eggs X100	6%
No of Undeveloped %	Total no of Undeveloped/Total No of Eggs X100	11%
TOTAL		100%

Zone-2 (Jodugudlapalem)		
No of Released%	Total No of Released/Total No of Eggs X 100	85%
No of Dead %	Total No of Dead/Total No of Eggs X100	4%
No of Undeveloped %	Total no of Undeveloped/Total No of Eggs X100	11%
TOTAL		100%

Zone-3 (Lumbini Park)		
No of Released%	Total No of Released/Total No of Eggs X 100	81%
No of Dead %	Total No of Dead/Total No of Eggs X100	5%
No of Undeveloped %	Total no of Undeveloped/Total No of Eggs X100	14%
TOTAL		100%

Zone-4 (Peddanagayapalem)		
No of Released%	Total No of Released/Total No of Eggs X 100	79%
No of Dead %	Total No of Dead/Total No of Eggs X100	6%
No of Undeveloped %	Total no of Undeveloped/Total No of Eggs X100	15%
TOTAL		100%

Zone-5 (Tantidi)		
No of Released%	Total No of Released/Total No of Eggs X 100	85%
No of Dead %	Total No of Dead/Total No of Eggs X100	4%
No of Undeveloped %	Total no of Undeveloped/Total No of Eggs X100	11%
TOTAL		100%

Summary		
No of Released%	Total No of Released/Total No of Eggs X 100	83%
No of Dead %	Total No of Dead/Total No of Eggs X100	5%
No of Undeveloped %	Total no of Undeveloped/Total No of Eggs X100	12%
TOTAL		100%

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The Release of the First Batch of this season's hatchlings by
The District Collector, Sri. Praveen Kumar, IAS,
GVMC Commissioner, Sri. Hari Narayanan IAS,
Divisional Forest Officer, Sri. Alan Chong Teron IFS,
Indira Gandhi Zoological Park Curator, Sri. Vijay Kumar, IFS.

MYSTERY : WHAT ARE THE ECOLOGICAL ROLES OF SEA TURTLES

AND HOW MANY ARE NEEDED TO FULFILL THOSE ROLES? Marine ecosystems are intricate webs of life with each species dependent on others for survival. Relatively little is known about the complex parts that sea turtles play in the global marine ecosystem. Unraveling their roles as consumers producers predators and prey is vital to understanding why and how to protect them

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FUN FACT: Sea turtles like salmon will return to the same nesting grounds at which they were born.

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