Empowering Coastal Communities in India for Holistic Conservation of Imperiled Marine and Terrestrial Resources

TERRA MARINE RESEARCH INSTITUTE
ANNUAL REPORT (2013-2014)
Karnataka, India
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Cover Photos:
Indo-Pacific Humpback dolphins Karwar: Silver Nut Tree; Timi-Kurm Fest 2013.
Olive Ridley turtle, a nesting species of Karnataka: Annie Kurian

Back cover Photo:
Traditional fishing boats, Karwar: Mridula Srinivasan

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Karwar, India (14° 48′ 0″ N, 74° 7′ 48″ E) (Source: Google Earth)

Karwar is a pristine coastal town in Karnataka neigbouring the state of Goa. It is flanked by the Arabian Sea and the Western Ghats- a biodiversity hotspot and UNESCO World Heritage Site.
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Along the west coast in places like Karwar, the ‘Sahyādri’ or Western Ghats run alongside the sea. The Ghats protect the coasts and nourish the seas with nutrients that get washed down with the rain. These soil nutrients help the growth of phytoplankton, a food source for fish, which in turn can provide food for mega fauna such as sea turtles, sharks, dolphins and whales.
EXECUTIVE SUMMARY

Terra Marine Research Institute (TeMI) is a community invested, non-profit organization based in Karnataka, India. The organisation was co-founded in October 2012 by Drs. Annie Kurian and Mridula Srinivasan who have focused extensively on the research and conservation of sea turtles and marine mammals, respectively. With the ultimate goal of effectively conserving these charismatic species and ocean health monitors, we have adopted a holistic approach to integrate terrestrial aspects especially coastal community livelihoods with marine research, education, and conservation activities.

As a nascent organization, we were keen to network with the greater research and conservation community and sow the seed for an enduring relationship that would foster collaboration and cooperation in accomplishing organisational goals. To this end, one of the first major events TeMI was engaged in was the Timi-Kurm (Whale-Turtle) Fest in October 2013. This one of a kind inaugural festival gave a diverse group of people the opportunity to come together to talk, experience, and enjoy nature in all its splendor and complexity.

Cultivating an enduring relationship with the marine environment and making critical links with the coastal communities, especially traditional fishing communities is integral to all of TeMI's activities and the Timi-Kurm fest! Empowering traditional fishing communities and making their conservation investments worthwhile is a continuing and major goal of TeMI.
To meet this goal, TeMI networks with the local fishing community and public, and government & non-government environmental organisations, academic, profit and non-profit sectors from coastal, rural, and urban areas. Smart wildlife conservation happens best when conservation awareness, responsibility, and positive action are inspired by people from different backgrounds and disciplines.

This report provides a detailed account of the Timi-Kurm fest in 2013 as well as brief updates on ongoing and future activities that TeMI has been involved since the fest. TeMI received its official tax-exempt status in early 2014, and now have the necessary organisational impetus to build on existing plans, explore new ventures and partnerships, and develop new proposals to accomplish our goals.

Since the Timi-Kurm fest, we have been slowly initiating several new projects building on connections made at the fest, described in more detail in this report. A key focus for TeMI is to build the next generation of research and conservation leaders, and thus, we are actively recruiting and supporting young researchers to pursue independent projects that are compatible with TeMI priorities.
The sea beach of Karwar is certainly a fit place in which to realize that the beauty of Nature is not a mirage of the imagination, but reflects the joy of the Infinite and thus draws us to lose ourselves in it. Where the universe is expressing itself in the magic of its laws it may not be strange if we miss its infinitude; but where the heart gets into immediate touch with immensity in the beauty of the meanest of things, is any room left for argument?” – Rabindranath Tagore, 1882
Part I

TIMI-KURM OR WHALE-TURTLE FEST KARWAR, INDIA

October 18-20, 2013
The Timi-Kurm or Whale-Turtle festival is a novel effort that links a diverse group of stakeholders to share a collective appreciation of our natural environment and facilitate holistic conservation of marine, coastal, and terrestrial resources in Karwar, India. Besides environmental education, a key focus the 3-day Timi-Kurm fest was to build monetary and in-kind support for the true environmental stewards — the traditional and vulnerable small-scale fishing communities of India.

The word “timi” in Sanskrit means a whale, and “kurm” means a turtle – the name was chosen to signify the cultural and enduring relationship Indians have with the marine environment since ancient times. Dolphins and whales are aquatic throughout their life but sea turtles need both the land and the sea, for example, a female sea turtle buries her eggs on the beach sand for incubation.

The link between land and sea is not limited to these magnificent creatures, but the same bond exists between humans and the sea. Our coastal communities and the wider world depend on the oceans for food. But the oceans play a more prominent role in our lives by influencing earth’s climate, by being a source for oil, minerals, and other valuable resources, and by housing an incredible diversity of animals and plants that have spawned eco-tourism activities worldwide.

Cultivating an enduring relationship with the marine environment and making critical links with the coastal communities, especially traditional fishing communities is integral to all of Terra Marine Research Institute (TeMI’s) activities and the Timi-Kurm fest!

To meet this goal, TeMI networks with the local fishing community and public, and government & non-government environmental organisations, academic, corporate and non-profit sectors from coastal, rural, and urban areas. Smart wildlife conservation happens best when
conservation awareness, responsibility and positive action are inspired by people from different backgrounds and disciplines.

Traditional subsistence fishing communities are found throughout the Indian coast including the islands of the Andaman and Nicobar and Lakshadweep. Their methods of fishing are largely environment friendly, but are sadly being displaced, due to pressure from industrial fisheries, leaving them with scarce fish to catch.

The *Timi-Kurm* fest has made its beginning in Karwar and will simultaneously cater to similar needs in the bordering state of Goa, primarily due to significant environmental concerns and collaboration interests expressed by major stakeholders and participants during the 2013 Timi-Kurm fest held in Karwar.

The *Timi-Kurm* festival does not conclude as a mere three day event. Its objectives are long-term, and include:

1) To empower coastal communities in India to holistically conserve marine and terrestrial resources in the Western Ghats bordering the coasts.

2) To support the welfare of artisanal or traditional fishing communities in the Karwar region and nationally.

3) To engage in conservation-oriented research and awareness efforts with local communities, integrating local traditional knowledge and scientific approaches.

4) To boost the local economy where the fests is held and build capacity by encouraging conservation champions among both the wildlife enthusiast and marginalized communities.
Devbag is one of the remaining villages in the northern region (Uttara Kannada) of Karnataka’s coast where fishing is carried out on a small scale. Shore/beach seines, dug out and outrigger canoes and plank built boats are the predominant fishing gear and craft used in the region. Recently, trawler or high speed boats, fish in near shore waters where traditional fishermen typically fish. The situation has reduced fish catch for small scale -fishers and potentially, creating an imbalance in the marine ecosystem.
FESTIVAL OVERVIEW

The first annual *Timi-Kurm* (Whale-Turtle) Festival was held in October 2013 in Karwar, Uttara Kannada, India, to create awareness about the marine biodiversity supported by the magnificent Western Ghats or Sahyādri and the Konkan coast, and to highlight livelihood issues of artisanal fishing families living in Karwar and nearby coastal towns.

The event was organized in Karwar, where the mountains (Western Ghats) meet the sea (Arabian Sea), emblematic of the diversity and uniqueness of India’s flora and fauna. And a festival helps to provide an informal and enriching environment for people of different backgrounds, age groups, and interests to share and learn about environmental responsibility through field trips and creative educational activities.

The festival was conceived, planned, and led by *TeMI*. As the festival aimed to inspire a common social responsibility for the marine and terrestrial environment it was carried out in partnership with coastal stakeholders that included the Jungle Lodges and Resorts, Devbagh fishing village, District Science Centre, Amrita Herbal Research Centre, Forest Department of Karwar, the Indian Navy, Field Services and Intercultural Learning (FSL-India)Prakruti Nature Club, Gujarat, and many individuals and institutions in Karwar and from across other Indian states such as Goa, Maharashtra,
Gujarat and Andhra Pradesh. Their roles were integral to the functioning of the event and for raising funds to support the supplementary livelihood programme for the artisanal fishing community in Karwar. About 150-200 individuals attended the festival during various days. Among the attendees, there were 10 non-profit organisations, District Forest Officers from Karwar and Honavar, Navy officers from Karwar Naval Base, Director of Fisheries, Karwar, students from the local Balmandir school, and professors and college students from the Department of Marine Biology, Karnataka University, professors from the Government Arts and Science College, staff from District Science Centre, and people from Karwar, Goa, and other parts of Karnataka and Maharashtra.
Drs. V.N Nayak and Jayakara Bhandary delivered the inaugural address. The inaugural session included talks on biodiversity of Karwar—the status of mangroves in Karwar and Honnavar, presented by District Forest Officers of the concerned areas—Shri T. Hiralal and Dr. Ramesh Shamanna. Assistant Fisheries Director Shri V. Hegde spoke on issues concerning fisheries of Karwar.

Cultural programmes representing local fishing traditions were showcased by local artists. This helped to recognize India’s coastal folk music and dance and also provided a platform for underrepresented artists to supplement their income. In addition to sea turtles and marine mammals,
issues related to human impacts, environment and wildlife issues were also highlighted through presentations and activities held over the 2.5 day festival.

The 3 main field trips included a trip on the Kali River estuary to see the mangroves and bird life, boat trips to observe Indo-Pacific humpback dolphins (Sousa sp.), a trip to a plant farm in the Western Ghats to observe rare, medicinal, and medicinal plants and surrounding bird life.

Karwar’s fishing community is no different from other coastal artisanal fishermen, who struggle to compete with industrial fishing and also have to contend with overfished marine resources. On the final day of the festival, attendees visited the Devbagh fishing community to interact with fishing families and get a sense of their deep understanding and reverence for the coastal environment. This brief interaction also provided a glimpse into the challenges and many unmet basic needs that the rest of us take for granted for example, a roof over the house and regular power. Prakruti Nature Club-Gujarat, Mr. Krishnamurthy-Bangalore sponsored 10 solar lamps which were distributed to children from 5 different fishing communities living along Karwar’s coast. Ms. Swati Kittur from Delhi has also sponsored for 2 solar lamps will be distributed at the 2014 Timi-Kurm fest, and hopefully, along with donations from other sources.

The festival provided a unique opportunity for young children, school and college students, environment interest groups and the public to experience eco-trips bringing them up close and personal with dolphins, birds, mangroves, and Karwar’s exquisite plant life. The visual experience is a powerful tool that enhances appreciation and understanding of the natural environment and the need to protect and preserve this unique biodiversity for Karwar and India’s future. The festival marks a small beginning for TeMI and partner organisations, one that will continue into 2014 and beyond.
The 2013 Timi-Kurm Fest was focussed on the coastal community of Karwar and was designed to the knowledge needs of local participants and socio-ecological issues of importance and relevance to the region. Resource people of Karwar and others experienced with the discussion topics, presented talks and interacted with participants during field trips. The atmosphere was informal with the talks kept simple, conveying the most basic conservation concepts, to reach out to the diverse participants, especially the public.

As simultaneous translation of talks into the local language for fisherfolk participants was difficult, on the third day of the fest, programs and talks were presented in either Konkani, Kannada and Hindi- the languages spoken or understood by the fishing community of Karwar.

Field Trips

In the current age of information technology, it has become a lot easier to access wildlife or environment-based talks and videos on the web. But to produce an ‘awe’ factor, often responsible for triggering curiosity and positive action for nature, even among the most unlikely people, direct exposure was found to be a highly essential component of the fest. And Karwar being among one of the most ecologically rich places, provides wonderful learning opportunities with limited effort. Thus, a major thrust of the fest was on organising field trips to different ecological habitats and coastal issues of importance coupled with indoor talk sessions.
Creative Sessions for Children

An important component of the fest included the participation of high school children from Karwar. To keep them motivated and help them absorb new information, we used videos, plays and drawing activity, in our indoor sessions.

Traditional Art, Food and Stalls

Traditional coastal folk dances, art items and organic agricultural produce, are as much a threatened resource as marine and terrestrial biodiversity. Both are interconnected as there is a constant balancing act between economic needs and preservation of nature and sometimes, economic liabilities trump conservation goals. A concerted effort was made at the fest to support the local economy and talent by showcasing local folk dances by underrepresented communities, stalls to exhibit or sell traditional and locally crafted ornaments, organic agricultural produce, and upcyled plastic products.

Bonding with Local Fishing Families

Talking about conservation is not the only way to mobilize conservation needs. Supporting livelihoods through informal interactions and cultural integration can go a long way in building trust with the fisher community and for supporting conservation. To help nurture an enduring relationship between the ‘two worlds’, some interaction programmes were designed and conducted, where both the participants and the fishing community could actively participate and interact with one another.
ECO- PRESENTATIONS AND ACTIVITIES

(INDOOR SESSIONS)

Talks, and presentations by environmental professionals, research scientists, and wildlife and environmental enthusiasts on various topics ranged from the beauty of India’s landscape and terrestrial wildlife, sea turtle and marine mammal biology & conservation, mangroves, to shark fishing and finning issues in India and are described in detail below.
The research and conservation of marine mammals such as whales and dolphins is still in the preliminary stages in India. The knowledge of these animals and their role in the marine ecosystem is important for implementing appropriate coastal management measures. Dr. Mridula Srinivasan, Co-founder of TeMI, gives a detailed talk on the fundamentals of marine mammal science, about the similarities between humans and marine mammals, and the importance of sound science informing management and conservation measures.
Stranding of whales and dolphins have been increasing at an alarming level in the recent years. And large numbers are being reported from the west coast of India, including from the Karnataka region. Although linkages between noise impacts and marine mammal strandings in India are still to be confirmed, Cdr. (Dr) Arnab Das from the Defense Research Institute provided an overview on the negative impacts from noise on our marine environment, and especially for marine mammals. The idea was to create awareness about this enormous conservation challenge and concern that has not been addressed.

Dr. Shivkumar Haragi, Department of Marine Biology, gave a presentation on the strandings of different species of whales and dolphins in Karwar over the years. The possible causes of stranding and the method of data collection was explained.
Annie Kurian introducing fellow turtle conservationists: Ravi Pandit-CGA Dinesh Goswamy and Jignesh Gohil-PNC, and Rakesh Soans along with FSL-India Team.

Picture: Nirav Parikh

Sea turtles are an endangered species throughout the world and in India, facing numerous threats from land and at sea. In many places of along the Karnataka coast they are opportunistically exploited for food. The plight of the turtles in Karwar was highlighted by Annie Kurian through her Master’s thesis on Olive Ridleys in Karwar back in the 2002. Her Ph.D research, involved field survey of sea turtle nesting habitats along nine coastal states of India, and the islands of Andaman & Nicobar and Lakshadweep. Dr. Annie Kurian, Co-founder of TeMI, jointly presents the sea turtle life history and awareness session with fellow turtle conservationists from Karnataka. Ravi Pandit from Canara Green Academy (seen in the picture above).
A painting conveying the knowledge and understanding gained on the life history and conservation needs of sea turtles through the puppetry session conducted by the FSL India team.

Sea turtle life history and threats faced was elaborated through as kit using puppets by FSL-India Team. A drawing session to ingrain learning in young minds followed soon after. Conserving sea turtles through setting up beach hatcheries was explained through Mr. Ravi Pundit’s presentation.
SHARK CONSERVATION ISSUES

C. Samyukta

Sharks are common in Indian waters, but many of them are endangered including whale sharks, hammerheads, and broad fin sharks due to unregulated and indiscriminate shark finning, and habitat degradation. India has the second largest shark fishery in the world, next only to Indonesia.

Fortunately, India banned shark finning in August 2013, under the Ministry of Environment new policy, fishermen now found with hauls of bodiless shark fins risk up to seven years in prison for hunting sharks. However, to ensure success, enforcement is necessary and so also, proliferation of shark conservation awareness and educational programmes around the country.
Karwar is among the many coastal locations in India, where several endangered species, including hammer-head sharks, are landed. Sharks are health indicators of the ocean and as apex predators have top-down effects on the food chain. A shark without fins is a dead shark, as without their fins they will drown. Sharks are late maturing, slow growing animals, and therefore, once their populations decline, it will take years for their populations to rebound.

C. Samyukta, from Humane Society International, created awareness about shark conservation and policy in India, as part of HSI’s ongoing mission across the country and one of the first and preliminary efforts in Karwar.
Whale sharks were once indiscriminately exploited in Gujarat. But thanks to efforts by conservationists like Dinesh Goswami and Jignesh Gohil have worked to rescue/disentangle the endangered whale sharks off Gujarat coast since 1997. These dedicated efforts, including educational awareness programmes conducted in Gujarat, have made a huge positive difference in the conservation of whale sharks.

A presentation was made about these efforts by Dinesh and Jignesh, including turtle conservation efforts, to inspire the coastal community into conservation of marine life in Karwar. Dinesh and Jignesh are example of grassroots conservationists, who without any formal training have dedicated
their lives to conserving wildlife and simultaneously, collecting valuable scientific data to enhance conservation and management measures in Gujarat. Their story is an inspiration to all those who feel that they need to be a professional biologist to make a difference in preserving India’s biodiversity.
Scuba diving is an essential skill for documenting life under water, and helps in the conservation of marine life. Nirav Parikh, a filmmaker and PADI Certified Instructor from Gujarat, does pro-bono work in instructing and training interested groups and individuals in scuba diving techniques, with the conviction that everyone should have the training to enjoy and appreciate life under water.

At the fest, he not only helped with taking a video of the entire event, but also demonstrated some basic skills in scuba diving in a swimming pool. He brought in the scuba equipment for demonstration all the way from Gujarat.
KARWAR ECO-FIELD TRIPS

During the fest, trips were made every day to diverse habitats of the Western Ghats, the Kali estuary and Arabian Sea. The third day was focussed on interactions with the fishing community and only 2 field trips were feasible for the day. The crowd capacity per field trip was fixed at 20 to enable better guidance and instruction by the resource person heading the concerned field session.

The field trips included: 1) A trip on the Kali River estuary to see the mangroves and bird life; 2) Boat trips to observe Indo-Pacific humpback dolphins (Sousa sp); and 3) A trip to a plant farm in the Western Ghats to observe rare and endangered medicinal plants and surrounding bird life.
In preparation for the tours to the Western Ghats, on day 1, Mr. Karthikeyan Srinivasan, Chief Naturalist of Jungle Lodges and Resorts, Karnataka and winner of the 2013 Carl Zeiss Wildlife Conservation Award provided an introductory talk on birds commonly sighted in Karwar and in the greater Western Ghats region. Mr. Ganesh Neverekar from Amrita Herbal Research Centre (AHRC),Karwar, also spoke about the genesis of the AHRC and the type of cultivation that is promoted there, and the ecological and health benefits of the plants cultivated at the farm. A documentary film on
(Facing the crowd) Mr. Ganesh Neverekar and Dr Jaikar Bhandary explaining the flora around AHRC to TIMI-KURM FEST participants

Picture: Bal Mandir School Karwar

Western Ghats (by Sandesh Kadur) was also screened on day two by Mr. Karthikeyan Srinivasan.

Field sessions in the Western Ghats to observe medicinal and aromatic plants maintained by Amrita Herbal Research Centre and resident bird life were carried out on day 1 and 2 of the fest.

The AHRC is located in a forest area protected within the Western Ghats, where rare and endangered medicinal plants are cultivated and preserved. The centre supports a diversity of wildlife including several species of birds, snakes and the elusive black panthers. It undertakes contract farming, which support farmer livelihoods.
DOLPHIN OBSERVATIONS IN NEARSHORE WATERS OFF KARWAR

Mridula Srinivasan

Participants travelled on the Great Outdoors and Jungle Lodges and Resorts boats to observe Indo-Pacific humpback dolphins in near shore waters near Karwar

Picture: Prakruthi Nature Club

The pristine coastal waters around Devbagh and Kali estuary are prime habitat for Indo-Pacific humpback dolphins. With a growing number of human-caused impacts on dolphins including pollution, interaction with fisheries gear and discarded trash/marine debris, increasing vessel traffic comprised of trawler boats and mechanised fishing vessels in Karwar waters, dolphin populations in Karwar are extremely vulnerable. They are an important species and health indicator of the oceans, and awareness of the threats in the coastal waters is critical. Mridula Srinivasan with her rich experience in dolphin research and conservation lead the dolphin watch
trips held on day 2 and 3 of the fest. The Great Outdoors and Jungle Lodges and Resorts sponsored their boats for the educational trips; they also conduct regular dolphin watch trips. The dolphins predictably occur in waters less than 5 kms from shore and often near trawlers or fishing activity. The dolphin trips were the highlight of the festival, with some participants taking 10-hour bus trips from their homes to get on the boat!
MANGROVES IN THE KALI ESTUARY OF KARWAR

Drs. V.N Nayak and Jayakara Bhandary

A slide from Dr. Jayakara Bhandarys presentation

Mangroves are the coastal and estuarine forests which help support breeding of fish, shrimps and crabs. About 80% of the global fish catch are directly or indirectly dependent on mangroves. Dr. Bhandarys presentation revealed Karnataka to be the richest place for mangrove species diversity along the west coast of India hosting 35 species; and Kali estuary is home to 14 of the 15 true species of mangroves. Drs. Nayak and Bhandary well known for their mangrove research and conservation efforts in Karwar, led field rips on mangrove associated fauna and flora. The boats were sponsored by the Forest Department of Karwar.
FISHING VILLAGE INTERACTION:
FORGING RELATIONSHIPS AND SUPPORTING LIVELIHOODS

Meeting of the Timi-Kurm fest participants and Devbagh Village Panchayat and Members

Picture: Nirav Parik

The fishing hamlet of Devbagh is a close-knit group of traditional fishers. It makes one among the few remaining villages of the northern coastal region of Karnataka (Uttara Kannada) that use the environmentally sustainable fishing crafts as the dugout and outrigger canoes, and plank built boats. But the increasing numbers of trawl and mechanised fishing boats around their
fishing areas have reduced fish catches and have put their livelihoods in crisis. As a consequence they are compelled to partner with their ‘competitors’ and engaged in activities that endanger coastal and marine resources. To be sensitized to the issue first hand, rekindle hopes and forge relationships with the fishing community, the fest participants met with the Devbagh fisher community leaders, women and children. Ten solar lamps generously donated by Prakruti Nature Club and Mr. Krishnamurthy from Bangalore were given to students of the fishing community from each of the 5 representative fishing villages the Devbag region as chosen by the community leaders. The 10 lamps are but a small drop in the ocean, as there is a need for over 400 solar lamps – TeMI hopes to fill this gap in 2014 through matching funds and in-kind contributions and 2013 TeMI festival funds. It was a good opportunity for festival attendees to interact with fishing families and hear first-hand about their association with the sea and the daily challenges they face. It was a revealing experience that firmly places humans as part of the marine ecosystem and therefore, critical to wildlife study and conservation.
A PRO-ENVIRONMENT, ECONOMY AND SOCIETY INITIATIVE:

Cultural Shows, Stalls and Local Cuisine from Karwar

Good management of environmental resources is not limited to research, protection and awareness efforts. It includes, often neglected factors as sustaining economy, promoting local traditions, and utilization of locally available resources.

At the fest, we made an attempt to cater to these factors, and included in the programme: traditional dances by local artistes, traditional food prepared by local caterers, and stalls to sell locally produced organic and art items. Promotion and championing locally sourced materials and boosting the local economy is integral to festival goals and will continue in 2014 and in the future.

Below are pictures of cultural shows and some of the unique Karwar products on display at the fest.
The Koli or fishermen dance is local to Karwar, being a place with a mix of Maharashtrian traditions; it tells the story of sea and fishing.

An aromatic extract in aluminium can of the rare plants grown at AHRC
Karwar Ornaments, established in 1997, is a manufacturing unit for handmade silver jewelry in Karwar. It is a centuries old tradition unique to the place. The ornaments made by this unit were on display at the fest.

Upcycled Products

Picture of Recycled Items: Silver Nut Tree
Land trash not only pollutes the land, but pollutes the sea. It is estimated that damage to marine ecosystems from plastics has a financial tag of about US$ 13 billion dollars. Marine debris, comprised of mainly plastic, discarded fishing gear, aluminum cans, etc. are one of the biggest threats to marine ecosystems throughout the world. To promote awareness on this dangerous situation, a talk and display on the use of recycling everyday items was made by Silver Nut Tree an organisation based in Bangalore. It is run by Angeline Robinson and Rituparna Das; Angeline Robinson also gave a talk during the inaugural session, particularly with a focus on the children and youth present at the fest as to how items can be reused and prevented from being dumped in the environment.
Books and Posters

R 1 & 2) Book Picture: Deepak Dalal; Picture of Deepak Dalal
Picture: Nirav Parik/PNC
(L) World Fish Migration Day Poster
Picture: Neethi Mahesh

Good educational material plays a huge role in promoting environmental awareness and conservation particularly among young minds. Deepak Dalal is a wildlife writer whose goal is to captivate school children with India’s great beauty, its landscape, its people, and its wildlife and wilderness areas. He introduced his books through a presentation during the inaugural session of the fest.

Posters bring a quick focus to conveying important information. The world fish migration day poster by Neethi Mahesh raised awareness and appreciation for migratory freshwater fish and riverine ecosystems in India, which are fast depleting.
CONCLUSION

The Timi-Kurm fest is a conservation education programme focussed on the of the coastal communities of India. The fest facilitated collaboration between various environmental professionals and stakeholders from across India, and made them felt invested in the conservation of Karwar’s resplendent, diverse and unique natural resources. The combination of talks and field trips helped enhance knowledge and awareness of wildlife and environmental issues that often fall to the sidelines in the mad rush to get a job. Conservation at the end of the day is about the community, it is about thinking beyond self, and contributing to the greater good. A clean and healthy environment does not just benefit animals, it benefits us as well. The dedicated approaches of different conservation groups, evident from the presentations made, was an added source of inspiration. Nevertheless, an encouraging factor for the future of Timi-Kurm fest was the enthusiasm shown by other regional groups in conducting similar programmes in their concerned localities.

The first Timi-Kurm festival was a success despite organizational challenges and occasional setbacks. We are particularly encouraged by the positive feedback, enthusiasm, and interest shown by the public and wildlife professionals alike. Planning for the 2014 festival has begun and we hope to make up for the challenges experienced in 2013. We hope that there will be larger turnout and avid interest in showcasing India’s beautiful but vulnerable marine and terrestrial biodiversity to grow India’s environmental literacy and commitment for preserving our natural wealth.
Part II

ONGOING AND FUTURE TEMI PROJECTS

2013-2014
The inaugural Timi-Kurm fest 2013 held in Karwar has helped initiate the following conservation and livelihoods projects.

1. DEVBAGH FISHING COMMUNITY LIVELIHOODS PROGRAMME-

This venture is as a result of support from Jungle Lodges and Resorts, which has one of its eco-tourism units operating in the vicinity of the coastal village of Devbagh, Karwar. An alternate livelihood programme to supplement incomes of traditional fishing community in Devbagh is underway. Medicinal plant culture in collaboration with Amrita Herbal Research Centre (AHRC) Karwar and Mariculture in collaboration with Central Marine Fisheries Research Institute (CMFRI), Karwar is currently being explored. From the funds collected and through in-kind donations 10 solar lamps were distributed to the students of a fishing village to aid night studies, and this will continue to be an ongoing venture in support of affected fishing families in Karwar and nearby villages. In the long run, we hope that these actions would make way for enthusiastic conservation of sea turtles, the coasts and marine life by the fishing communities.
Medicinal plant culture at the AHRC, Karwar.
Picture: Mridula Srinivasan

2. ENVIRONMENTAL ACTION AND AWARENESS PROGRAM

Olive Ridley Project team in the Maldives removing abandoned/ghost nets from the sea
Picture: Martin Stelfox/David Balson
This activity engages fishing community and the coastal public in the removal of trash and ghost nets (discarded fishing gear) from the beaches and nearshore areas along Karwar coast and nearby areas. Trash pollutes the sea and kills marine life, as also abandoned nets or ghost nets entrap a lot of marine life such as sea turtles, marine mammals, sharks and rays etc. TeMI partners with the Olive Ridley Project, in understanding the extent of the problem and removal of ghost/ abandoned nets, and in setting up efforts for transforming old fishing nets into useful products along Karnataka’s coast and the west coast of India. The idea is to support livelihood schemes and incentives for traditional fishing communities, which prevents them from discarding fishing gear on the beach or at sea. Through this project and other ancillary research projects, we hope to establish a coastal network of volunteer responders who may attend to a stranding response event involving dolphins, whales, or sea turtles. The stakeholders currently include participants of the 2013 Timi-Kurm fest, including members from the fishing community. Training programs and seminars will be initiated to equip these volunteer responders and advanced responders with the skills to respond to a stranding event.

3. INDEPENDENT CONSERVATION ORIENTED RESEARCH PROJECTS

In an effort to encourage community-based research and conservation action, we are currently supporting two pilot projects, one on river otters in the Kali estuary and the second, on Indo-Pacific humpback dolphins near Devbagh. These pilot studies will lay the foundation for more long-term work, which will improve our understanding of one of the richest ecosystems in the world and inform conservation practitioners in wildlife management.
‘Mavinhole Creek’ with patches of mangroves in the Devbagh Village Area-Karwar,

Picture: Nirav Parik
ACKNOWLEDGEMENTS

Organizing an environmental festival is not a small endeavour. Without the help, resources, and sacrifice of various individuals the event would not have been possible. TeMI owes its thanks to a variety of individuals and institutions in the organisation of the 2013 Timi-Kurm festival. The festival was the result of in-kind contributions by the Jungle Lodges and Resorts, Forest Department of Karwar and Honnavar, Amrita Herbal Research and Extraction Centre, District Science Centre, Great Outdoors Resort, Indian Navy, FSL-India, Prakruthi Nature Club, and many individuals from the academic and NGO community, as well as through monetary contributions by festival attendees from outside Karwar.

Major Sponsors

We are especially grateful to Mr. Anur Reddy, IFS, Managing Director, Jungle Lodges and Resorts for his kind and generous support, which was a big factor in the success of the fest. His dedicated team including Chief Naturalist Karthikeyan Srinivasan and Manager of JLR Devbagh resort, Mr. Karthik, contributed and guided in various capacities, and irrespective of the difficulties encountered, ensured the smooth operation of the fest. Mr. Srinivasan was also resource person for bird life in the Western Ghats and around Jungle Lodges.

Advisors and Well-Wishers

Former PCCF of Karnataka, Shri G.S Prabhu, was unable to be at the fest due to an urgent commitment. But his valuable advice and suggestions were very helpful in organising the event. Current PCCF, Wild Life, Shri. Vinay Lutra gave helpful direction in involving important stakeholders in the fishing community for the fest.
Guests and sponsors

We specially thank Shri T. Heeralal, District Forest Officer (DFO) Karwar, and Dr. Ramesh Shamanna, DFO Honavar, and Mr. V. Hegde, Assistant Director of Fisheries, for being part of the inaugural session and staying through many parts of the program. It was enriching to have their talks from working on the biodiversity, mangroves and fisheries of Karnataka. Dr. Heeralal also permitted the use of the forest department boats during the fest for field visits to mangrove sites located in the Kali Estuary.

We graciously acknowledge the Indian Navy’s enthusiasm, participation and support provided by Admiral C.S. Murthy and Chief Scientific Officer, Captain Kuruparan in organizing the festival. And Cdr. Bhosle was extremely wonderful to extend the naval transport facility on day one of the fest for field trips to the Western Ghats.

The Great Outdoors Resort boats, (in addition to the Jungle Lodges boats) were used for dolphin watching trips. We are thankful to Mr. Suresh Mathias, for being extremely gracious, and providing us with the amenity.

The District Science Centre enabled the use of their hall and premises for the fest. Dr. V.N Nayak, Coordinator of the District Science Centre and his staff extended all help within the facility, and helped arrange for local caterers in the fest. Dr. Nayak was also resource person for mangroves fauna, and his enthusiasm also facilitated greater participation of public and media from Karwar. We are very grateful to all the help and service rendered by Dr. Nayak and his staff at the District Science Centre.

Amrita Herbal Extracts and Research Centre has helped immensely all through in the organisation of the fest. We thank Mr. Ganesh Nevekekar, Director of the Centre for all logistical help, putting up a stall, sponsoring mementos of aromatic extracts, and in being part of the resource team for Western Ghats.
FSL-India facilitated outdoor presentation facilities, and hosted a group of volunteers who were part of the resource team for sea turtles. We thank Rakesh Soans, President of FSL-India for his whole hearted cooperation, facilities and financial support.

The Prakruthi Nature Club (PNC) from Gujarat along with NC Krishnamurthy from Bangalore sponsored 10 solar lamps for students of the fishing community. Swati Kittur from Delhi has contributed for 2 solar lamps for the 2014 Timi-Kurm fest distribution. PNC along with Nirav Parik, a filmmaker and Scuba diving instructor from Gujarat, helped document the fest through photos and videos. Nirav Parik in addition to providing funding support, was a resource person for the scuba diving demonstration. We are grateful to all of them for their kindness, dedication, contributions and moral support.

We thank the fishing community of Devbagh region, Karwar for meeting with the fest participants on the 3rd day and hosting participants at their village. We are very grateful for their hospitality and kindness, and for their willingness to engage with TeMI on livelihood supporting initiatives.

Resource Persons and Partners

We are grateful to Dr. Jayakara Bhandary from Government Arts and Science College, for being the chief resource person on mangrove flora. We are grateful for his presence, participation and expertise as he has extensively studied mangroves in the Uttara Kannada region of Karnataka. He also generously agreed to be the Master of Ceremonies for the inaugural session of fest.

Cdr (Dr) Arnab Das from Defense Research Institute, Pune showed amazing dedication in spreading awareness about noise impacts on marine mammals. He volunteered and travelled down from Pune and made two rounds of talk at different venues of the Timi-Kurm fest to address different participants. We are extremely grateful to Dr. Das and to Puja Mitra from
PACT Goa, for facilitating the participation of Dr. Das at the fest.

C. Samyukta from Humane Society International (HSI), spread awareness on the recent ban on finning of sharks, which was an eye opener for the coastal community of Karwar and surrounding areas. She has also been instrumental in connecting TeMI with significant stakeholders in conducting the fest. We are extremely grateful for her participation and help.

We are appreciative and thankful to the following people who despite many constraints participated in and contributed to the fest: Mr. Ravi Pandit from Canada Green Academy - part of the resource team for turtles; Deepak Dalal, a children's writer from Wild India, Pune-presented on wild books for children; Neethi Mahesh from ATREE-displayed poster on fish migration; Drs. J. Rathod and Shivkumar Haragi from Department of Marine Biology-were resource team for fishing by catch and marine mammal strandings; and Sushila Mendonca and her daughter from Goa took pictures for the fest.

Abhishek Jamalabad (TeMI) provided valuable logistical assistance in the organisation of the fest; Anant Pande, researcher with WII, was unable to be at the fest, but offered many valuable inputs in preparation of the Timi-Kurm fest flyer. Resident families of Karwar, such as of Mr. D.R Nayak and Drs. Digamber and Mangala Anvekar, Savita Anvekar, and the Nilavar family of the Amrut Hotel Group were unable to participate in the fest, but their support, help and hospitality rendered in the past, have been an additional source of inspiration in organising the fest in Karwar. We are grateful to all for the role they played and support provided over the years.

Tarang Resorts provided accommodations and hosted some fest activities as well. We are grateful for their in-kind support and help provided. The Syndicate Bank of Karwar has been a well-wisher of the fest and we earnestly hope to avail their help in future.
Information Portals and Media

We sincerely thank the Indian Ocean-South-East Asian (IOSEA) Marine Turtle Memorandum of Understanding, Marine Mammal Network of India, Andaman Nicobar Yahoo Groups, India Wilds Magazine, Sanctuary Asia and India Water Portal for being among the first groups to spread the word about the event through their dedicated websites and social media.

We also thank the media persons from Indian Express, Deccan Chronicle, Deccan Herald, and local TV channels of Karwar for their coverage of the events and communicating the educational and conservation focus of the festival to the larger coastal community in India.

Participants

Despite short notice, we had good participation from the people of Karwar, and from public and stakeholders representing the coastal states along the east and west coasts of India. We are deeply grateful to all of you, and for the commitment and efforts made in participating in the 2013 Timi-Kurm fest and look forward to a larger presence for the 2014 fest.
APPENDICES
COMPLETE LIST OF INDIVIDUAL SPONSORS, PARTNERS, AND CONTRIBUTORS

- Shri P. Anur Reddy, IFS Officer and Managing Director of Jungle Lodges and Resorts
- Former PCCF of Karnataka, Shri G.S. Prabhu
- PCCF, Wild Life, Karnataka, Shri Vinay Lutra
- Shri T. Heeralal, District Forest Officer – Karwar
- Admiral C.S. Murthy, Indian Navy-Karwar
- Captain Kuruparan, Indian Navy –Karwar
- Shri V. Hegde, Assistant Director of Fisheries, Karwar
- Shri Dr. Ramesh Shamanna, District Forest Officer – Honavar
- Mr. Jignesh Gohil and Mr. Dinesh Goswamy, Prakruti Nature Club, Gujarat
- Mr. Nirav Parikh, Wildlife Filmmaker & Scuba Diving Instructor, Gujarat
- Mr. Ganesh Neverekar, Amrita Herbal Research Centre
- Dr. V.N. Nayak, District Science Centre, Karwar
- Dr. Bhandary, Government Arts and Science College, Karwar
- Mr. Rakesh Soans, FSL-India
- Mr. Ravi Pandit, Canara Green Academy, Sirsi, Karnataka
- Mr. Karthikeyan Srinivasan, Chief Naturalist, Jungle Lodges and Resorts, Karwar
- Mr. Karthik, Jungle Lodges and Resorts, Karwar
- Mr. Suresh Mathias, Great Outdoors, Karwar
- Cdr. (Dr.) Arnab Das, Indian Navy
- Mr. Krishnamurthy NC, Bangalore
- Ms. Swati Kittur, Delhi
- Ms. Sushila Mendonca, Goa
- Mr. Gopakumar Menon
- Ms. Roshini, and Ms. Preeti, Goa University
- Mr. Prabhakar, St. Joseph’s University, Bangalore
- Mr. Deepak Dalal, Children’s Writer-Wild India, Pune
- Ms. Shaila Faleiro, Best Practices Foundation
- Ms. Neeti Mahesh, ATREE
- Ms. Hamsa Iyer, India Water Portal, Mumbai
- Ms. Samyukta Chemudupati, Human Society International
- Ms. Rituparna Sen and Ms. Angeline Robinson, Silver Nut Tree, Bangalore
- Dr. Mahabaleshwar Hegde, Namati-India and Goa University
- Dr. Shivakumar Haragi, Karnatak University
- Dr. Rathod, Karnatak University
- Mr. Hemant, Dayanand Jadav, Tarang Resorts, Karwar
- Ms. Puja Mithra, PACT, Goa
- Mr. Abhishek Jamalabad, TeMI and India Wilds Magazine
- Mr. Anant Pande, Wildlife Institute of India, Dehradun
- Mr. Pankaj Sekhsaria, Andaman & Nicobar
- Mr. Bittu Sehgal, Sanctuary Asia Magazine
- Mr. Sabyasachi Patra, India Wilds Magazine
- Mr. Kumaran Sathasivam and Mr. K. Natarajan, Marine Mammal Conservation of India
- IOSEA-Turtles: Indian Ocean South East Asian Marine Turtle Memorandum of Understanding: www.iosea.org
FESTIVAL AGENDA
“Timi-Kurum (Whale-Turtle) Festival”
October 18, 19th, and 20th, 2013
Schedule of Events

- Registration and Payment Counter will be open all days of the fest
- Exhibition of locally produced items will be held parallel on all days of the fest.
- Sign up to be a Timi Kurum Fest Volunteer at Registration Desk

Day 1 – October 18, 2013

Venue: District Science Centre, Karwar

9:00–10:00AM BREAKFAST and REGISTRATIONS

10:00–10:15AM
Welcome Address – Director-TMRI and, Co-ordinator-District Science Centre

10:15–10:25 AM  Lighting of the Lamp & Song

10:25 - 11:00 AM
KEY NOTE ADDRESS AND GUEST PRESENTATIONS SESSION I
I. Key Note Address – Jungle Lodges-Karnataka/District Science Centre
II. Inaugural Address - TMRI
III. Guest Talks-Forest Department and Government Representatives

11:15-11:45AM COFFEE/TEA BREAK and Cultural Shows

11:45 AM -1:30PM (10 mins each)

GUEST PRESENTATIONS SESSION II

I. Dr. V.N Navak- Mangrove Flora
II. Dr. Jaikar Bhandary- Mangrove Fauna
III. Syndicate Bank, Karwar- Coastal Issues
IV. Ms.Samyukta Chemudupati- The Ban on Shark Fins
V. Mr. Rakesh Soans-Sea Turtle Awareness Efforts
VI. Mr.Ravi Pandit- Sea Turtle Hatchery Programmes
VII. Mr. Karthikeyan Srinivasan- Bird Life of Karwar
VIII. Mr.Ganesh Navekar- Plants of the Western Ghats
IX. Mr.Deepak Dalal, Wild India, Children’s Writer’s Perspective
X. Ms. Dipani Sutaria- Dolphins along the West Coast
XI. Ms.Angeline R- Creation of Art from Waste

1:30-2:30PM LUNCH

2:30-4:30PM

FIELD TRIPS AND SCIENCE PRESENTATIONS (CONCURRENT SESSIONS)

- Guided Trip to Western Ghats for observation of cultivated aromatic, endangered, and medicinal plants.
- (Indoor) Introduction to Sea Turtles and Marine Mammals (Talks and Videos. Educational Skit by FSL-India) Drs. Annie Kurian and Mridula Srinivasan; FSL-India and Canara Green Academy

4:30-5:30PM COFFEE/TEA BREAK, STILL VISITS, AND ANNOUNCEMENTS
**END OF DAY 1**

*Day 2 - October 19, 2013*

**Venue: District Science Centre/ Tarang Resorts, Chittakul, Devbag**

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**7:30-8:00AM BREAKFAST**

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**8:15-10:15AM**

**FIELD TRIPS**

*Gather at assigned site to depart for field trips @ 815 AM*

- Field Trip #1: Dolphin watch boat trip near Devbag
- Field Trip #2: Mangrove tour in the Kali estuary
- Field Trip #3: Birding and Insect life in Devbag Forest
- Field Trip #4: Guided trip to the Western Ghats for observation of cultivated aromatic, endangered, and medicinal plants.

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**10:15-10:30AM REFRESHMENTS**

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**10:30AM-1:30PM**

**SCIENCE FOR CONSERVATION PRESENTATIONS**

- Anthropogenic Noise and its impact on Marine Species - **Cdr(Dr) Arnab Das**
- Primer on marine mammal and sea turtle strandng response (Talk and Videos) **Dr. Mridula Srinivasan**
- Documentary Film Screening on Scuba Diving - **Nirav Parikh**
- Demo on Scuba Diving at the swimming pool

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**1:30-2:30PM LUNCH**

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2:30–4:30PM

SCIENCE PRESENTATIONS

- Western Ghats- Screening of documentary- Karthikeyan Srinivasan
- Whale Sharks off Gujarat, India (Talk and Videos) Dinesh Goswamy and Jignesh Gohil, Prakruthi Nature Club
- Screening of Documentary on Lions made by Filmmaker, Nirav Farik

Day 3 - October 20, 2013

Venue: Tarang Resorts/ DSC

7:30–8:15AM BREAKFAST

8:15–10:30AM

FIELD TRIPS

Gather at assigned site to depart for field trips @ 8.15 AM

- Field Trip #1: Dolphin watch boat trip near Devbag
- Field Trip #2: Mangrove tour in the Kali estuary

10:30–12:30 pm (Refreshments Provided)

- Visit to Devbag fishing village
- Cultural programmes and viewing of nature-themed sand sculpture exhibits on the beach

12:30–1:30pm

- Concluding Remarks, Discussions, Certificate Distribution & Acknowledgments

1:30–2:30PM LUNCH and STALL VISITS

**END OF 2013 Tepad Kurn Festival**
TIMI-KURM FEST FLYER
Timi-Kurm Festival 2013

October 18th, 19th and 20th at Karwar, Uttara Kannada

A COASTAL AND MARINE LIFE AWARENESS FESTIVAL OF KARNATAKA

In support of Fishermen Livelihoods, Marine Life and Western Ghats Conservation

Organised By Terra Marine Research Institute, India

In Partnership with Jungle Lodges and Resorts, Karnataka, District Science Centre-Karwar and Amrita Herbal Research Centre, Karwar
FESTIVAL BROCHURE
The Timi-Kurm Festival is a unique event that brings together people from various walks of life to understand a common cause – the importance of protecting Karwar’s unique natural resources and joining forces to sustain the livelihoods of disadvantaged communities at the event but in the future as well.

It Aims to:

1) Educate and spread public awareness about Karwar’s natural wealth, wildlife diversity – marine and coastal, fishing community concerns and practical solutions to resolve environmental challenges within the Karwar context.

2) Provide a venue for a diverse group of environmental professionals and stakeholders across Karnataka’s coast to build an environmental coastal network to address coastal conservation issues by sharing resources, lessons learned, and scientific information. To engage in environmental education and protection programmes that includes the Western Ghats and Coasts. Ghats, Urban and Beach clean ups, afforestation programmes and response to marine mammal and sea turtle strandings.

3) Provide a platform for under-represented communities such as – Artisanal fishermen, Small-scale Organic Farmers/industries, and Rural Artisans to exhibit and sell their products, farm produce, and skills. Additionally it will also help them connect with the outside world and potentially lead to sustainable ways to enhance their livelihoods.
4) Help the young and old in Karwar connect and nurture an interest for protecting their natural world, meet specialists in the field, and be exposed, trained and educated for future conservation and research.

**Activities and Sessions**

- **Eco-field trips to Expose and Educate** — 1) Marine mammal observations in the beautiful offshore waters of Karwar 2) Birds and Insect Life observations in the Devbag Coastal Forest 3) Trip into the islands of the Kali River Estuary for Mangrove observations 4) Trip up the Western Ghats for observing wild and reared endangered medicinal and aromatic plants 5) Indoor and Outdoor sessions on Sea Turtles and their nesting places.

- **Plastic trash pick-up** during eco-field trips.

- **Environmental Documentary Films** and Question & Answer sessions with specialists in the field.

- **Session on Stranding of Marine life-Whales, Dolphins, Sea Turtles**

- **Exhibition and Sale** of nature based local-rural arts and crafts that are ecologically sustainable, and **Organic Farm Produce** to help Karwar's Fishing and Small scale agricultural communities.

- **Environmental awareness events for children and young adults.**

- **Cultural Shows** by Local Dance Artistes and Local Fishing Community on Karwar's Coastal traditions will be showcased.

- **Traditional Food** of the Fishing and Agricultural Communities of Karwar.
Additional Information:
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Karnataka, India
Email: terramarineinstitute@gmail.com
www.terramarineresearchinstitute.wordpress.com
Facebook: https://www.facebook.com/temiIndia