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Introducing ATREE's new Director

Dr. Balachander, or Bala, to friends and colleagues, is not new to ATREE. Bala has been Governing Board member, trustee and donor at various times in ATREE's history, and the role of Director, ATREE, is the latest hat donned.

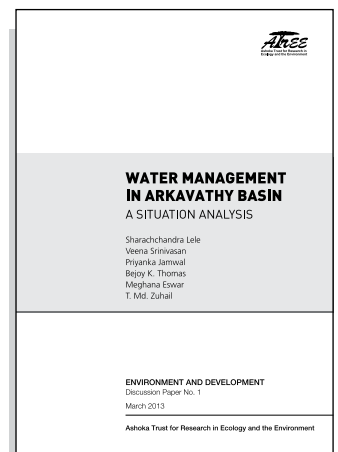
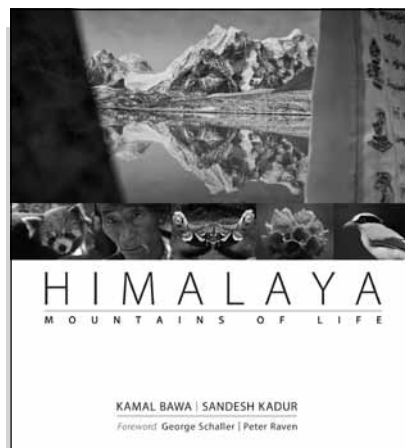
Earlier, he was the Ford Foundation's South Asia Representative for about six years until late 2008. In 2010, he was appointed as a Director of the founding Consortium Board of the Consultative Group on International Agricultural Research (CGIAR) overseeing reform across the 15 centers in the CG system. He also serves as the Chair of its Science, Programmes and Partnership Task Group.

New: Discussion paper series and a coffee table book

This quarter, ATREE released two publications that talk to audiences outside academia and scientific research—a discussion paper series and a coffee table book.

The first Environment and Development Discussion Paper is a situation analysis on issues of water management in the Arkavathy river basin, which abuts the north part of Bengaluru. The series, on issues at the interface of environment and development, will present insights and information, in accessible language, to decision makers, experts, civil society groups and the wider public. Topics will relate to forests, water, energy and pollution, and questions of livelihoods and environmental governance associated with these sectors.

Himalaya: Mountains of Life is a coffee table book on the threatened biodiversity and cultures of the eastern Himalayas. The images, interspersed with little known narratives of the land, its people, and flora and fauna, try to persuade the reader of the importance of conserving this region. This book, by conservation biologist and ATREE President, Kamal Bawa and photographer, Sandesh Kadur, is a sequel to Sahyadris: India's Western Ghats.



Download **Water management in Arkavathy basin: A situation analysis** and forthcoming in this series from http://www.atree.org/discussion_papers.

To purchase **Himalaya: Mountains of Life**, or for information on the book, visit <http://www.himalayabook.com/>.

Dr Balachander has been Director for Asia Programs at the Mountain Institute in Washington, D. C. and for a decade from the early 90s he worked for a variety of organizations concerned with community-based environmental management and development in Asia and North America. He has also served as Director of the Biodiversity Conservation Network, a USAID-funded programme for promoting conservation of vulnerable ecosystems in Asia. Besides being a keen mountaineer and naturalist who has hiked in many remote parts of the world, Bala is an avid tennis and cricket player.

Research

Putting grasslands on the conservation map

Grasslands hardly feature on the conservation agenda in India. They may be home to endangered species like the great Indian bustard, lesser florican, Indian wolf and blackbuck, but are termed 'wasteland', taken for granted and put to use for exotic tree plantations, irrigated agriculture and industrialization.

To highlight the role of grasslands as important ecosystems with valuable flora and fauna, and their role in livelihoods of local and nomadic pastoralists, ATREE is hosting a two-year project to produce country-wide maps of dry grassland biomes, using available satellite imagery. This is expected to serve as a starting point to conservation prioritization and action.

Abi Tamim Vanak and his team focused on four states—Andhra Pradesh, Karnataka, Madhya Pradesh and Maharashtra. Over a period of eight months, the team used unsupervised

classification of coarse (250m) and fine (30m) resolution satellite imageries to create a map of grassland areas. They then plotted ground control points of land cover types ranging from grasslands, scrub, plantations, fallow, cropland, bare rock, and bare soil and used this data to refine the initial classification and create high accuracy maps of land cover type. The team also charted grassland-associated species through tracking carnivore scat, track impressions, herbivore pellets, opportunistic sightings and local information. In the next phase of the project, species-presence data from field surveys and camera-traps will be used to create occupancy maps across the four states and will be combined with land cover maps and threat maps to derive a conservation prioritization ranking using a conservation planning software called Zonation. Based on the rankings obtained from the software, high priority grasslands will be highlighted for conservation planning in an inclusive adaptive management framework. The team will share the results of these analyses and conservation prioritization ranking on online databases such as India Biodiversity Portal, with high resolution, district level maps.

Team: Dr. Abi Tamim Vanak, Ameya Gode, Abhijeet Kulkarni and Chintan Sheth

Funder: MoEF National Environment Sciences Fellowship

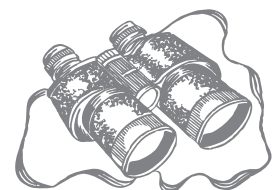
Tourism in a Protected Area: Building bigger stakes for the environment

Should Protected Areas be opened to the demands of tourism? Scientists find that unconditional access does not pay: tourists may enjoy the opportunity of a getaway, but do not appreciate it enough to not litter, vandalise, or play loud music.

Kalakad Mundanthurai Tiger Reserve (KMTR) is one of the tiger reserves whose boundaries will be relaxed to accommodate tourism, following a recent interim order by the Supreme Court of India in this regard. The Protected Areas that will follow this directive are supposed to do so within the framework of the guidelines set by National Tiger Conservation Authority (NTCA). In KMTR, the Field Director has, in addition, set up a Local Advisory Committee (LAC) to guide implementation, and invited ATREE to serve on the committee as the local ecology and conservation expert (ATREE's Agasthyamalai Community-based Conservation Centre is close to KMTR).

NTCA expectation is that tourism will help enhance livelihoods of forest dependents and possibly increase stakes towards biodiversity conservation for forest users and tourists. The opening up of the peripheral areas of KMTR at the recommendation of the LAC has started a flow of tourists. Public representation has also wrangled permission to boat in the Karayar dam reservoir, and tourist access to the area above Manimuthar falls, areas not originally included by the LAC.

However, high tourist traffic has meant high vehicular flow. Possibility of forest fires is higher, and there is not enough staff to manage these numbers of tourists. The net learning is that access should be conditional on efforts against littering, noise and vandalism. To make the KMTR model a success, tourists would need to be sensitised to respect the surroundings, so that tourist footfall has minimal impact on the forests and animals.



Outreach

Conserving an endangered bird in Assam

ATREE Eastern Himalayas/Guwahati has initiated implementation of a new action outreach project titled *Conserving the Critically Endangered white-bellied heron, Ardea insignis, in key sites of the Manas Tiger Reserve in Assam, India*. The project is supported by the IUCN-SOS (Save Our Species) fund for the period December 2012 to June 2014.

The white-bellied heron is a critically endangered species with an estimated global population of less than 250 mature individuals. It is listed among the fifty rarest birds in the world. At 1.27m in height, it is the world's second largest heron, exceeded only by the Goliath Heron. It is threatened by habitat degradation and disturbance in the few areas where it is still known to exist. The project will address these threats by working with local communities, civil society and government to conserve and minimize disturbance at three key sites along the Assam-Bhutan border to enable species recovery.

Conserving the white-bellied heron and its habitat will also result in conservation of several other species of plants and animals in the forest patches where they roost and breed, and in the river courses, which are an important source of water. It is therefore an important indicator species.

Niraj Kakati, ATREE Guwahati

Biodiversity on the World Wide Web

A two-day Indo-US workshop on biodiversity informatics was held at ATREE to survey current state-of-the-art biodiversity initiatives in



India and the United States; propose better standards for convergence and exchange of information among diverse biodiversity portals; promote integration of other geospatial data with species pages; and facilitate increased citizen motivation and involvement in biodiversity informatics. Data generators, curators, technology providers, from across government, academic and citizen science initiatives, from India, US, Bhutan, Sri Lanka, Nepal and France addressed issues of collaboration, technology, compatibility across portals or platforms, reliability of crowd-sourced data, and policies that allow such sharing across institutional and state boundaries.

Scientists agreed that without collaboration and generous exchange of information across countries, portals, institutions and individuals, a reliable, comprehensive portal on biodiversity would remain a pipe dream. Dr Cynthia Parr, Director, Encyclopedia of Life, emphasized the need to publish information that already exists in databases across the world. The Botanical Survey of India and Zoological Survey of India, represented by their Directors, spoke about plans to digitize their repository of images, illustrations, literature and specimen lists.

Discussions on initiatives like SeasonWatch and MigrantWatch in India, eBird, mapoflife, eFlora, Environment Information System (ENVIS), India Biodiversity Portal (IBP), and the Karnataka Biodiversity Atlas threw light on what might work in the creation and sharing of vast biodiversity databases. Steve Kelling, of the Cornell Lab of Ornithology eBird initiative, showed how accommodating user needs led to greater participation in citizen science initiatives, and how significant volumes of unreviewed data from citizen science might be subjected to crowd-sourcing corrections to arrive at reliable inferences. Dr Prabhakar, of Strand Life Sciences and lead for the India Biodiversity Portal (IBP) project, spoke about developing technologies to serve data according to user needs in order to fuel and sustain participation, and generate better information.

This workshop was organized by ATREE, in collaboration with India IBP, Encyclopedia of Life, the Western Ghats Portal and Strand Life Sciences. The sponsors were Indo-US Science and Technology Forum and Sir Dorabji Tata and Allied Trusts. It was held at ATREE's Bengaluru office on 19-20 January 2013.

Learning from other stakeholders: Meet on Ramsar wetlands

One hundred and thirty two delegates, scientists and government officials met for a first-time discussion on management and issues concerning Ramsar wetlands across India. This, the National Ramsar Sites Stakeholders Meet and Wetland Conservation Seminar, in Allapuzha, was the first stakeholder conference and it was represented by a cross-section of participants: from farmers and fishermen, to environmentalists, naturalists, researchers, scientists, teachers, politicians, staff from government and non government organizations from across the country.

The aim of this seminar was to share conservation models and learning that could be replicated. Conservation models that caught the imagination of stakeholders ranged from breeding season bans; ideas on managing invasive species – water hyacinth, Lantana and *Phragmites*; grazing-free reserves and community fish sanctuaries.

Conservation initiatives specific for each Ramsar site were also discussed. In Chilika Lake these ranged from



hydrological interventions for auto recruitment of juvenile fish from sea; free migration – opening of a new mouth, dredging of Magarmukh and Balugaon channels and renovation of Palur canal. In the Harike Lake area, organic farming was encouraged to reduce the pesticide load and so prevent water pollution. In Keoladeo National Park and Vembanad-Kol Wetland, plastic removal and cleaning campaigns by stakeholders. In Kanjli, water hyacinth and siltation removal by local community. Digging of creek, bund formation and turtle protection camps in Point Calimere Wildlife and Bird Sanctuary. Narratives of soil conservation and water quality monitoring by planting trees in Ropar and Chandertal Wetland. Moisture retention work (artificial glacier, pasture development (Tregonella cultivation) in Chandertal Wetland. Home stays and eco-certification meeting in Tsomoriri. And ATREE's own Student's Wetland Congress and Jalapaadam Club as successful wetland awareness programmes of Vembanad-Kol Wetland.

The event was supported by the Ministry of Environment and Forests. WWF India, Department of Environment and Climate Change, Govt. of Kerala and Department of Ports, Govt. of Kerala were event partners. The meet was held at Alappuzha, Vembanad Kol wetlands, the largest Ramsar site in India, 3-5 March 2013.

Jojo T. D., Vembanad

Waterfowl census 2013

Preliminary results of ATREE's annual mid-winter waterfowl survey in the wetlands of Tirunelveli and Thoothukudi districts recorded the presence of more than 58,000 birds belonging to about 60 species. The tanks of Kadambakulam, Perungulam and Armugamangalam recorded the presence of over 11000, 6000 and



5000 water birds, respectively. Greater Flamingoes, which mostly breed in Kutch, Gujarat were seen in flocks of hundreds in Karungulam, Perungulam and Kadambakulam for the first time in three years. Migratory bar-headed geese that come from Mongolia and other places in central Asia were seen in flocks of hundreds or more in two tanks. Migratory and resident duck flocks numbering more than one thousand were recorded in four large tanks in the Thoothukudi district.

Waterfowl numbers from about 40 wetlands survey sites revealed an increase of about 9000 birds from the preceding two annual surveys. One observation was that depleted water levels due to scanty rainfall have made the tanks very shallow and provided suitable habitats for large flocks of birds that feed in shallow waters. On the other hand, deep water birds like pochards were absent this year, and diving birds like cormorants were fewer in numbers.

This volunteer-based survey was led by ATREE's Agasthyamalai Community-based Conservation Centre, with the Pearl City Nature Society, from 26-28 January 2013. Fifty one participants – students, teachers, nature enthusiasts and birdwatchers – carried out the



survey in 63 wetlands of the two districts.

The concluding session was held at Thoothukudi, chaired by Mr. Shenbagamoorthy, IFS, District Forest Officer, Thoothukudi district.

*M. B. Prashanth and M. Mathivanan,
Agasthyamalai CCC*

CEPF updates

The Critical Ecosystem Partnership Fund (CEPF) is one of the largest conservation investments in the Western Ghats hotspot, with ATREE as its regional implementation partner. This five year programme extended its term by another two years in 2012. ATREE closed the fourth round of proposals in December 2012 with 95 applications. Of these, 16 small grants and 15 large grants have been selected by a decision making panel consisting of CEPF, ATREE Regional Implementation Team and four external invited expert members. The reviews were carried out from 18-22 February 2013.

Other activities of the RIT: Dr. R. Ganesan, Dr. Jagdish Krishnaswamy and Dr Bhaskar Acharya represented the CEPF-ATREE Western Ghats Programme at a wrap-up workshop at Pune on 'Policy for conservation and management of rocky plateau biodiversity' hosted by a CEPF grantee, Biome Conservation Foundation on 2nd Feb 2013.

Bhaskar Acharya, Coordinator, CEPF-ATREE Western Ghats Programme participated in a strategizing stakeholder workshop at Thiruvananthapuram on *Gap analysis of Periyar-Agasthyamalai landscape for arboreal mammal conservation*, hosted by CEPF-ATREE small grantee FERAL (Principal Investigator: Dr H. S. Sushma) on 25 Mar 2013.

grounding in ideas of 'sustainability'. For this, Wipro has started a three year Continuous Engagement Programme (CEP), with the schools and colleges shortlisted for the earthian award.

The first orientation programme was held from 23-25 February 2012, with eleven teachers from four earthian awardee schools of 2012. The theme was Forests, Culture and Us. Ideas of sustainability and resource use were discussed through contextualized field-based activities in three contrasting landscapes: a biodiversity-rich tiger reserve (BR Hills), a used protected forest surrounding a temple town (MM Hills), and a peri-urban agriculture-forest mix (Kanakapura). These are also sites of ATREE's Community-based Conservation Centres (CCCs).

Sightings of wildlife in the wilderness, conversations with tribals, visits to livelihood-enhancing lantana crafts centres, meals featuring local wild plants, set the platform for related narratives: on the role of birds in pollination; wild edible plants and sustenance and nutrition of forest dwelling peoples; Forest Rights Act, roles of the Ministries of Tribal Affairs and Environment and Forests; circumstances of tribal migration; lantana's role as an invasive weed as well as raw material for alternative livelihoods.

Sutapa Mukherjee and Sharada Ramadass, ATREE-earthian outreach partnership

Education

Wipro and ATREE partnership with youth

TN KHOSHOO EARTHIAN TROPHY 2012

This year's Khoshoo-earthian trophy went to two schools and one college for their practical action plans on waste management. KK English High School, Bengaluru; Sakar English School, Ahmedabad; and Rajalakshmi Engineering College, Chennai received the award at a ceremony held on 16 February 2013 at the JN Tata Auditorium, Indian Institute of Science campus.

Besides presenting the Khoshoo-earthian trophy for the most actionable entry, ATREE's role is that of a knowledge partner that takes the earthian award beyond the awards ceremony into a more informed

Interdisciplinarity discussion series update

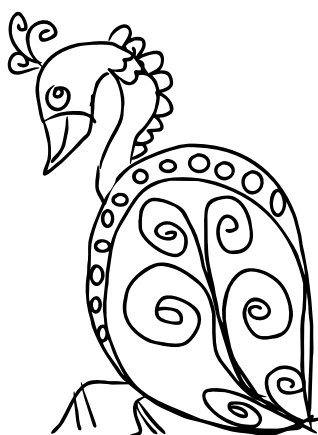
The students-organized, *Towards Interdisciplinarity@ATREE Discussion Series*:

Ms. Zainab Bawa, doctoral candidate at the Centre for Study of Culture and Society (CSCS), Bengaluru, highlighted the contestations arising from the ambiguity of property regimes in the process of rehabilitation of people, especially slum-dwellers and tenant traders, displaced by urban development projects. January 2013.

Ms. Arpitha Kodiveri, environmental lawyer at the non-profit organization Natural Justice, presented her experience of community mobilization under the Forest Rights Act, 2006 in the Sariska Tiger Reserve, Rajasthan, showing how the provisions of the law unwittingly entrench and accelerate the construction of a specific community self-identity. March 2013.

Dr. Nilotpal Kumar, Assistant Professor at Azim Premji University (APU), talked about the cultural complexity of farmers' suicides based on fieldwork carried out in Anantapur District in Andhra Pradesh, as part of his PhD research at the London School of Economics and Political Science. March 2013.

R. Venkat Ramanujam and Amit John Kurien, PhD scholars, ATREE



New

Doctorates awarded

Doctoral degree awarded to 2007 batch students, Savitha Swamy and Chethana H. C.

Savitha Swamy's thesis was on Reshaping neighbourhood parks for biodiversity and people: A study on pocket green spaces in Bengaluru, India.

Chethana's dissertation topic: Assessing the ecological processes in abandoned tea plantations and their implication for ecological restoration in the Western Ghats, India.

Recognitions

Third place in the 2013 ERDAS Award for Best Scientific Paper in Remote Sensing from ASPRS (American Society of Photogrammetry and Remote Sensing) for paper co-authored by **Sharad Lele and Shrinivas Badiger** with student and her advisors from McGill. See the paper on our website—<http://www.atree.org/articles>:

Heller, E., J. M. Rhemtulla, S. Lele, M. Kalacska, S. Badiger, R. Sengupta and N. Ramankutty. 2012. Mapping crop types, irrigated areas, and cropping intensities in heterogeneous landscapes of Southern India using multi-temporal medium-resolution imagery: Implications for assessing water use in agriculture. *Photogrammetric Engineering and Remote Sensing* 78(8): 815–827.

More information on the award at <http://www.asprs.org/Awards-and-Scholarships/Erdas-Award-for-Best-Scientific-Paper-in-Remote-Sensing.html>

Visiting lectureship

Lele, Sharachchandra. Andrew Mellon Foundation Visiting Lectureship. Department of Environmental Science, Allegheny College, Pennsylvania, USA. 1 week in January 2013.

People

Research staff

Ashwini S., JRF, Bangalore Genetics lab

Cynthia Sinclair, Project Assistant, CEPF, Bengaluru

Deepa Chandran, Consultant, Bengaluru on Karnataka Biodiversity Atlas

Divya Gopal, Consultant, Bengaluru

Dr. Joby Paul, Research Associate

Shibu Bhaskar, Programme Assistant; Vembanad, and **Binukumar,** Project Officer, Vembanad Kuttanad Package

Giridhar Malla, Consultant, Bengaluru

Dr. H. C. Chethana, Consultant, Bengaluru

Iswargowda Patil, SRA, Bengaluru

Dr. Pennan Chinnasamy, Dr Swati Sulagna and Dr. Sanjeev Kenchaigol, and Jyothi Hathenbelgal joined the IDRC, Bangalore team as post doc, SRAs and water quality lab analyst respectively.

Susan Varughese, Project Coordinator, Bengaluru

Administrative

Rajeswari R., receptionist, Bengaluru

Yellappa, driver, Bengaluru

Interns

Moumita Laha

Kavya Krishna

Publications

Krishnamurthy, J., M. Bonell, B. Venkatesh, B. K. Purandara, S. Lele, M. C. Kiran, V. Reddy, S. Badiger, K. N. Rakesh. 2012. The rain-runoff response of tropical humid forest ecosystems to use and reforestation in the Western Ghats of India. *Journal of Hydrology* 472-473: 216-237

Popular press

ACCUWa team. Rejuvenating the river: The science-policy disconnect. *Daily News & Analysis*. Pg 4. 15 March 2013.

Pradhan, S. Hornbills in Neora Valley National Park, Darjeeling, India. *Birding Asia*, No.18, December 2012.

Invited talks

Lele, S. NIAS-DST Training Programme for women scientists on resources and development: Scope and challenges. NIAS, Bengaluru. 15 Feb 2013.

Pradhan, Sunita lectured at the Sikkim State Council of Science & Technology's *Lecture Series for DNA Clubs of Sikkim* 16-22 March 2013, Sikkim Science Centre, Marchak, Gangtok.

Talks, papers presented in conferences and workshops and presentations

Lele, S. Understanding Bengaluru's water problem so as to identify

solutions. *A round table to evolve an integrated strategy for augmenting water resources to support increasing demand of a rapidly expanding metropolis – Bengaluru*. Organized by KSCST, BWSSB and GSI. Bengaluru. 16 March 2013.

Aggarwal, Safia and S. Lele. *CFR Management and governance: Lessons from past work*. At workshop on *National consultation on community forest rights under Forest Rights Act*. Organized by Kalpavriksh and Vasundhara. New Delhi. 17 March 2013.

Setty, S. Five talks on environment protection to Panchayat Secretary, Presidents and Panchayat Development Officers at Mahatma Gandhi Institute of Rural Energy and Development, Bengaluru from January to March 2013.

Setty, S. *Participatory resource monitoring concepts with special reference to gooseberry*. At workshop on *Conservation of bio-resources: Concepts, practices and instruments*. At Rudhrapur, Uttarakhand. Organized by Dabur. 1-3 March 2013.

Setty, S. *Biodiversity conservation in BRT tiger reserve*. To visitors from Kurukshetra University, Baroda. ATREE 21 February 2013.

Shivanna, K. R. Participated in Indo-UK Scientific Seminar on *Biology of tropical pollination: From individuals to networks*. Indian Institute of Science Education and Research,

Thiruvananthapuram. Delivered invited lecture on Pollination ecology of some endemic *Syzygium* species of the Western Ghats. 19-21 Feb 2013

Thomas, Samuel. Presented a paper on *The sacred and the material: everyday choices in resource landscapes in the Indian Eastern Himalayas* at the Conference on Everyday Religion and Sustainable Environments in the Himalayas, organized by The India-China Institute, The New School, New York 7-8 March 2013.

Grants received

Sunita Pradhan received a grant from the Rufford Small Grants Foundation for a study on *Tourism in Singhalila and Neora Valley National Parks, Darjeeling: An assessment for appropriate strategies*.



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*Pl note: * will also serve on the Faculty
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Monitoring and Evaluation, Office of
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Land Water and Livelihoods

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This newsletter has been put together from
reports by ATREE folk. Design and layout is
by Salil Sakhalkar. Editing by Samuel Thomas,
Ganesan Balachander and Meetu Desai.