

Dakshin Foundation Annual Report

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Envisioning Conservation

Human societies across the world face the challenge of trying to reconcile developmental imperatives and nature conservation. In the globalised world, every interaction between and within communities, citizens and the state produces an additional layer of complexity to perspectives, ideas and visions about lifestyles, limits of development, and governance.

A biologically degraded planet demonstrates that the powerful and dominant visions of human development are not just antithetical to the idea of healthy environments for all, but are principally socially contested visions. The threats that these views of nature pose to biological diversity in particular are well-documented and acknowledged by scholars from a range of disciplines. The growth of the global conservation movement has led to several measures that have had some positive consequences for nature, but also concomitant negative consequences for communities that are dependent on natural resources. In many instances, the narrow definitions of development are now competing with equally narrow definitions of nature and its conservation, both contributing to greater inequality and social injustice.

The challenge of conserving our environment is therefore one that necessitates an active engagement with social justice, where conservationists accommodate expertise that transcends disciplinary boundaries, and where reforms to conservation frameworks are addressed as collective mobilisations towards social reform. Since its inception in 2008, Dakshin has grown to become a space that nurtures and supports initiatives towards such social change.

We are fortunate that our work is carried out largely in coastal, marine, and to a lesser extent, mountain ecosystems with a diversity of social groups. These 'upside-down' worlds challenge the commonplace, the usual, and the tried and tested. The tenuous and delicate relationships, networks and dependencies in coastal and marine ecosystems are mirrored by human communities living along the Indian coastline. Such a social-ecological workspace demands adaptive and dynamic approaches to strategies, knowledges, attitudes and our relationships with the world. We therefore consider it an advantage that our work is located in environments and societies that have long been labelled as unknowns, unfamiliar, and remain outside the frame for much of society.



Aarthi Sridhar
Director, Dakshin Foundation



Environmental
Education
Programme



Programme on
Reconciliation
Ecology



Communities &
Resource
Governance
Programme



Biodiversity &
Research
Management
Programme



Locating Dakshin

Dakshin Foundation (DF) locates its philosophies, approaches and programmes at the crossroads of India's conservation and development paths. Adopting an affiliation to the global South encourages us to focus on the influences, nature and consequences of pursuing either path for India's peoples and habitats. The ideals of 'sustainability', 'knowledge' and 'development' that societies strive towards are however not easily understood or explained. Recognising their plural and dynamic meanings, members of Dakshin have worked over the last decade on a range of conservation and developmental concerns, in both terrestrial and marine systems, through research and intervention.

Dakshin Foundation works in a mosaic of land- and seascapes that are social-ecological in nature. They range from habitats bearing and exerting a low social-ecological influence or pressure (such as forest villages), to spaces that bear and exert heavy pressures (such as urban cities). The social influence encompasses policies, social institutions, and processes such as technology and culture. The ecological impacts of these systems influence the health of populations, the maintenance of biodiversity, genetic variability and ecosystem services. The operation of the dominant paradigms of conservation and development

contributes to the severance of delicate relationships between humans and their environments at varying scales. It has exaggerated the negative association between areas of human growth and development (like cities) and biological diversity. These paradigms have also fuelled the alienation between people and their environments even in biologically rich landscapes, often through violent means such as displacement, industrialisation, mechanisation and environmental degradation.

The most severe failure in India's environmental governance frameworks covering diverse political spaces, is the failure to integrate the social, and the ecological. Dakshin endeavours to influence environment and nature conservation in this direction, to articulate a conservation agenda that stems from integrated philosophies. Our sites of work are distributed between mountain systems and coasts with our programmes straddling these biologically diverse and fascinating ecosystems.

Approaches

Combining our skills in the disciplines of the natural and social sciences, the following approaches guide our work:

- a Adopting a pluralistic approach to knowledge;
- b Developing practical insights for

conservation solutions that use bottom-up approaches;

- c Basing our research and interventions at different sites on interdisciplinary methods;
- d Working through collaborations and partnerships with government and non-government organisations, guided by democratic principles;
- e Adopting multi-scalar and multi-site reconciliation frameworks in devising biodiversity conservation interventions.

Programmatic goals

Dakshin Foundation's mission is carried out through a range of programmes that cover marine and terrestrial systems. The overall goals of our programmes are:

- 1 To add to the body of disciplinary and scientific understanding related to social-ecological systems through cutting edge biological research;
- 2 To promote the understanding of communities and the governance of natural resources through quality social science research and field-based actions which are participatory, democratic and socially just;
- 3 To create and support collaborative platforms and networks towards biodiversity conservation and environmental justice;
- 4 To facilitate the transmission, communication and sharing of knowledge between various social actors.

Biodiversity and Resource Monitoring Programme



Fisheries
monitoring in the
Andaman Islands

Fisheries
resource
monitoring in
Karnataka

Fish catch
monitoring in
Muttukad Lagoon

Monitoring
leatherback turtles
in the Andaman and
Nicobar Islands

Community-based
baitfish monitoring
in Lakshadweep

Long-term
monitoring of olive
ridley turtles in
Orissa

Biodiversity rich ecosystems such as the Western Ghats or the coastal and marine ecosystems of the mainland and island groups provide extensive benefits in terms of goods and services to communities that live in and around



them. However, as is the case with most tropical hotspots, increased rates of deforestation, over-exploitation and biodiversity loss mark these regions. These natural resources and ecosystems play a complex and vital role in supporting local livelihoods and

economic prosperity for distant human societies as well. To characterise the survival and recovery of ecosystems and to manage and sustainably utilise these resources, we need to draw on the disciplines of population biology, community ecology, biogeography and a range of other ecological sciences. The Biodiversity and Resource Monitoring Programme focuses on both the theory and practice of these sciences.

Our applied scientific research will aim at filling some of the critical gaps in our current knowledge of mountain and marine ecosystems. Through long-term monitoring of select ecosystems, our research aims to advance our understanding of the patterns and processes that maintain ecosystem function and ecosystem resilience to anthropogenic stress and climate-induced changes. Long-term monitoring programmes that help understand the impacts of human and nature-induced variations can then inform management decisions.

The challenge for conservationists in human dominated land- and seascapes is to conserve biodiversity without compromising local livelihoods or the principles of environmental and social justice. Recent efforts in this

direction have led to the emergence of participatory and community-based approaches to conservation. The participation of non-experts and lay persons in conservation endeavours, especially through community-based monitoring of resources, serves to strengthen the integration of communities in decision-making and governance. In combination with environmental education and outreach, such interventions help build a larger constituency for conservation.

In addition to conventional ecological research, our projects under this programme aim to facilitate greater involvement of various social groups at the village level, and community-based organisations in monitoring natural resources, while promoting a deeper and wider appreciation of historical and ongoing changes in resource use. These projects address biodiversity and development concerns at different scales at our field sites including coastal areas in Orissa, Karnataka and Tamil Nadu, as well as in the Lakshadweep and Andaman and Nicobar islands.

Long-term monitoring of sea turtles at the Rushikulya mass nesting rookery, Orissa

Rushikulya, in southern Orissa, is one of three mass nesting rookeries for olive ridley sea turtles in Orissa. These sites represent the only mass nesting beaches for ridleys outside Central America. This rookery was brought to the attention of the conservation community in 1994 and has since been subject to a number of regulatory actions by the government, research projects by scientists, and conservation interventions. Dakshin's researchers have been associated with this area over the past decade, conducting biological research and training of community-based conservation organisations, local youth groups, and forest department staff. This site has been monitored regularly since 2007 when a comprehensive long-term monitoring project was initiated with the following broad objectives:

- To monitor sea turtle populations at this site through a census of mass nesting events, mortality and hatching success;
- To monitor environmental change by monitoring temperatures and beach profiles;
- To train local organisations and Orissa Forest Department staff in undertaking long-term scientific monitoring of the turtle population, shoreline changes, and climate change impacts.

Regular monitoring of the nesting beach has been carried out over the last 5 years. All mass nesting events during this period have been censused using a standard technique that can be compared with other sites worldwide. Research has also focussed on the possible impacts of climate change on hatchling sex ratios, since sex is determined by incubation temperature in sea turtles. Approximately 30 nests

transect-based methods. In-water surveys provide information about the location and movement of turtle congregations, and an alternate metric for assessing long-term trends in populations.

In addition, we interact regularly with the local forest department and conduct training programmes for their field staff on methods of carrying out the mass



are relocated to a hatchery each year to monitor incubation temperatures (using data loggers) and to collect dead hatchlings for sexing.

In 2010, offshore monitoring of turtle congregations was initiated using

nesting census and for the maintenance of hatcheries. A pictorial manual has been produced to assist field and forest department staff in carrying out the census.

Monitoring and conservation of leatherback turtles and their habitats in the Andaman and Nicobar Islands

In collaboration with the Andaman and Nicobar Environmental Team (ANET), the Centre for Ecological Sciences (CES), Indian Institute of Science, and the Madras Crocodile Bank Trust (MCBT), Dakshin has developed a

Very little is known about the status of leatherback populations from Indian waters, barring recent work by ANET on Great Nicobar Island, and the surveys conducted by the CES, Dakshin and ANET on Little Andaman

Andaman group of islands – namely, West Bay and South Bay beaches on Little Andaman Island. West Bay has been monitored for the entire season since 2010, with about 100 – 150 leatherback nests counted per season. With support from the Indian Space Research Organisation (ISRO) and the Space Technology Cell, Indian Institute of Science, Bangalore, a satellite telemetry study on the leatherback turtles of the Little Andaman Island was initiated in 2010. Satellite transmitters have been deployed on a total of six turtles and updates and results of the study are available online at www.seaturtle.org.

The prime leatherback turtle nesting beaches in the Nicobar Islands were severely affected by the December 2004 earthquake and tsunami in the Indian Ocean. Though there is little information on the status of these nesting beaches, surveys have revealed that new beaches have formed and nesting is occurring once again in this region. Dakshin is extending our leatherback monitoring programme to cover the island groups of the Nicobars as well.

long-term monitoring and conservation programme for sea turtles of the Andaman and Nicobar Islands, in particular for leatherback turtles. The programme also has a strong focus on developing networks for conservation in the region and a long-term education and outreach programme to sensitise government authorities and local communities on conserving sea turtles and their habitats.

Island. Given recent population declines of leatherbacks in the Pacific, it is imperative to monitor trends in populations of these turtles in the Andaman and Nicobar Islands. During January – April 2008, a monitoring programme was initiated on Little Andaman Island. Since then, the programme has successfully completed five years of monitoring of two of the most important nesting beaches in the



Community monitoring of baitfish in the Lakshadweep Islands

Oceanic tuna, which account for over 70% of Lakshadweep's fish landings, are caught using pole and line fishing which uses live bait. In addition to its economic benefits, a sustainable commercial oceanic tuna industry helps keep fishing pressure on coral reefs at minimal levels. This unique tuna fishery is directly dependent on the quantity of around 40 species of baitfish harvested from the lagoons of this island chain. These species are important planktivores in coral reef ecosystems and their removal may have ecologically significant consequences. The impacts of baitfish fishery in these island systems are poorly understood even though concerns of declining catch have been voiced since the mid 1960s. In recent years, fishermen have blamed various factors for declining baitfish populations, including increasing turtle densities, increasing fisher densities, and reef and seagrass habitat loss.

Despite community concern and interest, no continuous monitoring or promotion of sustainable use of baitfish resources has been undertaken. There is also concern that new fishing methods such as long lining, which have a high level of by-catch, are being introduced in these waters. This could pave the way for loss of local livelihoods in these islands. With the



involvement of local fishermen, our project aims to carry out an assessment of baitfish population dynamics and simultaneously design a long-term community-based monitoring programme that will enable fishing communities to evaluate the status of their own baitfish resources.

Through such an intervention we not only gain a better understanding of baitfish populations in the Lakshadweep archipelago against physical, ecological and anthropogenic stressors, but we also highlight the delicate linkages such populations have on the economy of the region. By partnering with local fisherfolk in our research and monitoring activities



we aim to strengthen the engagement and capacities of local fishers in tracking the health of their coastal waters, eventually extending these monitoring exercises to other marine resources in the islands. This project is additionally funded by Rufford Small Grants for Nature Conservation. Surveys and interviews with fisherfolk in the Lakshadweep archipelago will commence in mid-2012 and in-water surveys will be initiated at the end of the monsoon.

Monitoring fish catch in the Muttukadu Lagoon

Lagoons are highly productive ecosystems and provide a range of social and ecological services. They are rich breeding grounds for a number of marine species, regulate flooding, provide protection from storms and are sites of aesthetic beauty. Many of India's lagoons are degraded due to a range of factors such as land-use change, pollution, over-harvesting of fresh water, overfishing and unregulated coastal development. Understanding and conserving these ecologically sensitive regions is critical. It is equally important to demonstrate to decision-



makers the importance of lagoon and estuarine systems for local communities and highlight the rapid destruction of these delicate social-ecological systems.

Dakshin aims to work on these issues in its fisheries monitoring site

in the Muttukadu lagoon – one of the eight important lagoon systems on the east coast of India. Situated near Mamallapuram, Tamil Nadu, the lagoon is the site of a brackish water research station and the marine biodiversity and ecological values of this region are well-documented. In the first phase of our monitoring programme we focus on fish catch composition from small-scale fisheries in the lagoon, undertaken by a local fishing community. This community supplies nearly all its fish to the Madras Crocodile Bank Trust (MCBT).

MCBT was set up in 1976 for the conservation of crocodylian populations in India and is one of the largest reptile zoos in the world. Since its inception, MCBT has been procuring fish from the fishermen of Vadanameli village as food for the reptiles in the park. There has been a sustained demand for fish at MCBT and the fishermen of Vadanameli supply their entire catch to MCBT. However, from a daily catch of 800 kg initially, fish catch in recent years has decreased gradually to less than 100 kg a day. This decline in availability of fish impinges on the nutritional requirements of the reptiles at the zoo and has affected the livelihood security of the fisherfolk of Vadanameli. The local fishermen attribute this decline in fish catch to

the degrading health of the lagoon and recent land-use changes in the region.

As a collaborative venture with MCBT, Dakshin has initiated a long-term monitoring programme that aims to identify the causes of decline in fish productivity of the Muttukadu lagoon. By creating a simple and easy-to-use data collection protocol for MCBT's volunteers and interns, we intend to create long-term data on fish productivity of the Muttukadu lagoon, their diversity, distribution and seasonal variations. In addition, the monitoring programme will attempt to understand long-term changes in land-use patterns around the lagoon, monitor pollution levels and understand its impacts on fish communities. This information will be critical in identifying the reasons that have led to the decline of fisheries in the Muttukadu lagoon and future actions to redress this situation.

In the second phase of the project, we will share the findings of the volunteer run monitoring programme with the fishers of Vadanameli village. We intend to develop mechanisms of community-based monitoring with the requisite capacity building and skill sharing, in partnership with MCBT.

Monitoring fisheries in the Andaman Islands

The Andaman and Nicobar Islands have rich marine resources that support a range of fisheries across the length of the islands. Fishers from different parts of India have been settled in these islands as a result of which there is a diversity of fisherfolk communities in this region. Each community employs different fishing crafts and nets to target distinct groups of marine resources. The islands are thus characterised by multi-faceted fisheries, each demanding its own unique management approach.

The collapse and subsequent closure of the shellfish and *bêche-de-mer* fisheries were important landmarks in the history of these islands' fisheries management. The latter fishery catered solely to foreign markets, and even today a significant proportion of the landed fish stocks are exported to Southeast Asia. The enthusiastic promotion of newer technologies such as the live fish trade, long lining and the unchecked growth of specialised fishery like grouper trade, now threatens to dominate most of the islands' fisheries. Updated and in-depth information is however, not available on the status and impact of each of the diverse fishing practices on the marine ecosystem and livelihoods of various fisher categories. Fisheries regulations are not sensitive

to the nuances of the islands' multiple fishing cultures and practices. The need to develop a monitoring programme on the islands' fisheries to design relevant interventions has been expressed by many agencies concerned with these ecosystems.

In collaboration with the Andaman and Nicobar Islands Environmental Team (ANET), Dakshin is developing a monitoring protocol and profile of the fisheries in the Andaman group of islands. The profile aims to characterise the fisheries in terms of the geographical and ecological zones of influence exerted by different fishing communities, following historical and current patterns of utilisation of key groups of species. Our interviews with fishing communities seek to identify prominent fishing grounds where reef and fish stock health might be assessed. Surveys of markets (both local and export), will shed much needed information on the economic drivers of the fishery in this region. Surveys of fishers' perceptions and arrangements for participatory monitoring and co-management will also be explored.

A field survey was undertaken in December 2011, where researchers from Dakshin and ANET visited some of the major fishing villages

and landing sites in North, Middle and South Andamans. Interviews with fishermen helped us identify future research and conservation



targets in fisheries management in these regions. We hope to regularly build on this fisheries profile through periodic monitoring, in order to generate information necessary for planning sustainable solutions for the islands' fisheries. An important component of this exercise would involve the monitoring of populations of commercially important fish species and other potential ecological indicators.

Fisheries resource monitoring in Karnataka

Historically referred to as the 'mackerel coast', Karnataka contributes significantly to India's seafood industry. However, if one were to look beyond the benchmarks of 'total catch' and 'Mean Sustainable Yield', a different picture of its fisheries emerges. The characteristics of present-day fisheries in Karnataka shows not just an overall decline in key commercial species, but a marked increase in by-catch

the operation of other political and economic influences which affect resource exploitation emerges. In order to initiate an open debate on managing the state's fisheries amongst fisherfolk representatives, fisheries scientists and key fisheries officials, Dakshin organised a 3-day workshop for participants from the three coastal districts of Karnataka, representatives from Goa

among various categories of fishers about the 'burning issues' in Karnataka's fisheries management. Other objectives were to identify the role that various entities in fisheries (such as women vendors and financiers) could play in sustaining the fishery resource, and to debate management options such as co-management arrangements attempted elsewhere. The last day of the workshop was a field exercise on fisheries monitoring, where participants attempted to obtain fisheries-related data and examined the different ways of understanding and interpreting data with the assistance of fishers themselves.

Following these initial dialogues, Dakshin and the College of Fisheries, Mangalore are embarking on developing a taluka-level community-based fisheries monitoring programme in the Dakshin Kannada district. The project aims at identifying specific practical steps towards developing a co-management framework where fisher associations are engaged in monitoring key aspects of their own activities.

production, mechanisation and over-capacity of craft and gear in all sectors. These traits are paralleled by social tensions within its fishing communities and with fishers from the neighbouring maritime states.

In examining the fisheries management policies and practices within Karnataka,

and the North Malabar districts of Kerala. The workshop was organised in collaboration with the College of Fisheries, Mangalore with funding support from the National Fisheries Development Board, Hyderabad.

The main objective of this workshop was to initiate a process of dialogue



Communities and Resource Governance Programme



Development of communication tools with fishing communities

Advocacy support to the National Coastal Protection Campaign

Community monitoring towards resource management

Governance and leadership in fishing communities

Many ecosystems in the developing world are sites of conflict between notions of development and conservation and between ideas of modernity and tradition. Many governance frameworks for such ecosystems are vulnerable not just to these abstract contentions but also to physical challenges such as climate



change, sea level rise and increased resource demands. Often, these abstract and material conflicts combine with troubling consequences.

A poor policy framework is seen as a limiting factor in dealing with such conflicts, but frequently, the poor

involvement of citizens in resource governance negotiations is known to exacerbate social conflict. The legacy of resource laws framed in feudal and colonial contexts does not advocate approaches that are democratic or even socially just. Numerous clashes over wildlife conservation, forests rights and utilisation, and land acquisition persist as a result of the contested nature of these frameworks. Through our programme, we aim at reversing this approach to resource management, ensuring that community rights in governance processes are enhanced through legal reform and through the active participation of local communities in resource management. For a more meaningful and coordinated response towards improved resource management, and to remodel and reconcile conservation and development, research initiatives and conservation interventions need to be undertaken through partnerships with civil society networks. Strengthening civil society networks in negotiating conservation and development goals is necessary to optimally utilise democratic spaces. This also ensures the consolidation of a range of skills and capacities, often necessary for citizens to effectively engage with the state.

The Communities and Resource Governance Programme supports a range of research and policy analyses that aim at a critical appraisal of legislations and their implications for specific communities and ecosystems. This programme believes in actively re-creating social and legal frameworks where communities empowered with knowledge and capacity can take informed decisions with regard to the management of their natural resources and other aspects of their societies. We work with a range of national and state-level networks to further these goals.

Recognising the need for plurality of knowledge in decision-making, our projects under this programme are guided by local knowledge and community processes which shapes our understanding of problems and solutions regarding resource management.

Governance and leadership in fishing communities of Ramanathapuram district, Tamil Nadu

This study enquires into existing frameworks of coastal governance and the legally mandated spaces for community participation in coastal regulation. The robustness of local traditional authority with strong leadership is often deemed a critical foundation for successful local marine resource management. Such leadership has a direct bearing on community welfare and function, the distribution of responsibilities and entitlements, transfer of knowledge and legitimacy of regulations. The nature of leadership and governance systems among fishing communities is largely unstudied in India.

There are ongoing debates about whether community representation in environmental procedures or development schemes is democratic, participatory or accountable enough. The language of reform in environmental laws or development programmes emphasises greater participation of citizens, multi-stakeholder partnerships and greater accountability. The process of electing or selecting a representative to perform on behalf of a community is important. However, it is equally

important to examine the implications of these putative ‘community empowerment’ provisions on the welfare of the community. Differences are bound to arise in the legitimacy enjoyed by elected or traditional leaders and new legally mandated representatives. The emergence and function of this new legion of elites among fisher communities needs attention. It is therefore important to analyse the process and status of traditional governance structures and agents and explore the implications of fisher leaders adopting ‘modern’ roles as coastal managers for the future of coastal landscapes and societies.

We shall be engaging with the Coastal Regulation Zone Notification 2011 which mandates that all states have district level committees (DLC) to assist the state or union territory Coastal Zone Management Authorities. These DLCs must have at least 3 representatives from coastal communities including traditional fisherfolk. Such provisions could provide spaces for the traditional leadership to work with state institutions to achieve a more efficient system of marine resource management.

Unlike many other areas on the Coromandel coast, the fishing community of the Ramanathapuram district is socially heterogeneous with a variety of castes and religious backgrounds.



The region is characterised by friction between local and migrant fisherfolk, small-scale and trawl fishers, and fishers and the state over wildlife conservation laws. The diversity in

sources of conflict is mirrored by the range of governance institutions that exist within these communities, namely traditional institutions such as the caste panchayats, the more recent Eco-Development Committees, self-help groups (set up by the Gulf of Mannar Biosphere Reserve Trust), fisherfolk associations and finally, state institutions

such as government line departments. Given this heterogeneity in governance arrangements, we propose to undertake a mapping of decision-making structures and leadership processes among communities in this region. Through interviews, we aim to understand the capabilities and agency exercised by leaders and representatives

to deal with conservation and policy related conflicts. This will provide a better understanding of traditional as well as emerging forms of leadership and representation in new natural resource governance frameworks.

An initial analysis of laws operating on the coasts will be undertaken to identify spaces available for community participation in decision-making. The Dakshin team will also carry out a preliminary analysis of the capacity-building needs of local leaders to participate in these identified legal spaces. We plan to undertake a more detailed sociological research effort on traditional governance mechanisms found among local fishing communities in neighbouring stretches of coastal Tamil Nadu.



Advocacy support to the National Coastal Protection Campaign

Dakshin is a core member of the National Coastal Protection Campaign (NCPC) which was given shape by the National Fishworkers' Forum in 2007, after a series of collective campaigns in response to changes in coastal and marine policies. The NCPC as a national-level platform comprises of organisations and individuals from leading environmental and fisheries organisations. The goals of the NCPC are to advocate coastal community rights over natural resources and the protection of coastal and marine areas through appropriate community involvement.

As a core member of the NCPC, Dakshin has researched and compiled information on the implications of the Coastal Regulation Zone (CRZ) Notification 2011 and carried out a comparative analysis of this notification vis-a-vis the CRZ 1991 Notification in its original form. Dakshin is coordinating an RTI campaign on the implementation of the CRZ Notification 2011. Another element of the campaign is the mapping of CRZ violations in various coastal states and union territories followed by moves to persuade the concerned government agencies to take action against violators. We are committed to ensuring

the active participation of fishing communities in coastal regulation, and are presently working with fisher unions to examine the process of nominating fisher representatives in the District Level Committees for the implementation of coastal regulations.

Convention on Biological Diversity (CBD) Conference of Parties (COP) 11. Under the aegis of the NCPC, a Coastal and Marine sub-group of the Indian NGO Forum on CBD (INFC) was formed. The INFC was set up to facilitate NGO participation at the upcoming CBD-COP-11 to be held in October 2012 in Hyderabad. Coastal and marine biodiversity has been flagged as an issue for discussion both at the COP and the high-level ministerial segment. As a member of the NCPC, Dakshin and the National Fishworkers' Forum (NFF) organised a planning meeting on 18th Feb 2012 in Chennai to engage with the COP processes. A Coastal and Marine sub-group was formed comprising marine biologists, representatives of various traditional fishworker unions, and members of NGOs working in the

areas of coastal and marine biodiversity and fisheries.

Representatives of the INFC provided the coastal groups valuable insights into the processes associated with the CBD



and the opportunities that COP 11 presented to civil society groups. The group identified several activities and a series of position papers for submission to the MoEF and for public circulation at COP-11. Dakshin Foundation is presently one of the members of the core group which will coordinate the activities of the Coastal and Marine Sub-Group of the INFC.

(www.ncpcindia.wordpress.org)

Community monitoring towards resource management



Resource management should involve decisions based on the regular monitoring of resource use, patterns and stocks. A common misunderstanding is that resource monitoring, like management, is the domain of experts. However, the act of monitoring and making observations about local ecosystems has been carried out by several local communities who rely on this information for their livelihoods. Consequently, their ecological knowledge of certain resources and ecosystems is often profound. However, many ecosystems are being accessed by newer social groups who compete for limited resources and apply technological aids that do not mandate a keen ecological knowledge for extraction, nor impose limits to harvests.

Present management regimes continue to rely only on science and scientist-dependent monitoring to enable them to take management decisions. This is most evident in fisheries data collection which is the domain of only a few scientific organisations and trained staff. Dakshin believes in broadening the resource monitoring space to incorporate community knowledge and observation to assist in coastal and marine management decisions. A part of our applied scientific research aims to build on this practice of community monitoring to aid in the effective management of natural resources. We work with several social groups at the local level on issues that have a direct bearing on the survival of coastal fishing communities as well as the preservation of biodiversity and ecosystem integrity.

Coastal and marine biodiversity in India is characterised by a number of traits that need to be regularly monitored. An alarming amount of by-catch in fisheries, depleting fish diversity, the incidental as well as targeted take of endangered species, unregulated development and violations of coastal regulations are all areas where local communities can and have played an important monitoring function. Through our projects which aim to involve communities in resource monitoring along the coasts of Kerala, Orissa, Tamil Nadu, Lakshadweep and the Andaman group of islands, we aim to collect data that are accessible to communities and make it possible for them to engage with the state on resource governance and management. Through establishing collaborative monitoring programmes at these sites, we aim to demonstrate the potential for communities to be involved effectively in a spectrum of resource management roles.

Such monitoring programmes are not just ecological but also seek to gather a wider understanding of social and legal issues at stake in resource use. Therefore, a number of variables related to social processes are also monitored in addition to ecological data.

Development of communication tools with fishing communities

Oftentimes efforts at ‘outreach’ or communication programmes aimed at fishing communities tend to ignore their cultural practices, their worldviews and the social influences which shape their learning experience. Most material developed to aid fisherfolk in understanding state welfare schemes or even coastal regulations relies on text-heavy content and design. The process of designing such material and its final shape offer only a one-sided view of the message, ignoring that there might be different ways of understanding and representing such information. For instance, communication material on coastal regulations should be able to present a view which is beyond the narrow view of law.

In collaboration with the College of Fisheries, Mangalore, Dakshin has initiated a project to develop communication material using participatory design methods and protocols. We are jointly developing such material on fisheries schemes in one taluka in coastal Karnataka. The objectives of this project are to

- a understand the modes and methods of communication and transmission of information regarding fisheries schemes and rules between community members;
- b to assess the effectiveness of externally

produced communication material in terms of their relevance and appropriateness; and finally to develop, with inputs from community members, material that provides information about the various central and state fisheries schemes that are applicable to the community.

The material is also intended to explain how the provisions are applicable and enforced, and who the key actors are. The preliminary phase of the project will include working in pilot coastal villages in Dakshin Kannada district. We aim to gradually scale up this initiative to cover other coastal regions of the state. We have identified pilot villages and specific schemes based on its relevance to artisanal fisherfolk, who are most marginalised at present. The second phase of the project will involve gathering information on existing modes of communication within communities. This will enable us to understand gaps in official outreach programmes and to generate ideas to enhance communication mechanisms. We will interview and interact with fisher leaders and members of different fisher families (keeping gender-based occupational considerations in mind). From the feedback received, prototype design templates will be developed

and distributed/installed and their effectiveness tested in the field. Further interaction with community members will enable us to fine-tune the products and material to be distributed. The final phase of the project, and an important one, will be the assessment of the impact and relevance of the products developed. Since the aim of the project is also to empower the artisanal communities with information pertaining to their welfare, a post-evaluation exercise will be carried out to determine whether, and to what degree, the communication mechanism has strengthened fishers’ access to particular schemes. Documentation of the process of developing these materials and mechanisms will assist in replicating similar endeavours in future. We intend to apply the findings from this experiment to proposed initiatives that focus on fisheries laws and coastal regulation.



Programme on Reconciliation Ecology



Balancing human needs and ecological function in the Western Ghats

The Andaman and Nicobar Islands Collaborative Platform

Orissa Marine Resources Conservation Consortium

Development of communication tools with fishing communities

Ecological hotspots such as the Western Ghats or coastal systems like coral reefs are characterised by high levels of natural wealth and human pressure,



where the needs of biodiversity and people are entwined. Within these land- and seascapes, although conservation is often embedded in complex social, political, economic, historical, cultural and ecological contexts, a review of literature reveals that factors other than ecological are seldom given precedence when planning interventions. Although

people are part of these land- and sea scapes, the drivers of biodiversity loss or maintenance are rarely examined from the point of view of social, economic or resource-use histories, and other context-specific factors that have combined over time to make up these regions.

Understanding social-ecological systems, especially those that have the potential to undergo profound transformations, therefore calls for a reconciliation of frameworks, combining and analysing data across disciplines, approaches and time scales. The Programme on Reconciliation Ecology at Dakshin supports not just academic enquiries into these frameworks but also seeks to actively demonstrate their operation in these complex biodiversity rich land- and seascapes.

The most critical aspect of building a conservation culture is the facilitation of a paradigm shift from one of exploitation to that of sustainable

utilisation, with appropriate reforms in tenure arrangements. Towards this we use an approach of reconciliation to arrive at biodiversity benefits and work with various collaborative platforms and multiple actors to find common ground over conservation concerns.

The absence of constructive dialogue between various actors and networks, and the poor flow of information between and among them is another major obstacle in informed negotiating for resource management. This programme therefore works at strengthening platforms for effectively sharing and exchanging knowledge and experiences, facilitating dialogues and improving capacities for negotiating conservation and development.

Balancing human needs and ecological function in the Western Ghats

Extremely high levels of species diversity and endemism have led to the designation of the Western Ghats in India as one among the ten 'hottest' global hotspots. However, the region is also one of the most densely populated biodiversity hotspots on earth. Human activities, primarily agricultural expansion has resulted in the modification of natural landscapes. Although fairly large patches of natural forests remain within the protected area (PA) network, connectivity between PAs is poor and the potential for including additional areas into this network is limited. Located between two major protected area complexes in the southern Western Ghats, the Ranni Forest Division in Kerala is a typical Western Ghats landscape with extensive forests fringed by large monoculture plantations and small agricultural holdings. On account of its location and extensive forest cover, this area has been identified by various regional assessments as a priority corridor area for the conservation of significant populations of large mammals, and endemic species belonging to various taxonomic groups. To this end, this region is being investigated for inclusion in the PA network and to develop informal conservation arrangements. A purely ecological evaluation of this



area is insufficient if one were to plan conservation action in a region such as this, as it supports the livelihoods of a number of tribal groups, agriculturalists and other settlers.

Although there have been previously documented transformations of significance, the history of settlement in this region that is of interest to the present study begins with the late 1940s. An extensive period of food grain shortage following India's independence from colonial rule

saw the influx of large landowners, marginal farmers and the landless from other regions of Central Travancore to the forests which were till now the realm of a few forest-dwelling nomadic tribal groups such as the Malampadaram. This migration - which was prompted by calls from the government to clear forest and cultivate rice - was widespread and continued over a period of time. Settler colonies became a typical feature of many forested districts in the Western Ghats. Although derived from different



regional, caste and community denominations, a unique settler identity and livelihood ethic emerged, fostered by common experiences and obstacles which they surmounted as a group (e.g. abject poverty during the initial years, conflict with wildlife, etc.). Over a period of time, the Forest Department which emerged as the custodian of these lands persuaded some settlers to move elsewhere and others who remained were given title deeds with numerous restrictions. The intervening period also witnessed

the implementation of far reaching forest related legislation which was protectionist in scope, and decades after their arrival in the area, a number of settler families are yet to receive title deeds to their lands. More recently, in an effort to preserve these forests, there has been a tendency by conservationists to downplay factors such as historical use of forests in the area. Compared to large landowners (or lessees) with cash crops such as rubber whose fortunes are determined largely by non-local forces and cushioned by corporate investment, small-holder settler livelihoods are locally determined and dependent on their overcoming uncertain land tenure, agrarian distress, local political upheavals and extended periods of human-wildlife conflict.

Dakshin's work will focus on a number of questions that have the potential to inform conservation choices in human-modified landscapes such as the one mentioned above. Our research will aim to first analyse the production of this forest region in terms of place through a critical period in time which witnessed decolonisation, deforestation and increased pace of capitalist activities. This phase of the study

will also deal with the cultural and non-material aspects of place making and their role in the development of perceptions and attitudes. These aspects will inform an interdisciplinary enquiry into the current drivers that determine levels of biological diversity and trends relating to conservation. Lastly, a synthesis of these two critical aspects of the study will be attempted to design appropriate reconciliatory frameworks that are locally grounded. In an effort to incorporate knowledge that is traditionally not included in conventional conservation analyses, the complexity of landscape dynamics is being explored from three different perspectives:

- a exploration of a recent environmental history using secondary information and individual experiences to analyse landscape change and other human-environment interactions,
- b identifying current drivers of biodiversity maintenance and change using quantitative and qualitative data analysis and,
- c model building and solving for pattern in the future.

Orissa Marine Resources Conservation Consortium

Conservation measures do not always result in positive outcomes. Conservation programmes are known to have led to protracted conflicts with local communities. Although globally valued as an important tool for the protection of coastal resources, Marine Protected Areas (MPAs) are emerging as examples of failed conservation measures. In many parts of India they have failed to adequately protect critical coastal habitats or ensure the well-being of dependant coastal communities. In Orissa, official marine conservation measures are limited to the protection of mass nesting beaches of the olive ridley turtles, at Gahirmatha, Devi and Rushikulya. Gahirmatha was designated as a marine sanctuary in the year 1997. Several thousand turtles are killed on the Orissa coast each year in trawl fishing related mortality. Conservation campaigns in the late 1990s demonising trawlers for turtle mortality created conflict between fishers and conservationists. A blanket ban on all forms of gill-net fishing ordered by a Supreme Court committee resulted in the escalation of this conflict drawing in all categories of fisherfolk.

Dakshin's members were involved in this region in documenting the impacts

of conservation measures on fishing communities while also advocating and creating the middle ground necessary for implementing appropriate marine conservation measures. In 2004, the Orissa Marine Resources Conservation Consortium (www.omrcc.org) was set up to address conflicts over marine conservation measures, to support collaborations for conservation and build dialogues between multiple



stakeholders over issues of potential conflict. The OMRCC comprises of traditional fishworkers' unions of Orissa, conservation organisations, development NGOs, turtle biologists, and individuals interested in sea turtle conservation measures and/or sustainable fisheries in Orissa.

Dakshin's members work with its core committee for the operation of the

consortium and the execution of its projects. The OMRCC's website serves as a resource on marine conservation and fisheries-related information in Orissa. Members of the OMRCC have experimented with supplementary livelihoods programmes and attempted to address coastal development concerns and often acting as a lobbying group to promote the objectives of the consortium.

At present, Dakshin is working with the Orissa Traditional Fish Workers Union (OTFWU), a core member of the OMRCC, to prepare an official statement on the fishing rules and regulations imposed within Gahirmatha Marine Wildlife Sanctuary and to regulate fisheries along the rest of the coastline.

Turtle Action Group

Established in 2009, the Turtle Action Group (TAG) is a collective of NGOs and individuals from the Indian subcontinent working towards sea turtle conservation and research. The aim of the network is to provide a platform for the exchange of information, knowledge and experience amongst various groups and individuals working along the coast of India. In addition, the initiative also seeks to strengthen community-based NGOs in the various coastal states. Currently, TAG has 27 NGO members. Organisational members of TAG include community-based organisations, environmental

groups and non-governmental organisations. The main focus of TAG is to promote effective conservation of sea turtles and their habitats through collective and collaborative action. TAG is governed by a core committee of representatives and an advisory board. At present Dr. Naveen Namboothri serves as TAG's secretary and Dr. Kartik Shanker serves as its chairperson.

TAG's Vision

To promote a collective and harmonised approach to sea turtle conservation in India

TAG's Goal

Facilitate the members of Turtle Action Group to undertake coordinated action for sea turtle conservation activities in India.

TAG's Objectives:

- 1 To establish appropriate channels of communication between partner organisations to facilitate the effective sharing of information.
- 2 To build capacity and interest of local communities and students in coastal conservation through their involvement in monitoring programmes and training workshops.

- 3 To monitor the status of marine turtles at key nesting sites along the Indian mainland and islands with the involvement of network partners, through the promotion and use of standardised data collection and monitoring techniques.
- 4 To define administrative tasks of elected representatives of the network and encourage a transfer of ownership of the network, thereby ensuring long-term sustainability.

An annual meeting is held every year where all TAG members meet and share their work and experiences. The first TAG Annual Meeting was held in January 2009 in Chennai, followed by a second one in February 2010 in Bhubaneswar, Odisha and a third at Kumta, Karnataka in November 2010. Last year TAG held its fourth Annual Meeting in Mamallapuram, Tamil Nadu from 12th -14th November with support from the Madras Crocodile Bank Trust. The main focus of this workshop was to actively involve representatives of state forest departments in TAG and the capacity building of TAG members through different activities conducted by experts over three days. In particular the sessions on puppetry and video filmmaking were particularly successful.



Marine resource management through collaborations: The Andaman and Nicobar Islands Collaborative Platform

The Andaman and Nicobar Islands are important nesting sites for four important species of marine turtles and also harbour some of the world's healthiest coral reefs and seagrass beds. Most of the islands' natural resources are threatened by poor regulatory frameworks and mechanisms, unchecked poaching, illegal fishing practices, unregulated tourism and the absence of a coordinated set of measures to tackle these diverse issues. As in many parts of the country, there is also considerable overlap of jurisdiction and mandate between government departments and institutions. The pursuit of certain mandates leads to inter-departmental conflict while others lead to a duplication of efforts.

A number of institutions have generated a substantial amount of research and conservation initiatives in the islands aimed at addressing the problems of marine resource management. Several civil society groups working in these islands have expressed the need for a collaborative and coordinated approach to conservation and management efforts, particularly between the state and non-government agencies.

In order to facilitate the creation of a collaborative platform on marine resource management, Dakshin Foundation in partnership with the Andaman and Nicobar Islands Environmental Team, Andaman and Nicobar Administration and the Madras Crocodile Bank Trust, organised a workshop on March 24, 2012 in Port Blair. Top officials of key government departments, representatives and leaders from various non-governmental organisations and media organisations gathered to deliberate on the ideas for collaborative management in the islands. The objectives of the workshop were as follows:

- Share information among participants on their contributions to research, conservation and management of coastal and marine resources in the Andaman and Nicobar Islands.
- Develop a platform for sharing resources, capacities, and information between participants;
- Devise mechanisms to enhance coordination between participants towards specific conservation related activities;
- Devise collaborative approaches to environment education and outreach



activities in the Andaman and Nicobar islands;

The Andaman and Nicobar collaborative platform is guided by a core group comprising members from local organisations. The core group has identified a set of activities for immediate action such as the creation of databases on dive operators, media organisations and a number of activities related to environment education.



Environmental Education Programme



Dakshin's Environment Education Programme aims to work with a range of educational systems, both formal and non-formal, to facilitate greater societal engagement with environmental issues. In general, awareness of marine conservation issues has lagged behind prominent terrestrial icons such as forests and

necessary in the long-term to incorporate environmental education into mainstream education programmes. While this has been carried out to some extent at the national level, there is a need to incorporate these concepts and knowledge into curricula at the local level, particularly where English is not the medium of information. There are

Dakshin aims to build an environmental education programme for civil society by:

- a Developing an environmental science curriculum at the school level, developing educational material in regional languages, and incorporating this into teaching programmes at the regional level;
- b Incorporating scientific information from primary and secondary sources into appropriately designed and locally relevant communication material, tools and strategies, aimed at decision-makers within communities, government bodies and non-governmental organisations engaged in conservation and development;
- c Engaging and expanding science communication efforts to ensure that information on biodiversity and conservation is made available to stimulate greater debate on its relevance to management decisions, particularly in marine and mountain systems.



endangered species. However, flagships such as marine turtles and issues such as climate change impacts on coasts have been used to draw attention to coastal and marine conservation. Dakshin effectively employs examples and knowledge from the marine realm to convey broader conservation education messages.

In addition to providing information through outreach programmes, it is

few or no texts in local languages for instructors or students. It is therefore necessary to implement large-scale outreach programmes, but also make efforts to integrate environmental issues into mainstream education at the regional level.

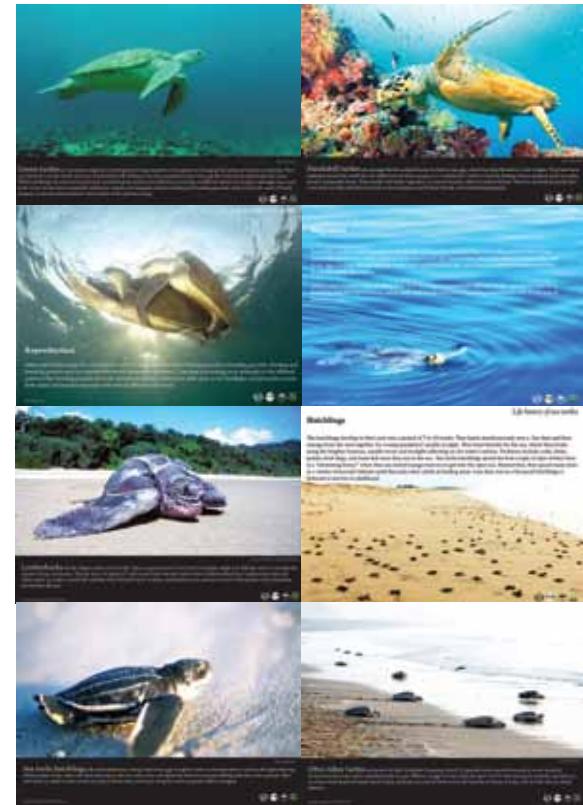
Education interventions in the Andaman Islands

Dakshin Foundation and the Andaman and Nicobar Islands Environmental Team (ANET) in collaboration with the Department of Education, Andaman and Nicobar Administration, are working towards initiating a long-term outreach and awareness programme that is specific to the Andaman and Nicobar Islands. The broad activities proposed are:

- Developing a plan for incorporating a strong environmental education component into the local school curricula;
- Design appropriate strategies for conducting teacher-training programmes for the islands;
- Develop a long-term environmental education (EE) strategy in partnership with the Department of Education;
- Reviewing and revising current environmental education syllabi to make it more context-specific;
- Updating and reprinting the popular environmental education book 'Treasured Islands' for the Andaman and Nicobar Islands;
- Working through a common platform to share resources from various institutions and departments that are involved in environmental education.

To successfully implement our education programmes with the

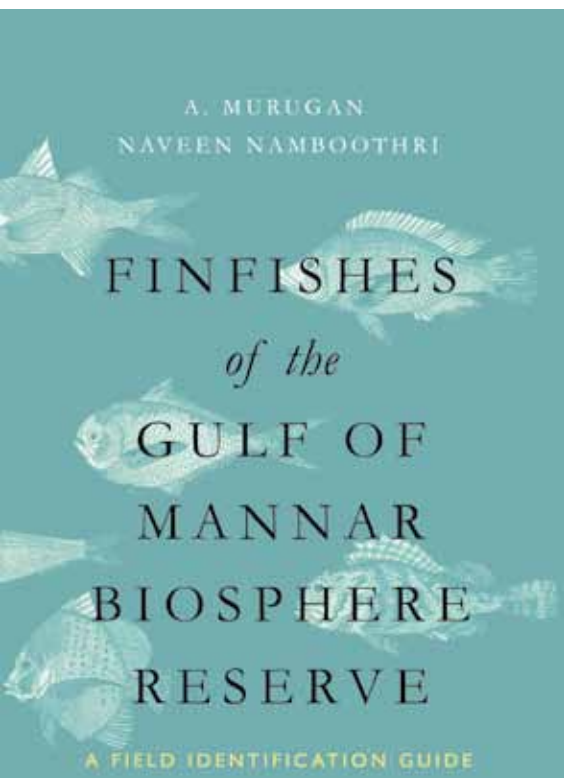
numerous schools in the islands and to ensure the sustained application of a revised EE model, ANET has worked closely with the Department of Education of the Andaman and Nicobar Administration, and have been requested to develop and conduct the teacher training programmes for all the nine educational zones in the Andaman and Nicobar Islands. This will enable the creation of a team of local resource personnel that will drive educational initiatives in the islands. This team will be at the forefront of developing new EE curriculum relevant to the islands and its continued dissemination. Over the next few months, Dakshin and other organisations, including Kalpavriksh, Charkha and the Madras Crocodile Bank Trust, will work together to review existing material and develop revised educational material. A workshop to initiate inter-departmental collaborations towards a collaborative approach to EE in the islands was also organised. The workshop has been able to garner support from the various dive operators and research institutions in supporting



environmental education, community outreach and awareness programmes in the islands.

Finfishes of the Gulf of Mannar Biosphere Reserve – a field identification guide

The Gulf of Mannar historically renowned for its pearl oyster banks is also one of the most biologically productive coastal waters of mainland India. As an important step in



promoting marine biodiversity conservation in this region, Dakshin has produced a field guide for the identification of local fish species.

Species are the fundamental units for quantitatively and qualitatively assessing biodiversity and ecosystem

health. Identifying and inventorying species in a locality is the first step towards biodiversity conservation. However, much of the literature that enables fish identification is scattered in inaccessible journals and knowledgeable taxonomists themselves are becoming ‘endangered’ worldwide. This makes species identification extremely challenging. High biological diversity and extreme phenotypic variations within groups make species identification of fish in particular, a daunting task.

Many field officers of fisheries departments and research institutions are involved in monitoring fish catch. Most of them have minimal scientific training and lack the capacity to identify species. As a result, data collection efforts are either inaccurate or of such poor taxonomic resolution that they are irrelevant to eventual management decisions. Despite several research studies being conducted here, no reliable identification guide existed for the biodiversity-rich Gulf of Mannar Biosphere Reserve.

As a part of a UNDP-funded project (the Post-Tsunami Environment Initiative) and through other field surveys, the authors had undertaken extensive surveys of fish resources

along the Tamil Nadu coast during 2007-2008. During the surveys, fish-landing centres in the region were monitored and all species landed were photographed and identified in consultation with national and international experts. The current field guide is an output of these extensive surveys. The field guide is intended to serve a wide range of users ranging from research scholars, fisheries managers, forest department officials, local NGOs and amateur enthusiasts. Though the current publication is demographically restricted to fish species of the Gulf of Mannar, many of the species also occur along the shallow coastal waters of the mainland coast of India and the islands of Andaman and Nicobar and the Lakshadweep.

“This field guide will be a valuable reference for people interested in biodiversity information, fisheries, conservation and sustainable use as well as for schools and community-based projects managing their local coastal fish resources.”

Helen K. Larson, Museum and Art Gallery of the Northern Territory, Darwin, Australia



Publications

Indian Ocean Turtle Newsletter (IOTN)



The *Indian Ocean Turtle Newsletter (IOTN)* is a medium 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 covers related aspects such as coastal zone management, fisheries and marine biology. IOTN is now in its eighth year of publication with 15 issues produced till date.

The main objectives of the newsletter are to disseminate information about sea turtle research and conservation to government departments, voluntary organisations, research institutions and students; to provide a mechanism through which awareness about

the status of sea turtles and their habitats can be generated; and to provide a channel for the findings and developments in research and management techniques developed elsewhere to reach a regional audience and communicate the results of sea turtle research and conservation related activity in the Indian Ocean region to the global community.

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 –

www.iotn.org.

Hard copy subscriptions of the newsletter currently reach about 1,300 subscribers from over 50 countries. A distribution of subscriptions categorised regionally is provided in the table below. In addition to the hard copy subscriptions, over 1,600 subscribers receive e-mail Table of Content alerts.

The production of the newsletter is supported through grants from the International Sea Turtle Society and the Marine Turtle Conservation Fund of the US Fish and Wildlife Service, and administrative support from the Madras Crocodile Bank Trust.

| Region | No. of subscriptions |
|----------------------|----------------------|
| India | 967 |
| South Asia | 80 |
| Southeast Asia | 106 |
| West Asia | 15 |
| Africa | 75 |
| Europe | 5 |
| Pacific Ocean region | 11 |
| South America | 2 |
| Australia | 6 |
| USA and Canada | 12 |
| Total | 1279 |

Current Conservation

Current Conservation magazine is a young publication dedicated to communicating conservation related science and research to a wide audience. It carries a diversity of articles, from comprehensive feature articles and opinion pieces to short summaries of research papers and books. Writers featured in the magazine come from various backgrounds, and include scientists, researchers and students from academic backgrounds as well as popular writers who are effective and experienced at communicating with the general public. The publication employs images and illustrations, and portrays data in a visually engaging and effective style. The subjects in the magazine range from conservation biology and environmental history to anthropology, sociology and ecological economics.

Current Conservation is published four times a year, and also has a presence

on the internet where the complete issues as well as additional content are accessible. It has featured contributions from South Asia, Europe, Africa, North America and South America. *Current Conservation* is managed by an editorial team of five principal members and a number of freelance contributors. It is advised by an editorial board of scientists and researchers from various parts of the world. The magazine is funded by donations from a consortium of agencies and institutions, from both within India and outside. The core donors include Dakshin Foundation, Duleep Matthai Nature Conservation Trust, Foundation for Ecological Security and National Centre for Biological Sciences.

Current Conservation Magazine is one of the only dedicated avenues from the old-world tropics that showcases contemporary scientific research and conservation related ideas in an integrative format. One of the missions of the magazine is to bring more ecological research and ideas into the mainstream domain, and in keeping with this the editors conduct writing workshops at student conferences, where they explain the salient points of reading scientific papers and summarising them to students.

Editorial Team

Nandini Rajamani - Editor

Kartik Shanker - Senior Editor

Ankila Hiremath - Senior Editor

Anil Ananthaswamy - Contributing Editor

Hetal Hariya - Managing Editor



Common Voices



Common Voices is a monthly publication co-produced by Dakshin Foundation and the Foundation for Ecological Security (FES) - the organisers of the 13th Biennial Conference of the International Association for the Study of Commons (IASC) held in January 2011 at Hyderabad, India.

'*Common Voices*' aims at popularising different notions, theories, practices and campaigns related to the commons. It draws from research and on-the-ground initiatives and experiences relating to a variety of commons, consistent with the themes and inter-linkages of the 13th IASC conference. The newsletter is produced in print form and is distributed free of cost to practitioners, policy makers, researchers, the media and interested laypersons. It is also available in a freely downloadable PDF version.

The content for this publication is sourced from previous and ongoing research and practice on the commons. Additionally, for each issue, leading scholars and practitioners are invited to

contribute essays on topics of current relevance to a particular thematic area. Essays often focus on a particular case study, a policy or legislation or an emerging perspective.

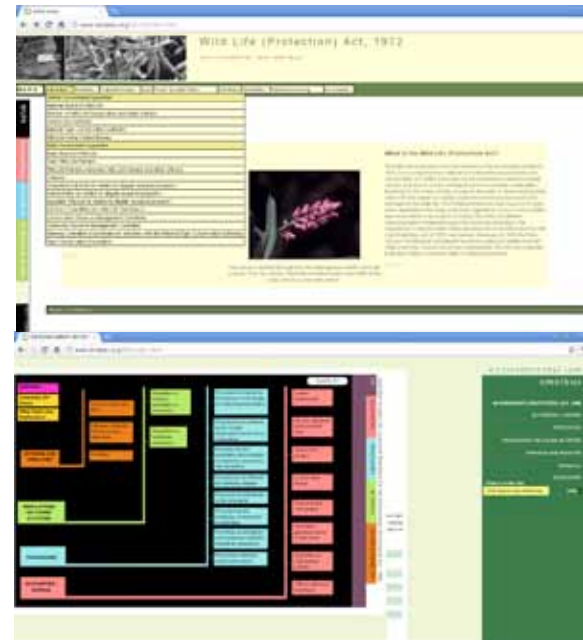
Common Voices is edited by Meera Anna Oommen and Aarthi Sridhar from Dakshin with Jagdeesh Rao of the Foundation for Ecological Security. *Common Voices* is available at <http://iasc2011.fes.org.in/> and <http://www.dakshin.org/609>

The commons, as shared resources, are an integral aspect of many resource management systems the world over. Their relevance spans across a variety of geographical regions, political ideologies and stakeholder groups, and their maintenance in some cases is of critical importance to providing sustenance for the poor and the landless. While their importance to sustainability is no longer in question, there still exist opportunities for discussion, research, application and better dissemination of commons-based information.

The Environmental Law Omnibus (ELO)

The knowledge and critical appraisal of environmental laws by the public is integral to making conservation and protection efforts effective. Conservation efforts in India have met with success through the active involvement of local communities, tribal groups, forest-dwelling communities, fisherfolk unions, NGOs and citizen groups. Many motivated officials at various levels of government, have also contributed towards conservation beyond their call of duty. However, legal text in the form of government orders and gazettes is largely unavailable to the public and is unorganised. The meaning of legal terms and text can also be a challenge to navigate through. This impacts implementation and is responsible for skewed interpretations of laws.

The Environmental Law Omnibus (ELO) has a simple enough goal – to provide access to information on laws related to the environment in India. The site will be divided into several sections, containing commentaries, bibliographies, scanned copies of laws, notifications, gazette copies etc. Importantly, it contains an Environmental Law Guide which hammers out the structure and meaning from a selection of laws which make their nature, structure and power clearer to the viewer. Material on the Coastal Regulation Zone Notification, 2011 is presently being developed to add to the ELO website in addition to existing information on the Environment (Protection) Act, 1986, the Environment Impact Assessment Notification, 2006, the Forest (Conservation) Act, 1980, the Wild Life (Protection) Act, 1972 and the Water (Prevention and Control of Pollution) Act, 1974. The design of the website as it currently stands is also being reviewed to ensure simpler access and greater functionality.

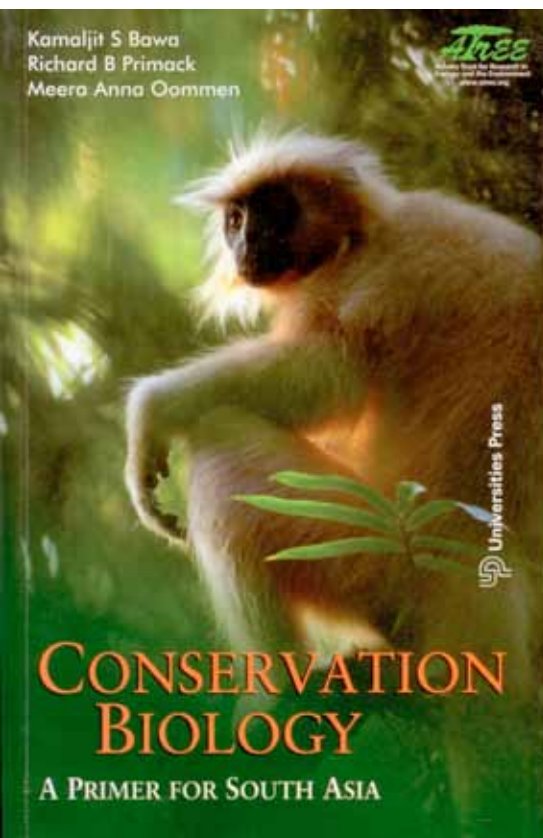


The ELO is unique in that ownership of the site does rest with any single organisation. The site as envisioned as being collectively owned by several organisations, groups and individuals who contribute to this open and common resource. The Omnibus as an idea and a resource seeks not just to bring information together, but to also provide an opportunity for cooperation between environmental NGOs grappling with the question of law and its role in society.

Conservation Biology: A Primer for South Asia

Conservation Biology: A Primer for South Asia provides a comprehensive introduction to the concepts of conservation biology as well as various perspectives on the effective conservation of biodiversity. With a balanced set of examples dealing with

different themes and geographical areas in the region, this book is should aimed at stimulating the interest of a wide audience ranging from students of conservation biology, managers and policy makers. The book draws attention to the initiatives that are underway in South Asia particularly with respect to those involving local communities, indigenous groups and other local stakeholders. It also identifies critical research areas for conservation research, policy interventions and on-the-ground efforts.



“This book explores a wide range of concepts that include our traditional approach to protected areas and reconciling humans and wildlife in human-dominated landscapes. I do hope that it will serve as a cornerstone for training conservation biologists, forest managers and policy makers in our colleges, universities and research institutions.”

*Jairam Ramesh,
Former Minister of State (IC), Ministry of
Environment and Forests,
Government of India*

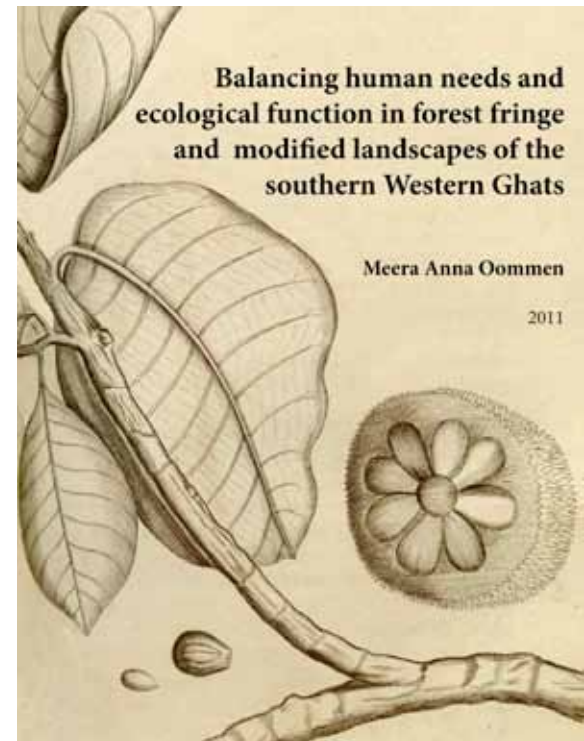
Balancing human needs and ecological function in forest fringe and modified landscapes of the southern Western Ghats

This is an awareness handbook that discusses dominant and emerging themes related to biodiversity conservation, ecosystem services and sustainable development in human-modified, forest fringe landscapes in the southern Western Ghats (specifically, Ranni Forest Division in the Periyar-Agasthyamalai Corridor).

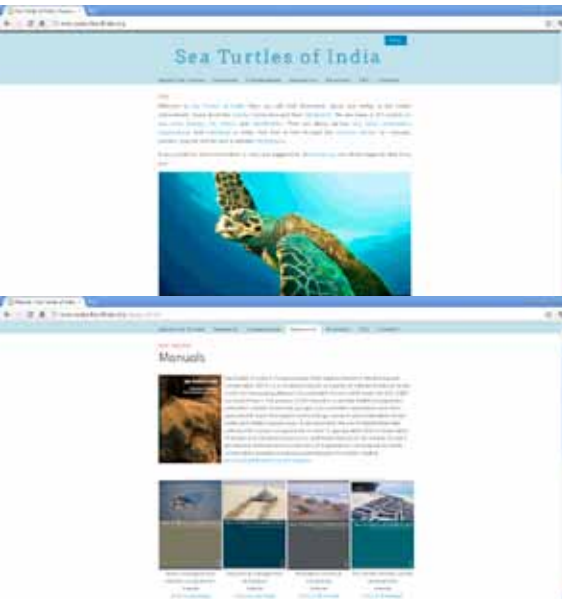
This document emerged from a series of discussions with landowners, community leaders, local government officials and bureaucrats, with whom potential multiple-use arrangements for forest fringe areas were discussed. While most participants were familiar with

the benefits derived from forests and natural resources, many expressed an interest in understanding the dynamics of human-modified landscapes in greater detail. During the course of our discussions, it was suggested to the author that a simple document was required which could introduce the concepts of landscape level planning incorporating biodiversity conservation and ecosystem services. Such a document could also outline the costs and benefits of proposed interventions related to ecosystem services. Being a politically aware and literate community, the interest expressed was not limited to the operational aspects of conservation interventions but also to an appraisal of these approaches within

a wider political ecological context. Funding for this project and booklet were provided by the Western Ghats CEPF Small Grants Programme.



Sea Turtles of India



Sea Turtles of India (<http://www.seaturtlesofindia.org/>) is a website about the marine turtles of the Indian subcontinent. This website boasts of a comprehensive collection of information on turtles - different species found, their ecology, identification guides and sea turtle life history information. The website also contains information on the range of research and conservation activities carried out in various parts of the

sub-continent. The 'Resources' section of the website is a repository of literature and research on sea turtles. Apart from a bibliography of research articles on turtles, it also has popular articles, manuals, books, reports and outreach material. Further, there is a page dedicated to the Turtle Action Group (TAG) with information on its members. A blog and a news section are also planned for the future.

This website is maintained by Dakshin and the production of this website is supported by the Madras Crocodile Bank Trust in collaboration with the Marine Turtle Conservation Fund of the US Fish & Wildlife Service.

The website design and content was conceived by Dr. Kartik Shanker and Seema Shenoy and the site is designed by Arjun Shankar with inputs from Shiv Subramaniam.





People

Programme Heads

Aarthi Sridhar



I work on the subject of environmental governance and my projects explore conflicts over conservation measures, experiments with collaborations, and investigations on legal spaces for social and environmental justice. I have worked on these issues in India since the year 2000. I am interested in the problem of equitable rights over natural resources and environmental justice. My work keeps me in constant interaction with a range of social actors. The nature of law, its application in environmental governance and its consequent impacts on different sectors of society are my interest areas. In my investigations I draw widely and deeply from my engagement with various social campaigns that seek environmental or social reform.

Kartik Shanker



I believe that social and political contexts, spaces and interactions largely determine conservation outcomes. In order to understand and possibly influence these systems, I am involved in research with students and colleagues on the political ecology of conservation, conflict and natural resource management.

I also serve as Assistant Professor at the Centre for Ecological Sciences, Indian Institute of Science, Bangalore. I am interested in the community ecology and biogeography of various taxa, including marine invertebrates, fish, amphibians, reptiles and birds. We combine field ecology, phylogenetics and ecological modelling to understand evolutionary and biogeography patterns. I am also continuing my research on the ecology and evolutionary biology of marine turtles.

Meera Anna Oommen



Over the past fifteen years, I have worked on projects related to conservation biology and planning, and biodiversity outreach. My interests are in pure as well as applied research related to these fields. My research focuses on the concepts of species diversity, biogeography and macroecology in mountain ecosystems, particularly the Himalaya and the Western Ghats. I am interested in developing interdisciplinary frameworks integrating reconciliation ecology with socio-cultural, economic, historical and policy aspects to obtain realistic conservation objectives in these regions. I have also been also involved in the development of community-centred, long-term monitoring programmes for harvested marine systems as well as for terrestrial taxa such as snakes.

Naveen Namboothri



My research interests lie in marine systems and the projects that I oversee with the Biodiversity Resource Monitoring Programme at Dakshin also deal with the applied aspects of science to assist in improved management systems for these spaces. I am also a Post-Doctoral Fellow at the Centre for Ecological Sciences (CES), Indian Institute of Science, where my research focuses on understanding vital processes and functions of ecosystems that are essential in maintaining its health. I am keen to facilitate an understanding of how ecological processes and functions interrelate with species diversity, distribution and abundance. My work both at CES and Dakshin aims at developing long-term community-based monitoring programmes in ecosystems such as coral reefs.

Project staff

Mahima Jaini



I am interested in the study of resilience in marine ecosystems, the key to better managing our marine resources. In particular, I'd like to study factors that influence marine communities such as the engineers and drivers of change as well as vital events such as recruitment and disturbance. Currently as a research assistant at Dakshin I'm involved in the community-based study of tuna baitfish populations in the Lakshadweep Islands. This work forms a part of the Biodiversity and Resource Monitoring Programme at Dakshin.

Marianne Manuel



Given my interest in the area of environmental law and governance, my research at Dakshin involves socio-legal studies on the impacts of coastal laws and policies on traditional fishing communities and the dynamics between traditional governance systems and the modern state. Currently, I am developing a project to understand the dynamics between the various governance institutions, leaders and representatives that are present in the fishing communities around the Gulf of Mannar Biosphere Reserve, their capacity to deal with various conflicts and their level of participation in the spaces provided by existing coastal policies.

M. Muralidharan



I have been working on olive ridley sea turtles populations in Orissa since November 2008. My work focuses mainly on monitoring the nesting population of ridleys in Orissa which includes maintaining a hatchery. My work involves regularly interacting with the local forest department staff and conducting training programmes for their field staff regarding the methodologies involved in maintaining hatcheries as well as census techniques during the annual arribada census. I have also been involved in several other field activities including satellite tracking, offshore density estimations of turtles, interacting with local communities and NGOs.

Sajan John



My research interests lie in endangered species and management - a subject I worked on for 6 years. The species that have been the focus of my research interest are marine turtles, marine mammals, elasmobranchs, molluscs and the horseshoe crab. I have undertaken research projects on the above species in my capacity as a research fellow of the Wildlife Institute of India (WII) and its satellite centre – the National Institute for Coastal and Marine Biodiversity (NICMB) in Kanyakumari. I am also interested in community-based conservation particularly for endangered species and fishery resource management. I believe that a better understanding of conservation issues through an engagement with local stakeholders can mitigate conflicts and will go a long way in formulating effective conservation strategies. I presently work on the Karnataka coast on fisheries management issues.

Sahir Advani



While at the Institute of Science, Mumbai I studied the freshwater fish fauna of Raigad district, Maharashtra. An interest in infrared camera traps led me to produce a dissertation on thermography in grey seals in Scotland. Furthermore in 2011, I assessed the effectiveness of the Nabq Managed Resource Protected Area, in Egypt in terms of predatory fish population distributions.

I am interested in determining sustainable solutions to coral reef associated fisheries. Currently, I am profiling the fisheries of the Andaman group of islands to establish critical areas for research and conservation of this multifaceted system.

Project Associates

Amrita Tripathy



I have a Masters degree in Ecology and Environmental Science and a Post Graduate Diploma in Mass Communication and Journalism. I am the coordinator for the Turtle Action Group and also administer the turtle projects funded by the Marine Turtle Conservation Act grants. My work involves administrative tasks and also the maintenance of Dakshin's web-based resources for turtle conservation. I also organise the TAG Annual Meetings. I have worked with other conservation organisation in the past and have co-edited a book titled *Forest Canopies of South Asia: A Glimpse* with Dr. Soubadra Devy and Dr. T. Ganesh of the Ashoka Trust for Research in Ecology and the Environment. My interests pertain to plant-animal interaction especially floral morphology, pollination traits, migration patterns, evolutionary biology and molecular ecology.

Hetal Hariya



I am the Managing Editor of *Conservation & Society*—an open-access peer reviewed journal on the theory and practice of conservation, published by the Ashoka Trust for Ecology and the Environment, Bangalore. At Dakshin Foundation, I am associated, as the Managing Editor, with *Current Conservation*—an open access magazine that carries the latest in conservation research. I also serve on the editorial team of *Common Voices*—an open access newsletter on common property resources produced by Dakshin Foundation in association with the Foundation for Ecological Security. I am interested in science communication, and have over seven years of experience in the publishing, copy-editing, proof-reading, and management of research journals, magazines, newsletters, and technical books.

Advisory Board

Dr. Daniel Brockington, Institute for Development Policy and Management, University of Manchester, U.K

Dr. Kavita Isvaran, Centre for Ecological Sciences, Indian Institute of Science, Bengaluru

Dr. Ajith Kumar, Centre for Wildlife Studies and Wildlife Conservation Society, Bengaluru

Prof. Mahesh Rangarajan, Nehru Memorial Museum and Library, New Delhi

Dr. Nitin Rai, Ashoka Trust for Research in Ecology and the Environment, Bengaluru

Prof. R. Sukumar, Centre for Ecological Sciences, Indian Institute of Science, Bengaluru

Trustees

Aarthi Sridhar

Kartik Shanker

Meera Anna Oommen

Naveen Namboothri

Collaborators and partners

Andaman and Nicobar Islands Environmental Team

Ashoka Trust for Research in Ecology and the Environment

Centre of Advanced Study in Marine Biology, Annamalai University

Centre for Ecological Studies, Indian Institute of Science

College of Fisheries, Mangalore

Foundation for Ecological Security

Lakshadweep Marine Research and Conservation Centre

Madras Crocodile Bank Trust

National Coastal Protection Campaign

Orissa Marine Resources Conservation Consortium

Turtle Action Group

United Artists' Association

Funding partners

Duleep Matthai Nature Conservation Trust, Anand

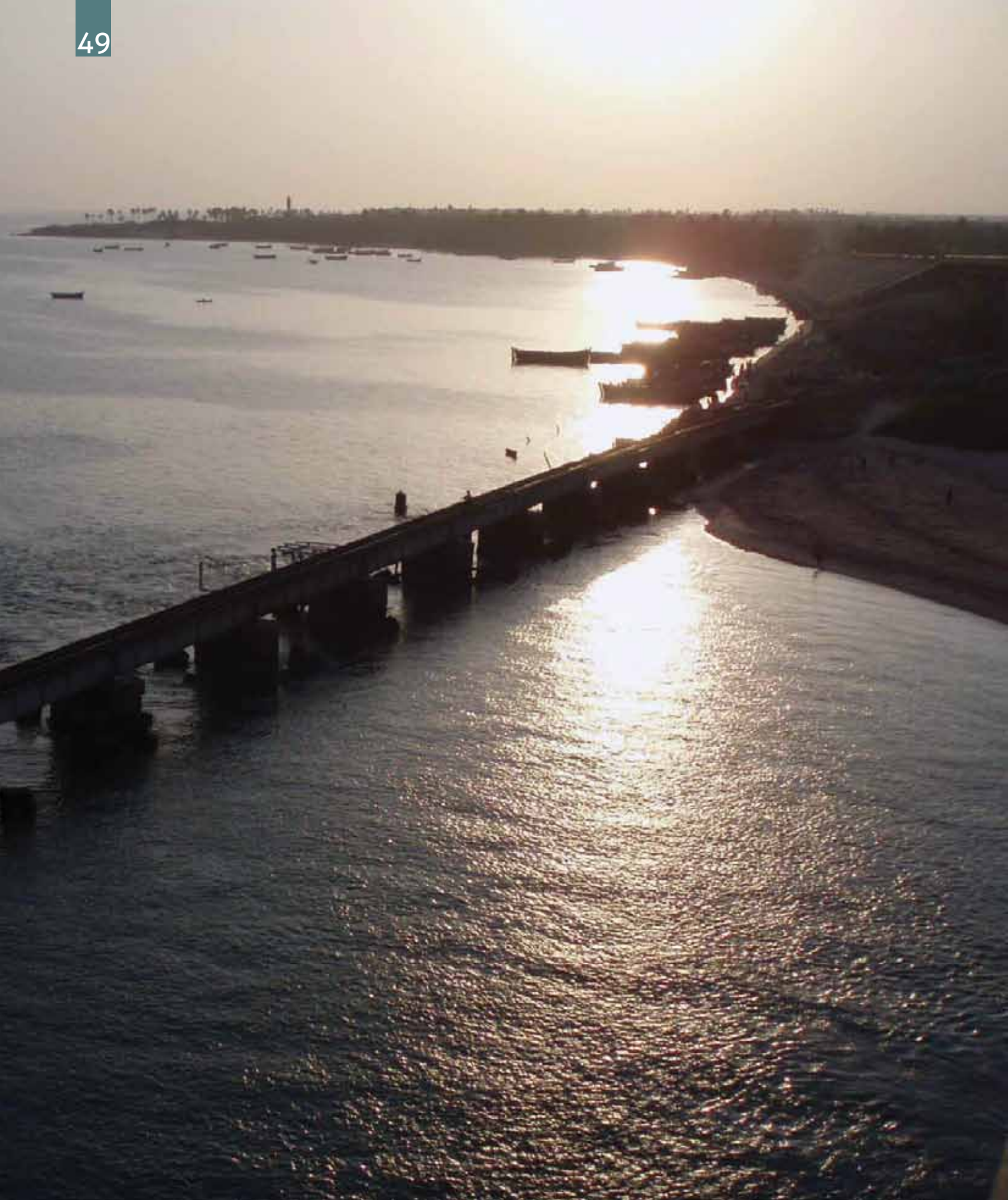
Foundation for Ecological Security, Anand

Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram

Madras Crocodile Bank Trust, Mamallapuram

National Centre for Biological Sciences, Bengaluru

Rohini Nilekani, Bengaluru



Auditors' Report

G.Anantha & Co.,
Chartered Accountants
'Srinidhi', No.36 & 36/1,First Floor,
Mallikarjuna Temple Street, Basavanagudi
Bangalore – 560 004
Phone No - 080 - 41204245 / 080-26622432
Fax No. 41204245

We have audited the attached Balance Sheet of **Dakshin Foundation** as at 31st March 2012 and Income and Expenditure Account for the year ended on that date hereto. These financial statements are the responsibility of the management of the trust. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

Further, we report that:

- 1 We have obtained all information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit;
- 2 In our opinion, proper books of account have been maintained by the trust, so far as appears from our examination of those books;
- 3 The Balance Sheet and the Income and Expenditure Account dealt with by this report are in agreement with the books of account;
- 4 The Balance Sheet and Income and Expenditure Account dealt with by this report comply with the accounting standards applicable to the trust;
- 5 In our opinion and to the best of our information and according to the explanations given to us, the said accounts give a true and fair view in conformity with the accounting principles generally accepted in India;
 - a in the case of Balance Sheet, of the state of affairs of the trust as at 31st March 2012.
 - b in the case of the Income and Expenditure Account, of the excess of Income over Expenditure for the year ended on 31st March 2012.

Place: Bangalore
Date: 04 June 2012

for G. ANANTHA & Co.,
Chartered Accountants,
FRN 005160S
Rani .N.R
Partner
M.NO. 214318

Balance Sheet as at March 31, 2012

DAKSHIN FOUNDATION

No. C-305, Samvridhhi Gardenia Aparments,
88/3, Bytarayanapura, Near Sahakarnagar,
A Block, Bangalore - 560 092

I Sources of Funds

As on 31-3-2012

As on 31-3-2011

| 1 | Fund | | | |
|----|----------------------------------|--------|--------|--------|
| a | Corpus Fund | 5.00 | | 5.00 |
| b | General Fund | 346.81 | | 103.21 |
| c | Utilised Fund | 108.28 | 460.08 | 0.00 |
| 2 | Loan | | 50.00 | 50.00 |
| 3 | Current Liabilities | | | |
| a | Project Fund | | 375.51 | 569.01 |
| b | Others | | 18.26 | |
| | Total | | 903.86 | 727.21 |
| II | Application of funds | | | |
| 1 | Fixed Assets | | | |
| a | Project Asset | | 108.28 | |
| 2 | Current Assets, Loans & Advances | | | |
| a | Deposits | 88.00 | | 85.00 |
| b | Advances | | | 15.00 |
| c | Cash and Bank balances | 707.58 | 792.58 | 627.21 |
| | Total | | 903.86 | 727.21 |

(Rupees in thousands)

Income and Expenditure account for the Year ended March 31, 2012

DAKSHIN FOUNDATION

No. C-305, Samvridhhi Gardenia Aparments,
88/3, Bytarayanapura, Near Sahakarnagar,
A Block, Bangalore - 560 092

Particulars *As on 31-3-2012* *As on 31-3-2011*

Income

| | | |
|-----------------------------|-----------------|---------------|
| a Project Income | 2,926.71 | 631.60 |
| b Donation and Other Income | 424.30 | 249.45 |
| c Interest | 54.24 | 5.43 |
| Total | 3,405.25 | 886.47 |

Expenditure

| | | |
|---------------------------|-----------------|---------------|
| a Project Expenses | 3,040.67 | 628.90 |
| b Travel & Conveyance | 27.26 | 8.50 |
| c Administration Expenses | 93.72 | 163.81 |
| Total | 3,161.65 | 801.20 |

| | | |
|-------------------|--------|-------|
| Surplus/(Deficit) | 243.60 | 85.27 |
|-------------------|--------|-------|

(Rupees in thousands)



Registered address:
No. C-001
Samvridhhi Gardenia Apartments 88/3,
Bytarayanapura
Near Sahakarnagar A Block
Bangalore - 560092

Office address:
No. A-001
Samvridhhi Gardenia Apartments 88/3,
Bytarayanapura
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Bangalore - 560092

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