



# INDIAN OCEAN TURTLE NEWSLETTER

ISSUE 15

JANUARY 2012

ISSN 0973-1695

The Indian Ocean Turtle Newsletter was initiated to provide a forum for exchange of information on sea turtle biology and conservation, management and education and awareness activities in the Indian subcontinent, Indian Ocean region, and south/southeast Asia. The newsletter also intends to cover related aspects such as coastal zone management, fisheries and marine biology.

The newsletter is distributed free of cost to a network of government and non-government organisations and individuals in the region. All articles are also freely available in PDF and HTML formats on the website. Readers can submit names and addresses of individuals, NGOs, research institutions, schools and colleges, etc. for inclusion in the mailing list.

#### **SUBMISSION OF MANUSCRIPTS**

IOTN articles are peer reviewed by a member of the editorial board and an external reviewer. In addition to invited and submitted articles, IOTN also publishes notes, letters, announcements, casual notes and anecdotal accounts. We also welcome photographs (broadly based on the theme of sea turtles/sea turtle habitats - see specifications below).

**Manuscripts should be submitted by email to: [iotn.editors@gmail.com](mailto:iotn.editors@gmail.com)**

Manuscripts should be submitted in standard word processor formats or saved as rich text format (RTF). Figures should not be embedded in the text; they may be stored in EXCEL, JPG, TIFF or BMP formats. High resolution figures may be requested after acceptance of the article. Please refer to previous IOTN issues or to the Guide to Authors on the website ([www.iotn.org/submission](http://www.iotn.org/submission)) for formatting guidelines. Authors should provide complete contact information including an email address, phone and fax numbers.

Photographs (including contributions for the cover): Individual photographs should be submitted as JPG or TIFF formats, with an accompanying caption and photo credit. High resolution images may be requested after acceptance of the photograph. Final files should have a minimum resolution of 1200 px or >250 dpi.

**This issue was produced with support from:**



**Cover photograph:** Turtle monitoring at the Gnaraloo Turtle Conservation Program in Western Australia.

Photo Courtesy: Gnaraloo Turtle Conservation Program

**IOTN is available online at [www.iotn.org](http://www.iotn.org)**



## EDITORIAL

ANDREA D. PHILLOTT

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An eager reader of *Kachhapa* and the Indian Ocean Turtle Newsletter since I was a postgraduate student, it was an honour to receive Kartik and Chloe's invitation to join IOTN. As a university lecturer assisting the next generation of biologists in countries bordering the Indian Ocean, IOTN illustrates for me the challenges and rewards facing those who work for the conservation of sea turtles and their habitats, and the coastal communities for whom natural resources are so important. I hope to help IOTN continue to grow as an important source of information for sea turtle biologists and conservationists in this region.

The previous editors have set an impressive standard for me to match, with the assistance of our experienced editorial and advisory board. My first editorial duties would not have been successful without the generous

assistance of Seema Shenoy, who contributed greatly to the production of this issue of IOTN and the design of our new website. My sincere thanks also to Karen Arthur and Amrita Tripathy, who helped with the transition between editors. In the next issue I will introduce a new co-editor for IOTN, and several new members of the editorial board and country representatives on the advisory board.

IOTN will continue to disseminate regionally-specific studies and management strategies that will aid NGOs, community groups, university researchers and students, fisher associations, government departments and agencies, and other individuals interested in sea turtles and their habitats in the Indian Ocean and South Asia. We hope that you will continue to provide suggestions (and content) for future issues. ■

The screenshot shows the IOTN website homepage. At the top left is a large illustration of a sea turtle. The main content area features a search bar, a description of the newsletter, and a list of articles. On the right side, there is a navigation menu with links for Home, About, Submission, Editorial Board, Subscribe, Acknowledgements, Donate, Current Issue, Past Issues, Bibliography, and Kachhapa. The main content area includes the following text:

**INDIAN OCEAN TURTLE NEWSLETTER**

A newsletter for the conservation and management of sea turtles and their habitats in South Asia and the Indian Ocean.

The Indian Ocean Turtle Newsletter was initiated to provide a forum for exchange of information on sea turtle biology and conservation, management and education and awareness activities in the Indian subcontinent, Indian Ocean region, and south/southeast Asia. The newsletter also intends to cover related aspects such as coastal zone management, fisheries and marine biology.

The newsletter is distributed free of cost to a network of government and non-government organizations and individuals in the region. All articles are also freely available in PDF and HTML formats on the website. Readers can submit names and addresses of individuals, NGOs, research institutions, schools and colleges, etc for inclusion in the mailing list.

**Current Issue**  
**No. 14 | JAN 2012**  
 ISSN 0973-1085

**Editorial**

Early accounts of marine turtles from India and neighbouring waters  
 Jack Frazier  
 Pages 2 - 8 | HTML | PDF

**Articles**

Post-tourism status of leatherback turtles on Little Andaman Island

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**IOTN is pleased to announce the launch of its revamped website (www.iotn.org). The website retains all of its previous features; the new look is intended to reflect the simplicity in design and accessibility of the newsletter.**

**Our hard copy version also dons a new look. In addition to sending in articles, we would like to request our readers to consider submitting photographs to be featured on the covers of future issues; photos should be based broadly on the theme of sea turtles/sea turtle habitats and be relevant to the Indian Ocean region. Please send in your photos along with appropriate captions to iotn.editors@gmail.com.**

**Here's wishing our readers happy browsing and reading!**

# HOW IT ALL STARTED!

KARTIK SHANKER<sup>1</sup> & CHLOE SCHÄUBLE<sup>2</sup>

Former Co-Editors, Indian Ocean Turtle Newsletter

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Many ideas and projects have their origins in chance events. In 1998, one of us (KS) attended the 18<sup>th</sup> Annual Symposium on Sea Turtle Biology and Conservation at Mazatlan, Mexico, and inspired by the fraternal spirit of that community, felt compelled to network with the sea turtle community in India. A year earlier, the Marine Turtle Specialist Group had conducted the Northern Indian Ocean Regional Meeting on sea turtles in Bhubaneswar, Orissa, bringing together many sea turtle biologists and conservationists in the region, and luminaries and experts from outside such as Jack Frazier, Frank Paladino, Neca Marcovaldi, Pam Plotkin, Colin Limpus and Charles Tambaiah. The time seemed ripe for bringing people together, and keeping in touch through a local publication.

By good fortune, a project called Operation Kachhapa was launched in 1999, focusing on conservation of olive ridley sea turtles in Orissa. With support from this project, in particular its leader Belinda Wright, we started a newsletter called *Kachhapa* in 1999 with the objective of spreading awareness about sea turtle conservation and management in South Asia. We took inspiration from the Marine Turtle Newsletter (MTN), initiated in the 1970s by Nicholas Mrosovsky and an extraordinary resource in the global sea turtle community. Over the next few years, the newsletter carried articles on sea turtle projects and status updates from all over India, and from Sri Lanka and Bangladesh.

From the very beginning, *Kachhapa* aimed to be inclusive of issues such as fisheries and livelihoods, with the second issue including a contribution on the status of Indian fisheries by Thomas Kocheri, then head of the National Fishworkers Forum. Also notable were editorials by Jack Frazier on sea turtles as the oceans' ambassadors of conservation, Neca Marcovaldi on sea turtle conservation in Brazil, Nicholas Mrosovsky on considering sustainable use in Orissa to aid both people and turtles, Matthew Godfrey and Miguel Pedrono on reintroduction of marine turtles, and Nick Pilcher on combining modern methods and traditional management.

In 2005, we broke away from Operation Kachhapa and recast the publication as the Indian Ocean Turtle Newsletter (IOTN) and its focus widened to cover the entire Indian Ocean region. With an expanded editorial board (including CS as co-editor from 2008), and an advisory board comprising representatives from most Indian Ocean and South-east Asian countries, IOTN aimed to reach not just academics, students and NGOs, but government officers in various sectors. The hard copy newsletter now has a distribution list of about 1,200 (with a peak of 1,500 in 2010), and is intended to reach an audience that is unlikely to access this information on the internet.

From 2005 to 2011, the IOTN has addressed many important issues, including the contentious Dhamra Port in Orissa. In 2008, the newsletter published (jointly with the MTN) a series of articles and perspectives from various stakeholders and observers on the construction of a port at Dhamra, which is adjacent to the olive ridley mass nesting beach at Gahirmatha. The IOTN also published bibliographies on sea turtles for India (with separate bibliographies for Orissa and the Andaman and Nicobar Islands) and Sri Lanka. Updates on projects and profiles of NGOs were periodically published. The geographical extent increased dramatically, including articles from Indonesia and Australia to the east, to Kenya and Tanzania to the west. In 2010, the IOTN carried a special issue (edited by Stephane Ciccione and Jerome Bourjea) on sea turtles in the western Indian Ocean.

IOTN makes another important transition in 2012, bringing on Andrea Phillott as the editor of the newsletter, along with several new members of the editorial board. We are confident that Andrea will bring a new vision and fresh perspective to the newsletter and expand its horizons even further. Finally, as outgoing co-editors, we would like to express our gratitude to those who have supported us over the years—for your advice, your contributions, your manuscripts and your readership. As we pass the mantle on, we believe that this encouragement and support is critical to achieving the goals of the IOTN. ■



# AN UPDATE ON OLIVE RIDLEY NESTING ALONG THE WEST COAST OF MAHARASHTRA, INDIA IN 2011–2012

BHAU KATDARE

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## INTRODUCTION

Sahyadri Nisarga Mitra is an environmental NGO that was established in 1992. Its mission statement is best described as nature conservation through field protection, awareness, education and scientific-based action. The NGO functions in the Western Ghats, a global biodiversity hotspot, and thus, a critical habitat supporting a rich variety of endemic and endangered species. Its work also spans the Konkan, a thin coastal strip that is bordered by the Western Ghats on the east and the Arabian Sea towards the west.

Through the marine turtle conservation programme, until 2011, the organisation has successfully protected 688 nests and ensured the safe release of more than 29,200 hatchlings into the sea. The ex-situ conservation technique of hatchery management provides employment to local villagers. Hatchery managers patrol the beach daily to look for marine turtle nests, relocate these nests into the hatchery and release the hatchlings into the sea on their emergence. The project began in 2002 in the village of Velas and since then has been implemented across the entire 720 km coastline of the state of Maharashtra.

The statistics of nests protected and total hatchlings released per year are shown in Table 1.

From 2007 to 2009, Sahyadri Nisarga Mitra implemented the Small Grants Program under the Global Environment Facility of the UNDP and the Centre for Environmental Education (CEE India). Through this project, community members from the project villages were encouraged to participate in turtle conservation activities. Improved awareness levels and benefits from initiatives like the Turtle Festival led to many locals choosing to associate themselves with marine turtles and their conservation.

**Table 1. Marine turtle nesting statistics in the period 2002–2011**

Year	No. of turtle nests	No. of hatchlings released
2002–2003	50	2,734
2003–2004	35	1,687
2004–2005	31	1,565
2005–2006	36	1,624
2006–2007	62	1,890
2007–2008	167	5,517
2008–2009	155	7,884
2009–2010	71	2,851
2010–2011	81	3,482
<b>Total</b>	<b>688</b>	<b>29,234</b>

## Current status: 2011–2012

In 2011, Sahyadri Nisarga Mitra, in joint collaboration with the state forest department, began implementation of the marine turtle conservation programme for the period 2011–2012 in 20 villages along the coast. From March 1, 2012, this 'Save Turtle' project is supported by the Maharashtra state environment department's Green Ideas Program. The programme includes five villages from Raigad district, namely, Velas-Agar, Diveagar, Srivardhan, Maral, and Harihareshwar. During the 2010–2011 nesting season, turtle conservation was carried out in seven villages in Ratnagiri district. This year, volunteers have been identified and trained for hatchery management at seven additional villages. Hatcheries have also been built at Velas, Kelshi, Padle, Anjarla, Murud, Karde, Kolthare, Dabhol, Hedvi, Velneshwar, Guhagar, Tavsai, Narwan, Ambolgad, and Vetyein villages.

As of March 7, 2012, 50 nests have been safely relocated by Sahyadri Nisarga Mitra's volunteers to hatcheries on respective beaches (see Tables 2 and 3).

**Table 2: Nesting statistics in Raigad district in 2011–2012**

Village	Number of nests
Diveagar	6
Maral	8
Harihareshwar	6
<b>Total</b>	<b>20</b>

**Table 3: Nesting statistics in Ratnagiri district in 2011–2012**

Village	Number of nests
Velas	15
Kolthare	5
Guhagar	4
Dabhol	2
Tavsal	2
Kelshi	1
Anjarle	1
<b>Total</b>	<b>30</b>

### International volunteers for marine turtle conservation

Since November 2011, three groups of international volunteers from the Raleigh Expedition-India have visited Sahyadri Nisarga Mitra's marine turtle conservation project in the village of Velas. The volunteers constructed a hatchery on the beach. They were trained by SNM in nest relocation, following which they patrolled the beach every night to look for nesting turtles. They also contributed to the development of the village by levelling the road leading up to the hatchery, constructing steps from the bridge leading down to the path to the hatchery, and constructing gates to prevent cattle from straying onto the path.

### Eco-tourism through the Turtle Festival

Velas has the highest number of marine turtles nesting along Maharashtra's coast. Hence, to involve the local community in turtle conservation, a Turtle Festival was initiated in the village in 2007, and has been held every year since during the nesting season. During this festival, tourists flock to the beach to watch hatchlings emerge from the hatchery nests and crawl towards the sea. The villagers at Velas provide home-stay arrangements for the visitors. Sahyadri Nisarga Mitra, in addition to a few villagers who wanted to work for conservation, established the Kasav Mitra Mandal. The members of the Kasav Mitra Mandal set aside 10% of their total income during the festival towards the cause of marine turtle conservation in Velas. Such a conservation initiative benefits both the local community and the marine turtles, thus ensuring the sustainability of the project in the village.

The Turtle Festival this year began on February 19, 2012. It is expected to continue as long as hatchlings emerge from the hatchery nests. Since then, approximately 450 tourists have visited this remote village located on the northernmost tip of Ratnagiri district to watch turtle hatchlings make their way towards the sea. During the festival, SNM ensures that no hatchling is harassed by restricting the handling of hatchlings to only its volunteers. The local Gram Panchayat has taken an initiative and become a participant in the Kasav Mitra Mandal. Providing economic incentives to the local community has ensured the success of this project. We now aim to replicate this model in other villages that have had a considerable amount of nesting this season.

### Acknowledgements

Sahyadri Nisarga Mitra is grateful to the Maharashtra State Government's Forest Department and Environment Department, which have consistently supported the project since its inception in 2002. The organisation would also like to acknowledge the Gram Panchayats of all project villages, the Kasav Mitra Mandal, local volunteers and its donors and supporters, without whom establishing a successful conservation model in the state would not have been possible. ■

# CAPACITY BUILDING FOR TRAWL/COMMERCIAL FISHERS TO REDUCE BYCATCH MORTALITY OF SEA TURTLES ALONG THE CHENNAI COAST, INDIA

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## INTRODUCTION AND OBJECTIVES OF THE STUDY

It is believed that only one out of 1,000 hatchlings that emerge from a nest and reach the sea survives to reach adulthood. With such a high mortality rate, it becomes critical to save every nesting adult turtle. Adult sea turtles falling prey to trawl/mechanised boats has been an issue to address for a long time, and is a sensitive issue which needs to consider fishermen's livelihood and the conservation of sea turtles.

Measures for the safe release of endangered olive ridley sea turtles entangled in fishing nets along the Chennai coast was proposed by TREE Foundation, jointly with the Wildlife Wing of the Forest Department, Department of Fisheries, Indian Coast Guard and The Chennai Mechanized Boat Fishermen Welfare Association in March 2011.

## Activities conducted

Through a series of meetings between the stakeholders, the "Sea Turtle Fact Stickers" outlining proper rescue and release methodology were designed in November 2011.

During a meeting on December 27, 2011, Mr. Rakesh Vasisht, IFS, Chief Wildlife Warden of Tamil Nadu, addressed fishermen and stressed the need for jointly working towards better conservation measures. After the meeting, the Trawlboat Fishermen Association leaders, in consultation with some of the Association members, fixed the date for the sticker release programme. They felt that January 14 would be the best date as January 15-18 are holidays during which time the entire state celebrates the harvest festival, and all trawl boat owners and workers usually return their boats to the harbour, clean the boats and visit their homes for the four days. They felt that we would be able to affix the stickers on the maximum number of boats during this period.

In a first of its kind initiative in Indian wildlife and fisheries history, a joint effort by the TREE Foundation, Wildlife Wing of the Forest Department, Fisheries Department, Chennai Trawl Mechanized Boat Fishermen Welfare Association, and the Indian Coast Guard to affix stickers showing methods to safely release entangled sea turtles from trawl fishing nets was held at Kasimedu fishing harbour on January 14, 2012 at 5 pm in the evening. During the olive ridley nesting period in the months of January to April, more than 100 dead turtles were recorded washed ashore, and some turtles stranded with their flippers amputated. This initiative should reduce similar mortality in the future.

Easy to read "Sea Turtle Fact Stickers" outlining proper rescue methodology, designed by TREE Foundation, were distributed and strategically stuck on each boat. The trawl fishers association gave full support for this initiative, as they agreed that a healthy sea turtle population is vital for a healthy marine ecosystem. Dr. David Raj, Head Quarters - Forest Range Officer, who represented the Tamil Nadu Forest Department, requested that the fishing community bring to action the rule of law in protecting marine life. Speaking on the occasion, the Assistant Director of Fisheries Mr. Sekhar stressed on responsible fishing practices with equal care for the marine ecosystem. The trawl fishers' association president, Mr. M.E. Raghupathy, recalled ancestral fishing practices when all marine life was protected as a mark of respect to the ocean.

At the launch of Sea Turtle Release Stickers, the unanimous support of the fishers' association was sought to protect more turtles and reduce fisheries related mortality in the current nesting season. The result of the joint coordination between all stakeholders was that Chennai has been a success story in sea turtle conservation.



**On the bridge with TREE Foundation members and fishers**

Photo credit: Arun Krishnamurthy



**Supraja Dharini, Trawl Association Secretary, Forest Ranger, Fisheries A.D., President and Vice President release the stickers**

Photo credit: Siddharth Muralidharan



**Range Officer sticking the first sticker on a trawl boat**

Photo credit: Siddharth Muralidharan

### Highlights of the event

1. Sea turtle safe release stickers were stuck by sea turtle protection force members on more than 2,800 trawl boats at Kasimedu. (About 3,000 small/large commercial fishing boats are registered with the Fisheries Department).
2. Close to 100 fishermen attended the meeting, and more than 2,000 trawl fishermen received the turtle facts leaflets between 14 and 18 January at the harbour.

### Preliminary results

It is important to educate every trawl boat owner and worker on the ecological role of sea turtles and the methods involved in safely releasing them. The support for the stickers from Duke University and Disney Worldwide Conservation Fund came at a very crucial time, and has made the project a success. Extending the outreach programme to protect sea turtles at sea will

reduce bycatch of sea turtles. It was gratifying to see the change in attitude among the trawl fishers as they requested stickers.

### Next steps

TREE Foundation has elicited the services of CIFNET (Central Institute of Fisheries Nautical and Engineering Training) to design a TED for local use, taking into account weather and marine conditions, mesh and grid size, and other specifications. During meetings with trawl fishers, TREE Foundation proposed to the Trawl Fishers Association to fix a suitable date to introduce the TED, explain the need for its use, and demonstrate the technique of using TEDs.

### Acknowledgements

I thank the Duke University, Oak Foundation and Disney Worldwide Conservation Fund for their support, without which this endeavour would not have been possible. ■

# TREE FOUNDATION – SEA TURTLE RESCUE AND REHABILITATION CENTRE

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## INTRODUCTION

TREE Foundation was founded in 2002 with the aim of protecting marine turtle populations, and understanding the inter-relationships between coastal communities and the marine resources upon which the former rely. To focus on initiatives that combine conserving species and habitat with empowering local people is the only solution, incorporating the human element from a variety of perspectives including education programmes, capacity building, economic development/poverty alleviation, human and animal health programmes, and networking with various government departments/agencies.

As part of TREE Foundation's community based sea turtle conservation programme—jointly run with the Tamil Nadu Forest Department's Wildlife Wing and the Department of Fisheries, the Kadal Aamai Paadukavalargal (KAP) members patrol the beaches from Periya Neelangarai to Marakanam. TREE Foundation has been able to extend and strengthen its community based sea turtle conservation programme up to Villupuram, 8 km beyond Marakanam, covering 35 fishing villages along 110 km.

## WHY

Sea turtles that nest along the Indian coast face several hardships and challenges during their lifetime. Lack of awareness and relaxed regulations have led to several problems, including custom designed fishing gear, which are threats to turtles and other marine species. In 2010, as a result of all these fishing practices and actions, turtles named Karuna, Hope, Sagari, Abdhi, Olivia, Adhira and Sagarika (olive ridley turtles), Greenie (green turtle) and Sukruti (hawksbill turtle), were recovered and brought to the rescue and rehabilitation centre. All these turtles have missing flippers, intentionally or accidentally amputated when the turtles were entangled in fishing gear. Unable to swim and feed, they became stranded on the coast. When possible, injured turtles are rescued and rehabilitated at rescue centres such as TREE Foundation's

Rescue and Rehabilitation Centre, jointly run with the Wildlife Wing of the Forest Department (Chennai, Tamil Nadu).

With limited resources, TREE Foundation functions as the caretaker for turtles in its turtle rescue and rehabilitation centre. Lack of adequate facilities and resources has pushed TREE Foundation into a challenging role of conserving and creating awareness about sea turtles and their plight along the coastal districts of Chennai – Kancheepuram in Tamil Nadu, and Nellore – Sullurpetta districts in Andhra Pradesh.

However, TREE Foundation proposes to upgrade its Turtle Rescue and Rehabilitation Centre. TREE Foundation's expenditures are focused towards food and medical expenses. College students from the zoology department intern regularly and help in cleaning tanks and feeding the turtles on a daily basis. The Sewa Turtle Protection Force (STPF) members physically fetch seawater in cans to fill the tanks on a daily basis. STPF members also bring in the food provided to turtles whenever there is fresh catch of fish, squid and crabs. We would like to upgrade the centre with a freezer to preserve fish, and aerators with a water treatment system for the seawater in which the turtles live.

## Why didn't we euthanise the turtles?

Several times, TREE Foundation has been questioned by biologists, reptile specialists, veterinarians and scientists about why we did not euthanise injured turtles. TREE Foundation does not euthanise turtles if there is a chance of successful rehabilitation. This is not the easy option, as to rescue and rehabilitate an injured turtle is time consuming and expensive. TREE Foundation spends around INR 10,000 for food, maintenance and medical care for the rehabilitating turtles.

The quality of life of the turtle is also questioned repeatedly. We acknowledge that the turtle habitat is

reduced to a five-foot tank. However, thousands of people, including trawl fishers, artisanal fishers, Forest and Fisheries Department officials, and students, have been inspired after seeing Karuna, Abdhi, Sagarika, Sukruti, Hope and Greenie. These turtles send a strong message—when they are alive and in the rehabilitation centre—about uncontrolled fisheries and the irresponsible utilisation of harmful fishing gear. They are also inspiring representatives for turtles in the ocean.

## RESULTS

TREE Foundation has so far released four rehabilitated turtles, named Hope, Greenie, Olivia and Sukruti, in the presence of more than 2,000 students, fisher folk and members of the general public. Sagarika will be released in April 2012 after she has fully recovered. However, Abdhi and Karuna will need to stay in the rehabilitation centre for a longer period.



**Release of Sukruti (hawksbill) and Olivia (olive ridley): TREE Foundation members and volunteers, Mr. Gautham Dey, IFS, Chief Wildlife Warden, Dr. Supraja Dharini, TREE Foundation, Mr. T.K.M. Chinnayya, Minister of Environment and Forest, Tamil Nadu, Mr. R. Sundaraju, IFS, Retd. Chief Wildlife Warden**

Photo credit: Stephanie Wright



# EXPANDING AND STRENGTHENING COMMUNITY INVOLVEMENT IN SEA TURTLE CONSERVATION IN NELLORE DISTRICT, ANDHRA PRADESH, INDIA

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## INTRODUCTION

TREE Foundation began its work in Nellore in the year 2008 and has progressively been strengthening community based sea turtle conservation. In the year 2008–2009, the organisation protected 36 nests, following which 40 nests were protected in 2009–2010, 142 during the 2010–2011 season, and 97 nests to date in the current season (2011–2012). This steady increase in nest protection has given encouragement, as well as motivation, to expand TREE Foundation's Community Based Sea Turtle Conservation work to other coastal areas in Nellore district, Andhra Pradesh, which resulted in the inclusion of 16 km in Sulurpetta–Pulicat Sanctuary Range and 42 km in Shriharikota Island (SHAR).

## WHY

TREE Foundation pioneered a successful community-based conservation programme for the endangered olive ridley sea turtles nesting along the south-eastern coast of India. The support from the Wildlife Wing of the Forest Department and the Department of Fisheries of Andhra Pradesh has been pivotal in engaging the community. Though these are sporadic nesting sites of olive ridley sea turtles along the east coast, the offshore waters are the migratory routes for the mass nesters of the Orissa rookery.

It is imperative to also reduce bycatch of foraging juvenile hawksbill and green turtles before their populations decline. The Foundation also works to establish partnerships with local education institutions and decision-makers to disseminate findings and encourage more effective conservation policy through participatory workshops, curriculum development, and knowledge exchanges with conservationists.

## WHAT

TREE Foundation has been working with local

communities on general ecological observations, natural history, and problems faced by communities while protecting sea turtles against poaching and other illegal activities. This strengthens the community-based conservation that constitutes the backbone of TREE Foundation's successful establishment in Nellore district. The Andhra Pradesh Forest Department and Fisheries Department support the Foundation's work with the communities, creating an intimate web of governmental, non-governmental and community involvement in sea turtle protection. The Forest Department collects weekly data and monitors turtle nesting through a Forest Section Officer involved in random night patrols.

This year, TREE Foundation, in a joint initiative taken by the DFO of Sulurpetta Division and the CCF of Tirupathi, recruited six new Sea Turtle Protection Force (STPF) members in Sulurpetta Range. The new members will be patrolling the Pulicat Sanctuary area protecting sea turtles. The main threat to turtles which nest along Sulurpetta coast is poaching. Yanadi tribes are said to poach adult nesting turtles and eggs for their protein. However, TREE Foundation plans to suggest alternate protein source options for them in order to avoid turtle poaching. TREE Foundation also conducted a training workshop for officials and Yanadi Tribes at ISRO/SHAR, Shriharikota. The two day training workshop provided hands-on experience for the Yanadi tribesmen who will be patrolling the 42 km stretch of pristine shores of Shriharikota every morning. The Foundation engaged with 300 Yanadi tribe community people, screening documentaries and organising interactive sessions.

TREE Foundation took the opportunity to visit schools in and around SHAR. The team outreached at the Space Central School at SHAR and Pulicat Nagar, Sanctuary Range. Around 200 students from classes 6–10 participated in film screenings and interactive sessions. The students were encouraged to take up ecology related projects near their own living areas to understand the fragile and beautiful ecosystem that they live in.



**Dr. Supraja Dharini and TREE Foundation Nellore STPF members along with Andhra Pradesh Forest Department officials at Pulicat Sanctuary Range**

Photo credit: Rahul Muralidharan

TREE Foundation has conducted a Prohibited Marine Species Workshop to emphasise the importance of enforcement in conservation strategies. TREE Foundation organised a joint workshop with the Forest Department in order to inform conservation managers and stakeholders with greater knowledge and equip them to effectively carry out conservation measures along the coast.

A District Awareness Workshop on Prohibited Marine Species and Sea Turtles included government participants from the Wildlife Wardens, DFO's, Rangers, Foresters and the Joint Directors and Assistant Director of Fisheries, Fisheries FDO, Marine police, village Sarpanch and officials of the coastal areas of Nellore. NGOs and marine conservation groups engaged in fieldwork also participated in this workshop. TREE Foundation provided all the resource materials for conducting the workshop. The aim of the workshop was

to provide necessary coordination for better conservation and management of the prohibited and protected species along the Nellore coast and also spearhead work on the country's marine prohibited species, which include sea turtle, marine mammal, and shark conservation initiatives.

The **Prohibited Marine Species Workshop** was held in the following districts/towns/cities:

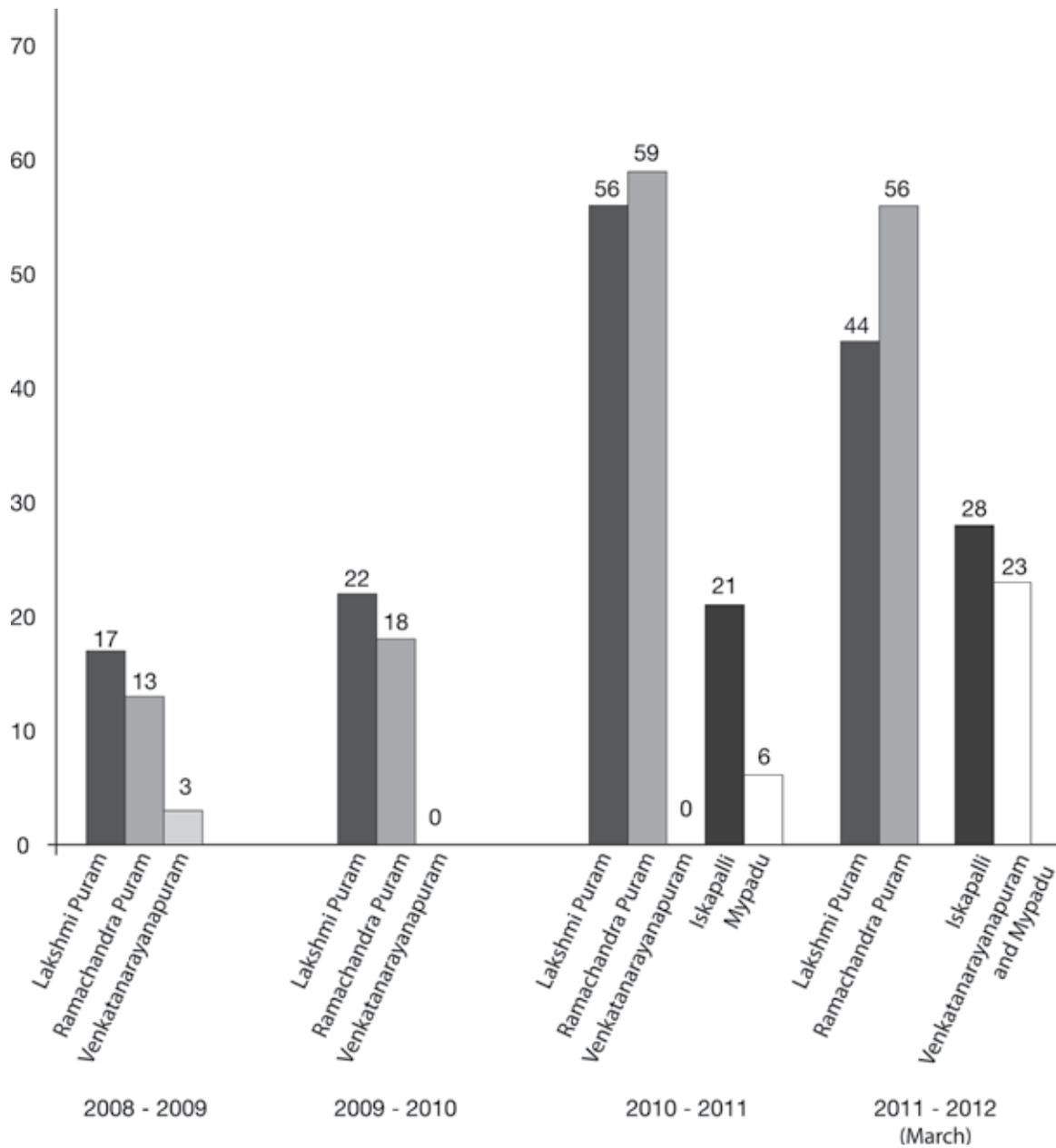
1. Chennai (Tamil Nadu)
2. Vizagapatnam (Andhra Pradesh)
3. Nellore (Andhra Pradesh)
4. Puligedda (Krishna - Godavari district, Andhra Pradesh)
5. Ramanathapuram (Tamil Nadu)
6. Sirgazhi (Tamil Nadu)
7. Vedaranyam (Tamil Nadu)
8. Nagapattinam (Tamil Nadu)

**RESULTS**

**Table 1. Total number of nests protected in Nellore district from 2008 to 2012 February**

Year	2008–2009	2009–2010	2010–2011	2011–2012 (on-going)
Total number of nests protected	97	33	40	142

**Figure 1. TREE Foundation - Sea turtle nesting data graph for Nellore (2008-2012)**



Note: In 2010 – 2011: Area expanded to Iskapalli and Mypadu; In 2011 – 2012: Venkatanarayanapuram merged with Mypadu



**Dr. Rabbani, Head, Environment and Forest Division, SHAR, Dr. Supraja Dharini, and the school students**

Photo credit: Rahul Muralidharan



**Left to right: Dr. Supraja Dharini, Mr. B.K. Singh IFS, Chief Conservator of Forests, DFO Telegu Ganga Project, Mr. Bhaskar Raju, SFS, DFO Nellore and Mr. Nageswara Rao, IFS, DFO Nellore**

Photo credit: Rahul Muralidharan

### **Acknowledgements**

The project is supported by the Forest Department and Fisheries Department of Andhra Pradesh, US Fish & Wildlife Service and the Indian Coast Guard. ■

## PROJECT PROFILE

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# GNARALOO TURTLE CONSERVATION PROGRAM

KAREN HATTINGH<sup>#</sup>, ROBERT EDMAN, AMY JAMES,  
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Gnaraloo Station is a privately leased pastoral station and wilderness tourism business in Western Australia that takes pride in minimising human impact on the environment as significant tourism interest in the Ningaloo World Heritage area grows. Mr. Paul Richardson, the Gnaraloo leaseholder, and Ms. Karen Hattingh, Gnaraloo's Environmental Advisor, initiated

the *Gnaraloo Turtle Conservation Program (GTCP)* onsite during 2008, after seeking legal permission to do so from Government for the prior three years. The currently monitored area, the **Gnaraloo Bay Rookery**, is located in the southern section of the **Ningaloo Marine Park** and consists of approximately 7 km of coastline along Gnaraloo Station.



Gnaraloo coast in proximity of 7Mile

The GTCP is currently in its fourth year of operation on-ground with the programme's scope of research being refined as well as expanding where necessary every year. Preliminary analysis of the first three seasons of the GTCP has found the area to be a significant turtle rookery in Western Australia, the Gnaraloo loggerheads (*Caretta caretta*) are believed to be part of the third largest loggerhead turtle population in the world, and the Gnaraloo Bay Rookery is one of two mainland areas in Western Australia with the highest nesting densities for loggerheads (the other being in Cape Range National Park in Exmouth). Three of the world's seven sea turtle species, endangered loggerhead, critically endangered hawksbill (*Eretmochelys imbricata*) and endangered green (*Chelonia mydas*) turtles, have been found to nest at Gnaraloo with the current survey site containing predominantly nesting loggerheads. Considering the endangered status of loggerhead turtles, the Gnaraloo nesting population could play a vital role in the greater population's success. Threats such as climate change, human activity, and inappropriate coastal developments may reduce loggerhead numbers and limit the number of suitable coastal nesting habitats. The research at Gnaraloo is important to gain as much knowledge as possible about these turtles in order to fully protect them.

The GTCP research team for the 2011–12 season comprises three scientists who hold degrees in the fields of biological or environmental sciences. The research

team's objective this season is to identify turtle species and nest distribution within the monitored area through track interpretation. This involves daily morning surveys to locate new turtle tracks to identify species, count nests and unsuccessful nesting attempts and record nest locations. Environmental and predator impacts on the nests are also carefully monitored throughout the season. In addition to the morning survey, a night monitoring programme is in place at the beginning of the season in order to confirm one hundred per cent accuracy of species identification and nest determination by the research team.

The three GTCP team members not only conduct research over the four months of the seasonal programme, but also act as liaisons with schools and guests who visit Gnaraloo. Commencing in 2010, a formal *community volunteer coordinator* position was added to the GTCP scientific team (still with a requirement to hold a scientific degree) to increase the involvement of the community, school groups, and the general public with the sea turtle research that takes place at Gnaraloo. The community involvement component of the GTCP is again expanding this year to allow younger persons to become involved with the research (previously, the programme only accommodated participants that were 15 years or older). Please contact the GTCP research team should you, your family or friends be interested to become involved with the programme as community volunteers.



Gnaraloo loggerhead returning to sea



**GTCP researchers with community volunteers**



**GTCP researcher recording data at the Gnaraloo Weather Station**

The GTCP research team will also be gathering more information on other coastal nesting sites at Gnaraloo. Aerial surveys conducted under the programme during January 2010 and January 2011 identified other potential rookery sites along the Gnaraloo coastline. This year, the research team will go one step further and monitor one of these areas over the course of the season in the hopes of adding another permanently monitored area in the future.

One of the primary goals of the GTCP is to gather baseline data in order to establish long term trends of sea turtle activities onshore at Gnaraloo. However, it can take up to thirty years to collect enough data to appropriately analyse these trends. This information will allow for the creation of conservation management plans to protect the biodiversity at Gnaraloo. Although the GTCP is in its infancy, the data collected each season will make important contributions to sea turtle research worldwide.

A portion of all accommodation fees at Gnaraloo is invested into the GTCP to ensure its continuation.

For more information and updates of the programme during the season, please 'Like' our Facebook page: Gnaraloo Turtle Conservation Program.

*All photos provided courtesy of the Gnaraloo Turtle Conservation Program. ■*



# STUDENT AWARDS FROM THE 31<sup>ST</sup> ANNUAL SYMPOSIUM ON SEA TURTLE BIOLOGY AND CONSERVATION, 10–16 APRIL, 2011, SAN DIEGO, CALIFORNIA, USA

MATTHEW H. GODFREY<sup>1,#</sup> & ANDREA D. PHILLOTT<sup>2</sup>

<sup>1</sup>North Carolina Wildlife Resources Commission, Beaufort, NC, USA

<sup>2</sup>Asian University for Women, Chittagong, Bangladesh

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The annual sea turtle symposium attracted nearly 900 participants from 79 different countries to San Diego in 2011. The theme of the symposium was “The Next Generation of Research and Conservation” to highlight student contributions to the International Sea Turtle Society. An important component of the symposium is the Archie Carr Student Award, rewarding outstanding research presentations by students. Coordinated by Matthew Godfrey and Jeanette Wyneken, the following volunteers helped to judge oral and poster presentations

by students: Karen Arthur, Larisa Avens, Ray Carthy, Paolo Casale, Craig Harms, Emma Harrison, Mike James, Jennifer Keller, Cynthia Lagueux, Kate Mansfield, Catherine McClellan, Zoe Meletis, Terry Norton, Dave Owens, Andrea Phillott, Nick Pilcher, Peter Pritchard, Kim Reich, Erin Seney, Kelly Stewart, Tony Tucker, Roldan Valverde and Thane Wibbels.

Student Award Winners at the 31<sup>st</sup> Sea Turtle Symposium in San Diego were:

Category	Format	Prize	Student	Institution	Title	Prize (USD)
Foraging, Physiology & Movements	POSTER	WINNER	Morgan Young	Florida Atlantic University	Visual wavelength discrimination by the loggerhead turtle	500
Threats	POSTER	WINNER	Leigh Ann Harden	UNC-Wilmington	Using a spatially explicit predator-prey model to investigate bycatch risk of terrapins in crab pots	500
Population Assessment	POSTER	WINNER	Vanessa Bezy	UNC-Wilmington	Comparison of methodologies for estimating the nest density of olive ridley arribadas at Ostional, Costa Rica	500
Health & Rehabilitation	POSTER	WINNER	Virginie Plot	Université Strasbourg	Physiological state and condition in nesting leatherback turtles in French Guiana	500
Breeding Biology	POSTER	WINNER	Hannah Vander Zanden	University of Florida	Nutrient transport by green turtles	500

Category	Format	Prize	Student	Institution	Title	Prize (USD)
Foraging, Physiology & Movements + Health & Rehabilitation	ORAL	WINNER	Simona Ceriani	University of Central Florida	Satellite tracking confirms the use of stable isotopes to infer foraging grounds of loggerhead turtles ( <i>Caretta caretta</i> ) nesting on Florida's east coast	500
Foraging, Physiology & Movements + Health & Rehabilitation	ORAL	RUNNER UP	Alexander Gaos	San Diego State University	Satellite telemetry reveals novel insights into the biology and conservation of hawksbill turtles ( <i>Eretmochelys imbricata</i> ) in the eastern pacific ocean	250
Threats	ORAL	WINNER	Qamar Schuyler	University of Queensland	To eat or not to eat? The roles of choice and vision in ingestion of marine debris by sea turtles	500
Population Assessment	ORAL	WINNER	Brian Shamblin	University of Georgia	Genetic mark-recapture of the female loggerhead population nesting in Georgia, 2008-2009: Abundance, nest site fidelity and relatedness	500
Breeding Biology	ORAL	WINNER	Anthony Rafferty	Monash Univerity	Embryonic death is linked to maternal identity in the leatherback turtle ( <i>Dermochelys coriacea</i> )	500
Breeding Biology	ORAL	RUNNER UP	Jeanne Garner	Texas A&M University	Evaluating steroid hormone data in association with reproductive parameters in a population of endangered leatherback sea turtles and the application to conservation and management	250
Conservation through Social, Economic, Cultural & Legal Pathways	ORAL	WINNER	Courtney Shephard	Duke University	Optimizing U.S. Endangered Species Act protection by integrating recovery planning, Section 7 consultations, and incidental take authorizations: A sea turtle case study	500



# SIXTH MEETING OF IOSEA SIGNATORY STATES

DOUGLAS HYKLE

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The Sixth Meeting of the Signatory States was held in Bangkok, Thailand, from 23–27 January 2012, preceded by a two-day session of the IOSEA Advisory Committee. The meeting was chaired by Dr. Maitree Duangsawadi, retired Director-General of Thailand's Department of Marine and Coastal Resources, and former IOSEA Focal Point. The organisation of the meeting was supported by generous contributions from the Governments of France and the United States. Twenty-three Signatory States were officially represented at SS6, along with a nearly full contingent of Advisory Committee members, as well as invited experts and observers from various intergovernmental and non-governmental organisations.

The four days of wide-ranging discussions generated the most interesting ideas about the future direction of marine turtle conservation of any IOSEA Signatory State Meeting to date. After taking advantage of an opportunity to discuss issues in sub-regional groups, the meeting agreed that the following issues were the highest priorities for IOSEA to address in the immediate future: 1) illegal direct take of marine turtles; 2) identification of index beaches associated with genetic stocks; 3) capacity-building in support of Signatory State efforts; 4) investigation of indirect take in legal fisheries; and 5) socio-economic considerations of relevance to marine turtle conservation. Most of the issues identified by Signatory States as high priorities corresponded closely with issues that the Advisory Committee had reflected upon during its earlier meeting. In each instance, the Committee had suggested mechanisms that might be pursued in the coming biennium to make progress towards the desired conservation outcomes.

One of the highlights of the gathering was the finalisation of a proposal to create a Network of Sites of Importance for Marine Turtles in the IOSEA region, culminating many years of intensive development work and discussion. The network aims to enhance the local-to-global scale recognition of the importance of selected sites, while offering conservation benefits that are most readily achieved through a coordinated mechanism. Delegates fine-tuned the contents of the proposal, before adopting a resolution that sets out a schedule for finalising

the selection criteria for the network, soliciting site nominations from Signatory States, and proceeding with the formal launch of the network at the next meeting of Signatory States.

The Secretariat presented its customary overview of IOSEA implementation progress, based on an exhaustive analysis of information submitted by Signatory States in their national reports. More than 80 percent of Signatory States were reported to have improved their implementation and reporting of IOSEA Conservation and Management Plan measures, many very substantially. Signatory States have done well to describe “best practice” approaches they have undertaken to reduce threats to marine turtles and their habitats; to document a range of socio-economic studies; and to put in place measures to counteract adverse economic incentives that contribute to turtle mortality. Advances have also been made in the reporting of fisheries potentially interacting with turtles, as well as measures aimed at reducing incidental capture and mortality; and most Signatories have undertaken interesting research and development activities in support of bycatch reduction.

The reports of Signatory States describe the important economic uses of marine turtles. Virtually all countries have enacted legislation to prohibit direct harvest and domestic trade in turtles and derivatives, although traditional consumption of meat and eggs still occurs. Almost all have measures in place to minimise or reduce the mortality of eggs, hatchlings and nesting females. These including monitoring programmes, extensive education/awareness activities, and debris removal and beach clean-up activities. Most Signatories have undertaken research and monitoring of turtles, with impressive advances made in satellite tracking to help elucidate migration routes, and in genetic profiling of turtle populations. Very good progress has been made to prioritise national conservation and management activities, and also to identify issues for which international cooperation is considered essential.

The Secretariat reported that the online IOSEA database now contains information on more than 1,000 sites of importance for marine turtles, a substantial increase since

2008. The system can be mined to gather information on each species, including the threats they face and the mitigation measures that are being implemented at individual sites. The analysis revealed that areas in need of further improvement by Signatory States include, among others, better documentation of incidental capture and mortality of turtles, use of alternative fishing practices, and identification and protection of critical habitat outside of protected areas. Signatory States were encouraged to undertake more systematic exchange of information and closer collaboration and coordination of activities, to better articulate their resource needs, to try to mobilise increased domestic resources for implementation, and participate in more equitable sharing of IOSEA's operational costs.

Two workshops incorporated into the conference programme provided much food for thought: one focused on satellite tracking in the IOSEA region and the other on impacts of climate change and related mitigation strategies. Dr. Peter Richardson gave a very informative introduction to satellite tracking which illustrated the uses of this remarkable technology and encouraged participants to reflect on the kinds of research questions it could address. This was followed by a lively question and answer session involving expert panellists, and group discussions that identified priority areas for future satellite tracking work. The account of the satellite tracking workshop annexed to the main meeting report captures the essence of this enriching session.

Dr. Colin Limpus teamed up with Dr. Mark Hamann to convene the second workshop on climate change and mitigation strategies, which provided an opportunity for participants to discuss issues of concern regarding management of marine turtles in the context of global climate change. The workshop included technical presentations that dealt with the biological background to global warming impacts on turtle egg incubation, hatchery management in response to warming beaches, and the impact of extreme climate events on foraging turtles and dugongs in eastern Australia. The expert panel discussion that followed stressed the importance of maintaining resilience in the ecosystem, and of obtaining long-term monitoring information which would provide a better foundation for responding with mitigation approaches. Apart from the two workshops, the meeting was enlightened by two additional expert presentations: the first on the use of spatial planning tools to identify areas of high conservation priority for sea turtles, delivered by Dr. Ronel Nel; and the second on various innovative information systems for exchanging data on sea turtles, presented by Prof. Pat Halpin.

The Meeting received an update from Dr. Mark Hamann

on progress towards finalising a long-anticipated assessment of the conservation status of loggerhead turtles. An advanced draft was made available for review, and the document is expected to be finalised by mid-2012. Already, some recommendations for additional conservation action have been formulated, including genetics work and population identification in Sri Lanka, analysis of existing data from the Northwest Indian Ocean, collection of bycatch and mortality data, and various other species-specific studies.

The Meeting also revisited the comprehensive leatherback assessment from 2006, which had been the focus of recent attention aimed at updating basic information on the species' current conservation status, and identifying progress made towards filling important information gaps and areas in need of further work. In presenting the progress made so far, Dr. Ronel Nel confirmed that the updating exercise also provided for the development of specific project concepts to take forward some of the key recommendations that had been proposed in the 2006 assessment, but had not yet been acted upon. The document is expected to be ready for circulation in April 2012.

The Meeting formally adopted 'Terms of Reference and Guidance for IOSEA Focal Points', which clarify the general roles and responsibilities of IOSEA national and sub-regional Focal Points, and offer guidance to assist Focal Points in their intersessional work, as well as in the preparation for future meetings of the Signatory States. The IOSEA sub-regional Focal Points were reconfirmed as follows: Indonesia (for South-East Asia+), India (for Northern Indian Ocean); United Arab Emirates (for Northwest Indian Ocean); and Madagascar (for Western Indian Ocean). It was further agreed that the Secretariat would facilitate regular consultations with the four sub-regional Focal Points and the Advisory Committee Chair. The IOSEA Advisory Committee was reconstituted with the addition of one new member, Dr. Manjula Tiwari, and the re-nomination of two existing members who will serve alongside five other Committee members who have served half of their terms. Further development of technical support to Signatory States, review of the selection criteria for the IOSEA Site Network (and eventually the site nominations themselves), and finalisation of the loggerhead assessment are among the tasks the Committee will be working on in the coming months.

IOSEA Coordinator Douglas Hykle paid tribute to two Advisory Committee members, Dr. Colin Limpus and Dr. Jack Frazier, for their lifetime service to marine turtle conservation, and presented each with a plaque to formally recognise their enormous contributions. ■

# FOURTH ANNUAL TAG MEETING

## 12–14 NOVEMBER, 2011, MAMALLAPURAM

AMRITA TRIPATHY

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### THE TURTLE ACTION GROUP

Established in 2009, the Turtle Action Group (TAG) is a network of turtle experts, enthusiasts and organisations dedicated to the conservation of sea turtles and their habitats in India, including the mainland and islands of Andaman & Nicobar and Lakshadweep (visit <http://www.seaturtlesofindia.org/tag>). Organisational members of TAG include community based organisations, environmental groups and non-governmental organisations (NGOs). TAG now consists of over twenty five NGOs from around India. Promoting effective conservation of sea turtles and their habitats through collective and collaborative action is the main objective of TAG<sup>1</sup>.

The members of TAG meet once every year at the Annual TAG Meeting where they present outcomes of their efforts over the year and share their experiences. After the initiation workshop in January 2009 in Chennai, the second workshop was held in Bhubaneswar, Orissa in February 2010, and the third at Kumta, Karnataka in November 2010.

### FOURTH ANNUAL WORKSHOP

TAG held its 4<sup>th</sup> Annual Meeting in Mamallapuram, Tamil Nadu from 12–14 November, 2011. The meeting was hosted by the Madras Crocodile Bank Trust, a member of TAG. The main aim of this workshop was to encourage the active participation of forest department personnel and provide capacity building through various sessions held by experts over a span of three days. The workshop focused on training for outreach programmes and the collection and management of standardised data. The workshop was held back to back with a marine mammal stranding workshop organised by National Oceanic and

Atmospheric Administration (NOAA), USA and Madras Veterinary College, so that TAG members could attend both training programmes.

The workshop was conducted at Hotel Tamil Nadu, situated in Mamallapuram, midway between Chennai and Pondicherry. Over 70 participants, including Forest Department officials, herpetologists, non-profit groups, community-based conservation groups and TAG members from all over India took part in this workshop. The presentations and discussions were conducted in English and translated into Hindi and where required, into other languages.

### Day 1

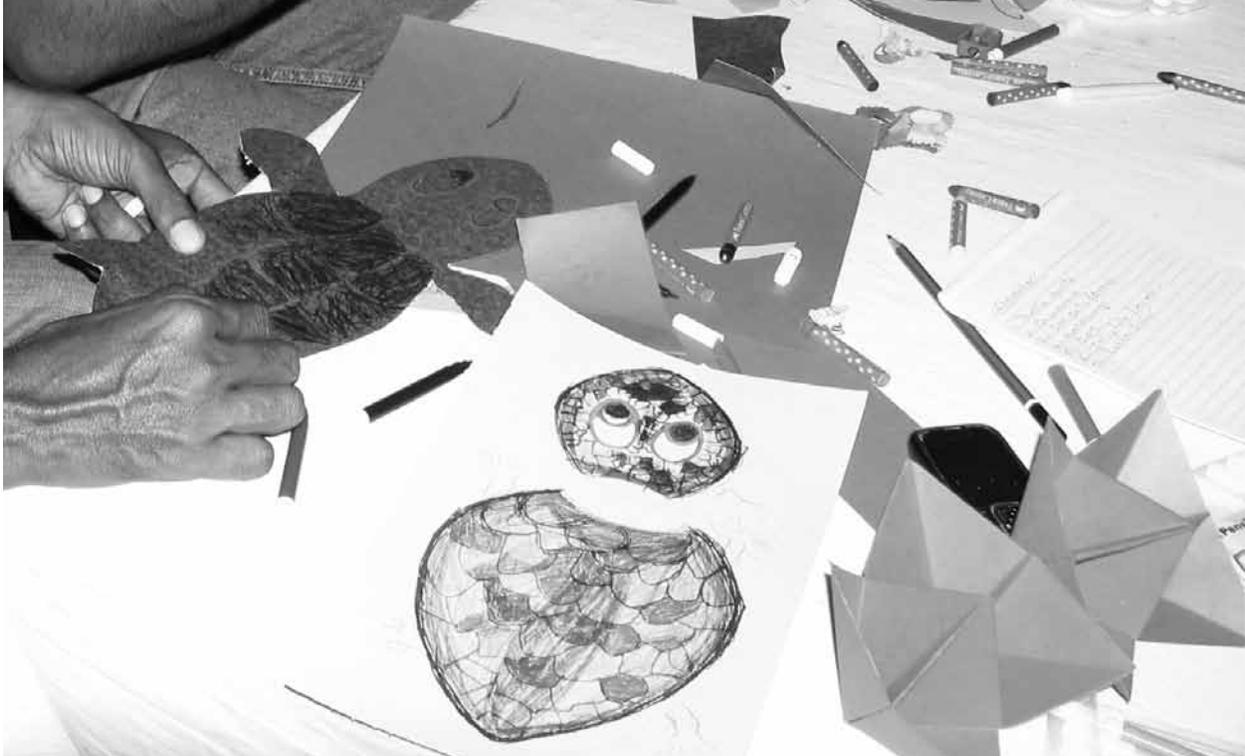
The programme started with an inauguration and introduction to TAG and its activities over the past year by Naveen Namboothri. During the first half of the day, forest department officials from various states presented their field experiences with conservation related issues. Sudhakar Kar from Odisha, C.R. Mallick, Divisional Forest Officer (Northern Andaman Islands) and R.D. Khamboj, Chief Conservator, Marine National Park, Jamnagar elaborated upon conservation efforts in their regions. Syed Ali, Lakshadweep Forest Department and Devraj, Pondicherry Forest Department also provided information about sea turtle nesting in their respective regions.

The post-lunch session was included an interactive workshop on conservation awareness through puppetry by R. Bhanumati from Pavai Centre for Puppetry, Chennai. She started by pointing out that puppetry has long been used for education and awareness. The session began with an introduction to the world of puppets, various puppetry forms in practice till date and a demonstration of how puppets can be a strong medium for the creation of awareness. She mentioned that nine Indian states use this art form to narrate folklore. Bhanumati encouraged the participants to develop a puppet character and build

<sup>1</sup>TAG and its member organisations are featured in the 13<sup>th</sup> special issue of IOTN ([www.iotn.org/iotn-13.php](http://www.iotn.org/iotn-13.php)).



**A Forest Department official address participants at the workshop**  
Photo credit: M. Muralidharan



**Participants experiment with shapes and colours to create puppets**  
Photo credit: M. Muralidharan

a story around it. She elaborated upon the skills required to convey relevant messages to the audience through the puppet show. She also pointed out that puppetry inculcates team spirit, as was evident amongst the participating teams at the workshop. The participants were divided into five small groups of five members each and were told to devise a story based on turtles and to narrate it to rest of the audience. They were given art paper and other stationery to make their own puppets. The participants were enthusiastic about the exercise and actively interacted with each other. About 30 puppets were made by 5 groups and were used to present stories relating to turtle lifecycles, impacts of climate change on nesting turtles, threats of trawlers to sea turtle populations, and threats of predators (dogs and raptors) to hatchlings.

Under Bhanumati's guidance, the audience participated with enthusiasm, Forest Department officials, TAG members and children alike. The stories that were narrated through the puppetry exercise brought out the message of conservation. During the post-presentation discussion, one of the participants pointed

out that puppetry has an additional impact because of its inherent humour. Many participants agreed that puppetry was an innovative thought provoking folk-art, and could influence the audience into initiating action. Some TAG members were motivated and have decided to use puppetry in creating awareness about sea turtle conservation in their areas, especially in schools and colleges.

## Day 2

Hari Sridhar and Kartik Shanker conducted the first session of the day on applying for grants for new projects and to sustain ongoing projects. Hari made the important point that good writing is essential for a good proposal, and that conveying clear, concise and complete ideas is critical when applying for a grant. He emphasised applying to the appropriate funding agency, following instructions while preparing the proposal, and submission deadlines. Hari also elaborated upon the 'ten points' one should always keep in mind to get a grant (<http://www.conservationgrants.com/write.htm>).



**A group of participants at work making puppets**

Photo credit: M. Muralidharan



**A group of participants narrate a story using their puppets**  
Photo credit: M. Muralidharan



**A group at work during the 'story building session'**  
Photo credit: M. Muralidharan

The post lunch session on capacity building was also interactive and was conducted by filmmakers Rita Banerji and Maya Khosla of Dusty Foot Productions. Rita began the session with a question: Can a film make a difference? As Rita addressed the participants, Maya documented the activity. Rita screened some of her earlier documentaries that address conservation and livelihood issues. Video clips from her documentaries—*Right to survive*, *Shores of silence*, *Voices from the forest* and *The wild meat trail*—were shown and participants were encouraged to discuss them. Rita talked about the efforts and challenges involved in making a small documentary, even of just a few minutes. The 25 minute long *Shores of silence* took Rita and her crew four years to complete. While discussing her documentary on sea turtle conservation and fisheries livelihood issues, *Right to survive*, she said that short films and documentaries are a strong tool for awareness, and can play an integral role in achieving success in conservation programmes. During the group activity, participants were divided into five groups. Each group was given a set of fifteen photographs and was asked to build a story with a conservation angle, using the photos. Rita and Maya also gave a quick demonstration of how to use the camera for documentation in field. The participants narrated stories that included threats faced by turtles due to waste disposal into the sea (especially plastic), threats faced by hatchlings due to traffic lights on highways, etc. Both forest department personnel and TAG members participated actively in the exercise.

In addition, the online data entry application was introduced to TAG members and workshop participants. Led by Naveen, Muralidharan and Kartik, the session focused on making TAG members aware of the online application “TAGABLE”. The main objective of this online application is to enable online data entry, storage and management, including data on turtle encounters,

nesting patterns, hatchery data and mortality. Data will be classified into various categories such as beach, nest, hatchery and arribada datasets. The data is retrievable by users in multiple formats and the application can be used to create representations of the data (for example, by creating maps, graphs and tables). Since data privacy is a major concern, it was clarified that data would only be accessible to data providers, and would become public only if they choose to make it so.

On the last two days of the workshop, core committee members met and discussed administration and logistics relating to TAG. Naveen reiterated the objectives, goals and vision of TAG, and presented the future agenda for the core committee of TAG. He also conveyed the minutes of the core committee meeting to TAG members. It was decided that the 5<sup>th</sup> Annual TAG Meeting would be held in Gujarat in collaboration with Prakriti Nature Club, Forest Department, Marine National Park, Jamnagar and Gujarat Ecological Commission. After the last session, participants visited the Madras Crocodile Bank.

Apart from the annual meeting, TAG also supports a small grants programme where individual TAG members are given grants to support their ongoing/new activities on sea turtle conservation. As a network, TAG draws its strength from the diverse range of expertise and experience that its members bring to it. As the network expands, it seeks to promote collaboration not just between member organisations, but also with other stakeholders including local fishing communities, coastal community leaders and researchers of various disciplines. The activities of TAG are supported through a grant from the Marine Turtle Conservation Act Fund of the US Fish & Wildlife Service and administrative support is provided by the Dakshin Foundation, Bangalore and the Madras Crocodile Bank Trust, Mamallapuram. ■

ANNOUNCEMENTS



# BIODIVERSITY ASIA 2012: SCIENCE, POLICY AND GOVERNANCE

7–10 AUGUST 2012, BANGALORE, INDIA

[www.biodiversityasia2012.org](http://www.biodiversityasia2012.org)

## THE 2<sup>ND</sup> ASIA REGIONAL CONFERENCE OF THE SOCIETY FOR CONSERVATION BIOLOGY - ASIA SECTION

### Registrations and abstract submissions open!

Biodiversity Asia 2012 is an international conference that aims to highlight the urgency of biodiversity conservation in Asia and showcase the advances made in research and conservation of Asia's rich biodiversity. It is being organised ahead of the 11th Conference of the Parties (CoP) of the UN Convention on Biological Diversity (CBD) to be held in India in October 2012. Biodiversity Asia 2012 will bring together researchers, policy makers, students, teachers, practitioners, NGOs and others working towards the conservation of Asia's biodiversity. The conference will include important updates on conservation research in Asia in lectures, plenary sessions, symposia and poster sessions by leading scientists and students. It will also contribute to capacity-building in the region by including practical workshops and short-courses for students and practitioners.

Our goal is to have every country in Asia represented, and to showcase the advances made in research and conservation of Asia's rich biodiversity. The conference, in addition to organising cutting-edge symposia, will feature skill-building workshops for students. In addition, we plan to have public talks and exhibitions to take the message of conservation to the wider public.

The conference is being co-organised by the Society for Conservation Biology-Asia Section, (SCB-Asia), Ashoka Trust for Research in Ecology and the Environment (ATREE), Indian Institute of Science (IISc), and several other institutions with the Secretariat housed at ATREE, Bangalore, India.

**Venue:** JN Tata Auditorium, Indian Institute of Science Campus, Bangalore, Karnataka, India

### Conference themes:

1. Conservation governance
2. Conservation biology
3. Conservation management
4. Biodiversity and people

### International advisory committee:

Co-Chair: Dr. Kamaljit S. Bawa  
*President, ATREE, India and Distinguished Professor of Biology, UMASS, Boston, USA*

Co-Chair: Dr. Eleanor Sterling  
*Center for Biodiversity and Conservation, American Museum of Natural History, USA*

Dr. Simon Nemetzov  
*President, SCB-Asia Chapter, Israel*

Dr. Sukumar R.  
*Centre for Ecological Sciences, Indian Institute of Science, India*

Dr. K.N. Ganeshaiah  
*University of Agricultural Sciences, Bangalore, India*

Dr. Damayanthi Buchori  
*IPB, Bogor, Indonesia*

Dr. Lian Pin Koh  
*ETH, Zurich, Switzerland*

Dr. Xu Jianchu  
*Centre for Mountain Ecosystem Studies, Kunming Institute of Botany, China*

**Registration opens:** March 15, 2012

**Deadline for abstract submission:** June 1, 2012

**Registration closes:** June 1, 2012

Register at: [http://scbasia2012.org/registration\\_and\\_fees](http://scbasia2012.org/registration_and_fees)

**Contact:** Veena P.G. at [scbasiasecretariat@atree.org](mailto:scbasiasecretariat@atree.org) or [veena.pg@atree.org](mailto:veena.pg@atree.org). ■

# INTERNATIONAL YOUTH FORUM: GO4BIODIV CONSERVING COASTAL AND MARINE BIODIVERSITY FOR SUSTAINING LIFE AND LIVELIHOODS

NEERAJ KHERA

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Go4BioDiv is an International Youth Forum, aimed at providing a platform for youth to voice their opinion on issues related to biodiversity during the global event of decision-making on biodiversity – the Conference of Parties to the Convention on Biological Diversity (CBD COP). The 11<sup>th</sup> COP of CBD is being hosted by India this year, and will take place in Hyderabad in October 2012. The International Youth Forum Go4BioDiv will take place in parallel to COP with the theme ‘Conserving coastal and marine biodiversity for sustaining life and livelihoods’.

Go4BioDiv 2012 is being organised by the Ministry of Environment and Forests (MoEF), with the Wildlife Institute of India as the nodal institute, and in partnership with *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), IUCN, UNESCO, the ASEAN Center for Biodiversity, and other partners. A total of 35 youth (18-29 yrs) will be selected via an application process, which is currently open; the application material can be found at the website [www.go4biodiv.org](http://www.go4biodiv.org). Ten participants will be selected from India – one from each coastal state, and one representing the islands.

Go4BioDiv 2012 will have three phases: a **Virtual Phase** will start in April 2012, in which issues critical to coastal and marine conservation and coastal community livelihoods will be discussed among concerned stakeholders, especially the youth on discussion forums on Facebook and LinkedIn -International Youth Forum Go4BioDiv. The phase is open for the 35 Go4BioDiv participants as well as the wider community. The

discussions that will take place in the virtual platform will shape further activities and the Go4Biodiv Declaration during CBD COP-11.

The **Live Phase** of Go4BioDiv will take place in India during the CBD-COP (6–19 October, 2012). In the first ten days of this phase, the participants will be stationed in the Marine World Heritage site of India- Sundarbans, and prepare for their interventions in the CBD COP. Participants move to the COP venue in Hyderabad in the last four days of this phase. During the CBD-COP, the participants will use innovative ways and means, which are creative and global, for spreading their messages on coastal and marine conservation, including a Go4BioDiv declaration. The third phase will be the **Post-COP Publication Phase** and follow-up with participants after they return to their respective countries/ states and spread the message of biodiversity conservation, while remaining connected with the virtual platform.

**Website:** Further details on Go4BioDiv, previous events, and the application process and material can be found at the Go4BioDiv website - [www.go4biodiv.org](http://www.go4biodiv.org).

**Discussion Forum:** Participate in the discussions on coastal marine conservation and youth involvement in conservation at our Facebook group [<http://www.facebook.com/groups/youth4coastalmarine/>] or LinkedIn group [International Youth Forum Go4BioDiv].

**Facebook Page:** Subscribe to the Facebook Page of Go4BioDiv [<http://www.facebook.com/Go4BioDiv>] to receive daily updates on the coastal marine conservation and youth initiatives. ■

# SEA TURTLES OF INDIA WEBSITE LAUNCHED!

www.seaturtlesofindia.org

We are pleased to announce the launch of the website: Sea Turtles of India (www.seaturtlesofindia.org). The website collates information about sea turtles and their habitats in the Indian subcontinent. The main features of the website include a state-wise account of distribution, status and threats; a resources section with freely downloadable material such as manuals, posters and policy briefs for education and outreach, a collection of articles and reports, and an extensive bibliography; a research section which profiles research and conservation projects carried out along the coastline and the islands; and a directory of conservation groups and individuals in the subcontinent. For beginners, there is a 101 section on identification, sea turtle biology and life history. The website also features a blog “Talking turtles”, where we hope to receive regular contributions from our readers.

The website, maintained by members of Dakshin Foundation, Bangalore, in collaboration with the Madras Crocodile Bank Trust, Mamallapuram, is also a platform to showcase the activities of the Turtle Action Group, a network of NGOs and other local and community based organisations dedicated to the cause of sea turtle conservation and coastal protection in India. Coming soon is an online interactive database for TAG members for monitoring sea turtles in India, a photo gallery, and much more!

Please visit the site and feel free to look around and send us your inputs and comments. You can reach us at seaturtlesofindia@gmail.com.

Sea Turtles of India team ■

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**Cover Design:** Arjun Shankar

**Printed by:** Medknow Publications and Media Pvt. Ltd., Mumbai, India

# CONTENTS

## EDITORIALS

---

- 1 Editorial  
*Andrea D. Phillott*
- 2 How it all started!  
*Kartik Shanker & Chloe Schäuble*

## ARTICLES

---

- 3-4 An update on olive ridley nesting along the west coast of Maharashtra, India in 2011-2012  
*Bhau Katdare*
- 5-7 Capacity building for trawl/commercial fishers to reduce bycatch mortality of sea turtles along the Chennai coast, India  
*Supraja Dharini*
- 8-9 Tree Foundation – Sea Turtle Rescue and Rehabilitation Centre  
*Supraja Dharini & Rahul Muralidharan*
- 10-13 Expanding and strengthening community involvement in sea turtle conservation in Nellore district, Andhra Pradesh, India  
*Supraja Dharini & Rahul Muralidharan*

## PROJECT PROFILE

---

- 14-16 Gnaraloo Turtle Conservation Program  
*Karen Hattingh, Robert Edman, Amy James, Fiona Morgan & Kimmie Riskas*

## REPORTS

---

- 17-18 Student awards from the 31<sup>st</sup> Annual Symposium on Sea Turtle Biology and Conservation, 10–16 April, 2011, San Diego, California, USA  
*Matthew H. Godfrey & Andrea D. Phillott*
- 19-20 Sixth meeting of IOSEA Signatory States  
*Douglas Hykle*
- 21-25 Fourth Annual TAG Meeting, 12–14 November, 2011, Mamallapuram  
*Amrita Tripathy*

## ANNOUNCEMENTS

---

- 26 Biodiversity Asia 2012: Science, Policy And Governance, 7–10 August, 2012, Bangalore, India
- 27 International Youth Forum: GO4BIODIV  
Conserving Coastal and Marine Biodiversity for Sustaining Life and Livelihoods  
*Neeraj Khera*
- 28 Sea Turtles of India website launched!

