

A photograph of a sloth resting on a thick, dark tree branch. The sloth is light brown and grey, clinging to the branch. In the background, a squirrel is visible on another branch, surrounded by dense green foliage. The scene is brightly lit, suggesting a sunny day in a forest.

# FERAL!

Annual Report  
2016 - 2017

Foundation for Ecological Research, Advocacy and Learning (FERAL)

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## Mandate

Our mandate is to address issues of resource management, conservation, environment and health at the grassroots and the policy level. To do this we implement projects, undertake research and provide training to both students and practitioners through a variety of courses. We collaborate with other research and development institutes in India and abroad and engage with stakeholders through awareness campaigns, workshops and seminars.

We are a non-profit trust founded in 1997 to address the need for applied research and training in ecology and the environment. Since then, we have contributed substantially to research and policy in wildlife biology and conservation, natural resources management and in education and skill building in these and allied areas.

We use data driven ecological research based on modern techniques and tools and strive to involve major stakeholders in the identification and resolution of problems emerging from environmental degradation and loss of natural habitats. We believe that building the skills and capacities of stakeholders and testing out of the box approaches are key ingredients to tackling some of most difficult and seemingly intractable challenges we face in this field today.

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## The year that was

The year 2016–2017 saw a mix of four new initiatives and successful follow up of projects building upon earlier work in the Western Ghats. The study abroad initiative was brought out of hibernation and steps were taken to revive short term courses. New research collaborations were forged which focused on coastal land-use change and its ecological and environmental consequences and on citizen sensing initiatives with stakeholders and community based organisations.

FERAL initiated a project under the Frontier Elephant Programme which brings together researchers from four agencies to conserve individuals and populations of wild elephants that persist in human-dominated landscapes, through long-term monitoring and citizen-science initiatives.





The sambar (*Rusa unicolor*), a vulnerable deer is an important prey species for large carnivore. Its populations have declined substantially due to severe hunting, insurgency, and loss of habitat.





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## Wildlife Biology and Conservation

The focus of this programme is to undertake scientific research on wildlife and use the outputs to steer conservation interventions. In the year gone by, we initiated three projects under this programme and an equal number of collaborative studies were initiated or are being planned.

In the Periyar-Agasthyamalai landscape, we pursued our proposal with the Government to construct wildlife crossing structures across the NH-208 to ensure connectivity for large mammals is restored across the Shencottah Gap. FERAL researchers were also involved in a collaborative research project to understand the impacts of future land-use change on tiger populations in the Central Indian Landscape. Continuing our research on connectivity for wildlife, we initiated a two year study to assess the impacts of linear infrastructure on forest fragmentation and functional connectivity for large mammals in the Western Ghats.

A study on the socio-ecological impacts of small hydro-power projects in the Western Ghats was initiated this year. While small hydro-power projects are being promoted as “green alternative” there are few studies which have

assessed their environmental and social impacts. Along with scientific reports and peer reviewed papers this one year study will also produce a video documentary to disseminate key findings amongst policy makers and general public.

Under the Frontier Elephant Programme, FERAL initiated a three year project “The Elephant in the Towns Commons” funded by the Prince Bernhard Nature Fund. The aim of this project is to conserve elephants in human-dominated landscapes and to find solutions to create elephant-friendly villages.

Continuing our training efforts this year, we trained over a hundred ecologists, conservation practitioners and forest department staff working in the Western Ghats in the use of Camera Traps, GPS and GIS to analyse data. These training programmes have built capacities of end-users to use spatially explicit data from a variety of sources to address conservation and management challenges. Additionally, we continued to provided support to many researchers pursuing their Masters and PhD programmes.





View of the de-watered stretch of a river below the weir of a small hydro-power project in the Western Ghats of Karnataka.



## Assessing the socio-ecological impacts of small hydro-power projects in the Western Ghats, India

**Project Period:** April 2016 – August 2017

**Budget (Lakh ₹):** 4.72

**Supporting Agency:** The Rufford Foundation, United Kingdom

**Principal Investigator:** Suman S Jumani

**Web Page:** <http://www.feralindia.org/drupal/node/181>

Various national and international policies are supporting the growth of small hydro-power project as it is assumed that small dams have minimal or no environmental impacts. However, recent studies are questioning this assumption. This project gathered and assessed the broad impacts of extensive small dam development within the Western Ghats – a global biodiversity hot-spot that has one of the largest densities of small dams in India. The important outcomes of this project are:

a) Mapping all planned and commissioned Small Hydel Projects (SHP) within Karnataka. All existing and proposed SHPs were mapped, and this information will soon be uploaded on an open-source online

portal, such as the India Biodiversity Portal

b) Identification of conservation priority catchment areas within the Western Ghats of Karnataka

c) We also produced a compelling documentary film that can aid in bringing about meaningful policy-level changes regarding small dam development in India. This film was produced in English, [English](#), [Kannada](#) and [Hindi](#), and is available on YouTube.

d) Crop compensation data for the last two decades has been compiled from 11 forest ranges in the state of Karnataka and we are currently examining the relationship between SHP construction and human-elephant conflict in these ranges.





Linear intrusions through forests leads to forest fragmentation and degradation. In addition, they also disrupt animal movement. A canopy bridge in Valparai has been used to facilitate the movement of arboreal mammals across the Aalliyar-Valparai highway.



# Assessing the impacts of infrastructure development on forest fragmentation and potential connectivity for large mammals in the Western Ghats

**Project Period:** July 2016 – June 2018

**Budget (Lakh ₹):** 16.25

**Supporting Agency:** Centre for Wildlife Studies, India

**Principal Investigator:** Srinivas Vaidyanathan

**Co-Investigator:** Rajat Ramakant Nayak

**Web Page:** <http://www.feralindia.org/drupal/node/391>

Connectivity for large mammals is seriously hampered by linear intrusions within the Western Ghats. Currently, there is no comprehensive assessment of connectivity that has been carried out across the Western Ghats. However, site specific studies/reports indicate the lack or poor connectivity for large mammals across roads and railway lines, especially for elephants and tigers in several locations within the Western Ghats. At these locations, not only is the movement of dispersing individuals restricted, it also leads to mortality of animals due to collision with vehicular traffic. Restoring and enhancing connectivity in these locations will greatly improve overall connectivity across the Western Ghats. Apart from the looming threat to dispersal of wild animals, associated impacts of habitat fragmentation due to linear infrastructure are poorly known/evaluated across the Western Ghats.

This two year project builds on the premise that identification of practical, cost-effective, science-based alternatives can lead to solutions that provide connectivity for wildlife while meeting essential needs for infrastructure.

Objectives of this project include:

a) Assembling spatial datasets that will be

combined into connectivity maps for the landscapes.

b) Compilation and analysis of datasets to assess the fragmentation impacts of linear intrusions within the Western Ghats.

c) Performing analyses of scenarios of various spatial arrangements, mitigation measures, and intensities of future infrastructure development and the impacts of these scenarios on connectivity in the Western Ghats.

Between June 2016 and March 2017, we generated all spatial datasets required assess structural and functional connectivity in the Western Ghats. Apart from data collection, we did a thorough literature review and decided on fragmentation indices that will be used to quantify fragmentation and connectivity. The structural connectivity analysis mainly involved characterising forest patches across the Western Ghats and three indices comprising of forest patch size, amount of perforation and distance between neighbouring forest patches has been developed. Functional connectivity for tigers was modelled using resistance layers which were parameterised using genetic data. In the coming months we will develop functional connectivity models using multi-species approaches.





The frontier-habitats are areas mostly outside or bordering protected areas, where wild elephants continue to live. These landscapes are human-dominated and are urbanising rapidly, bringing humans and elephants ever closer!

**Photo credit:** Nishant Srinivasaiah



## The Frontier Elephant Programme

The Frontier Elephant Programme brings together researchers from the National Institute for Advanced Studies (IAS), Asian Nature Conservation Foundation (ANCF), Indian Institute of Science (IISc) and FERAL to conserve individuals and populations of wild elephants that persist in human-dominated landscapes, through long-term monitoring and citizen-science initiatives. The goal of the programme is to harness the behavioural adaptability of elephants to help local communities adopt lifestyles that facilitate their coexistence with elephants in frontier-habitats, while ensuring food security and safety in the region.

## The Elephant in the town's commons: A participatory approach to conserve Asian elephants in a developing country (India) and to mitigate human-elephant conflict

**Project Period:** September 2016 – March 2018

**Budget (Lakh ₹):** 13.09

**Supporting Agency:** Prince Bernhard Nature Fund (PBNF), The Netherlands

**Principal Investigator:** Srinivas Vaidyanathan

**Co-Investigator:** Nishant Srinivasaiah

**Web Page:** <http://www.feralindia.org/drupal/node/360>

In India, nearly 15,000 elephants (~50% of its population) live outside protected areas in and around densely populated agro-pastoral landscapes. Loss of elephant habitat, change in land-use and archaic farming practices have all resulted in increased human-elephant conflict (HEC). This project is a long-term approach (3 year plan, 2016-2019) to protecting elephants while improving people's safety and food security through community empowerment, reduction in poaching and HEC. Our main target groups are the elephants and villages affected by conflict. We plan to create elephant-friendly villages through monitoring and awareness. This project has been initiated under the "Frontier Elephant Program", a multi-institution effort to address elephant conservation in human dominated landscapes. Its objectives are:

a) Improving the lives of people in villages affected by human-elephant conflict, through

real-time monitoring of elephants using camera traps and early warning systems

b) Promoting lifestyles among villagers that are compatible with elephant's use of the region, in order to prevent fatalities on both sides

We have trained nearly 70 forest staff and villagers in monitoring elephants and have begun to develop an early warning system which will send out SMS to subscribers and forest department personnel when elephants are detected (using camera traps/other sensors) in proximity to villages. Three consultation meetings in three villages have been held. Each village is unique in terms of its location, crop cultivation patterns, elephant visitations and land-use. The lifestyle pattern and mitigation measure that is most suitable to each village will be identified and promoted during the next cropping season to assess its impact on human-elephant conflict in the three villages.



The introductory GIS workshop underway. Our workshops are typically attended by small groups and involve hands-on training equipping participants to start using the technology right away.



## Learning And Study Abroad

The learning and study abroad programme, under which all non-project events of FERAL are conducted, organised two workshops. In addition, a day-long visit of students from Juniata college was coordinated during which the students were taken for a field visit where they interacted with members of the fishing community and later with scholars from various institutes.

### Introductory workshop on GIS and GPS

**Workshop Dates:** 17th June 2016 to 19th June 2016

**Resource Persons:** R.S. Bhalla and Kumaran K

**Web Page:** <http://www.feralindia.org/drupal/node/353>

A three day hands-on workshop was conducted which comprised of tutorials and exercises for persons new to GIS and GPS. Participants learnt the basics of vector GIS and how to collect spatial data on smart-phones and tablets using forms. Topics that were covered included geo-referencing, digitising, manipulation of geometric objects and their attributes and integration of data from diverse sources onto a GIS platform. The open source software Quantum GIS was used for the workshop.

### Workshop on basics of spatial data collection, management & visualisation

**Workshop Dates:** 6th Aug 2016 to 7th Aug 2016

**Resource Persons:** Srinivas Vaidyanathan and Rajat Ramakant Nayak

**Web Page:** <http://www.feralindia.org/drupal/node/357>

This workshop, included tutorials and exercises and was structured for persons new to GIS and GPS. The team conducting the workshop has over a decade of experience in using and teaching the subject. The workshop was structured to give a balance between essential geographical theory (a quick re-hash for most participants), understanding spatial data collection and management, these being important for utilising a GIS effectively, and learning to use a GIS software. The participants were taught to use a GIS software to make quality maps, and to undertake some spatial analyses. For this we used Google Earth Engine and Quantum GIS (QGIS), which is among the most popular, free and open source GIS software.





A ground level rain gauge installed on the hill opposite Kollaribetta.





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## Natural Resource Management

Ensuring the protection and restoration of ecosystem services on which a multitude of communities are dependent is the goal of the Natural Resources Programme in FERAL. The programme focuses on water resources management and coastal resources, which is increasingly challenging in the face of large scale modifications of natural habitats which disrupt basic ecosystem processes and functions.

We seek ways to conserve, restore and manage ecosystem services with local communities under this programme whose objectives are:

- To unravel ecological processes which deliver important ecosystem services and to quantify these ecosystem services using multidisciplinary approaches.
- To demonstrate and develop research tools for decision support in the management of natural systems with specific focus on scenario building for impacts of climate change and

trade-offs between interventions.

- To use this research to identify strategies and inform and influence policy which will:
  - Reduce the vulnerabilities of both stakeholders and the ecosystems on which they depend to natural disasters and climate change.
  - Help restore, and sustainably manage ecosystem services through community action in habitat restoration, protection and management.

During this year, we continued work on the eco-hydrology research based in the southern Western Ghats and developed proposals for follow on research focusing on impacts of exotic invasive species in the Upper Nilgiris.

A new collaborative initiative on citizen sensing was started which seeks to develop community based monitoring of environmental parameters as a means to document changes in coastal regions.





Water samples being collected from a weir installed downstream of a wattle (*Acacia mearnsii*) dominated catchment. The wattle is scheduled to be removed under the grassland restoration programme. We hope to be able to quantify the ensuing changes in stream-flow and the quality of the runoff.



The fortnightly downloading of data from our loggers often involves a beautiful, albeit tough, walk. This, however changes during the monsoons when the walk up the slippery slopes is much more tricky and the wet and cold combine to make it a rather unpleasant experience.

## Hydrologic and carbon services in the Western Ghats: Response of forests and agro-ecosystems to extreme rainfall events

**Project Period:** January, 2012 to August, 2016

**Budget:** ₹45,20,744

**Supporting Agency:** Ministry of Earth Sciences, Gol.

**Principal Investigator:** R.S. Bhalla

**Co-Investigator:** Srinivas Vaidyanathan

**Web Page:** <http://www.feralindia.org/drupal/node/143>

This research project focused on the role of extreme rainfall events in the generation of floods in a region of India that has some of the largest short-term rainfall intensities. The methods used were capable of identifying changing dynamics directly from meteorological and hydrologic time-series from both existing government stations and new experimental systems. To reduce uncertainties, changes were monitored using both field and numerical techniques. We monitored two basins in the Western Ghats, one in the Upper Nilgiris in the catchment of the Cauvery river, and the other in Northern Karnataka in the catchment of the Aghnashini River. A nested sampling approach was followed through which the discharge of low order streams was measured along with rainfall and other climatic parameters in their catchments. Four basic questions were asked:

- Are extreme rainfall events in India influenced more by La Nina or the Indian Ocean Dipole phenomena?
- Do the parameters used in rainfall-flood models need to change between rainstorm events with different rainfall intensity characteristics (even after accounting for changes in basin wetness)?
- Does forestation mitigate responsiveness (flashiness) of river floods?

○ Does extreme rainfall events also impact (aquatic and atmospheric) carbon cycling? If extreme rainfall events in India are influenced more by La Nina or Indian Ocean Dipole phenomena.

○ If the parameters of rainfall-flood models need to change between rainstorm events with different rainfall intensity characteristics (even after accounting for changes in basin wetness).

Preliminary results of our work suggest that:

○ Flow dynamics in Upper Nilgiris are dominated by subsurface flows and the residence time of water in the sub-surface decreases in a non-linear fashion with increasing rain intensity.

○ Wattle and invasive shrubs are likely to reduce soil moisture and dry season stream drain into Upper Bhavani reservoir.

○ Rainfall variability and increase in rainfall intensities in Nilgiris are likely to enhance flood threats in the future. Removal of wattle may increase dry season flow but could potentially increase flood flows if climate trends persist.

The project is working towards the establishment of long-term vegetation plots in different vegetation types (wet forests in Sirsi, and grasslands, shola patches, pine and wattle plantations in the Nilgiris) where carbon cycling is being monitored, and will continue to be monitored at high temporal frequencies.





The **FREESTATION** is an international citizen sensing initiative led by [AmbioTEK CIC](#) and [King's College London](#) with the objective to "build and deploy reliable automatic weather stations with the lowest cost and easiest build possible". Here the unit has been temporarily set up adjacent to our automatic weather station for calibration by Sarvanan, the field coordinator.

## Community led environmental monitoring

**Project Period:** August 2016 onward

**Supporting Agency:** Internally Funded

**Principal Investigator:** R.S. Bhalla

**Co-Investigator:** Srinivas Vaidyanathan

Citizen sensing is a term used to describe crowd sourcing of data, its analysis and packaging to provide decision support. While this is a relatively new “phenomenon” it is rapidly growing in the developed world. Citizen sensing in India is largely nascent. While there are some prototypes, there are few examples of its large scale use.

This initiative is an attempt to bring together individuals and agencies interested in citizen sensing as a means of community based resource management, environmental monitoring and conservation. The goal of the initiative is to leverage the power of social networking and tap the growing community of electronic hobbyists and open source software enthusiasts in South India to develop community based environmental monitoring programmes.

As an initial step, we’ve identified some simple applications and built prototypes of sensors for soil moisture, air pollution and soil salinity. The challenge now is to calibrate these low cost sensors so they provide accurate and robust measurements, to test the sensor–logger pairs in field conditions and create a cloud based interface which collates, processes and analyses this data to make it available to users. We propose to involve the stakeholders directly in the design of the units and to discuss with them, ways in which this information can be shared and used as a basis of environmental monitoring and to inform conservation and management decisions.

In the coming year, we hope to build a network of individuals and agencies and raise funds to support these activities





The Eurasian hoopoe (*Upupa epops*), a common bird in south India, has a widespread distribution and is native to Europe, Asia and the northern half of Africa.



## Events

This section of the report summarises events held outside the purview of the Learning programme. These usually comprise of workshops, meetings and conferences organised under ongoing projects or those attended by our team elsewhere.

### Backyard and campus bird count 2017

**Venue and dates:** Kalivelli, Ousteri and Bahour lakes, 17<sup>th</sup> to 20<sup>th</sup> February 2017.

**Participants:** Students from Dept. of Ecology and Environmental Sciences - Pondicherry University, school students accompanied by teacher volunteers associated with CERD - Pondicherry and bird watching enthusiasts from Pondicherry, Auroville and FERAL.

**Web Page:** <http://www.feralindia.org/drupal/node/370>

FERAL helped organise the Great Backyard Bird Count in and around Pondicherry between the 17th and 20th of February 2017. Among the sites we covered were the Kalivelli Lake, the Ousteri Bird Sanc-

tuary and the Bahour Lake. CERD/PSF led the bird count at Bahour. This year there was a larger participation from schools than earlier and some of the students later conducted a bird count at their respective campuses.



Many schools joined the bird count this year.



A flock of black ibis (*Pseudibis papillosa*) at Kalivelli.





Chestnut-headed bee-eater (*Merops leschenaulti*) at Ousteri lake.



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## Publications

Below is a list of publications for this financial year covering articles, both in scientific journals and popular magazines and news papers followed by technical reports prepared for donors and conference papers presented by the team at both national and international events.

### Journal articles and book chapters

- (1) Aditya Gangadharan, Srinivas Vaidyanathan, and Colleen Clair. Planning connectivity at multiple scales for large mammals in a human-dominated biodiversity hotspot. *Journal for Nature Conservation*, 36:38–47, 2017.
- (2) Divya Karnad. Navigating customary law and state fishing legislation to create effective fisheries governance in India. *Marine Policy*, 86:241–246, 2017.
- (3) Ramesh Ramachandran, Ajith Kumar, Kolla Sundar, and R. S. Bhalla. Hunting or habitat? Drivers of waterbird abundance and community structure in agricultural wetlands of southern India. *Ambio*, pages 1–8, 2017.

### Reports and conference papers

- (1) Divya Karnad. Managing fisheries from a migrant perspective. 2017.
- (2) Jagdish Krishnaswamy, Nick Chappel, R. S. Bhalla, Mahesh Sankaran, Srinivas Vaidyanathan, Shrinivas Badiger, Susan Varghese, and Susan Varghese. Hydrologic and Carbon Services in the Western Ghats: Response of Forest and Agro- ecosystems to Extreme Rainfall Events. Technical report, 2017.
- (3) K Kumaran, R. S. Bhalla, and K. Deviprasad. Ecological and Anthropogenic Implications of Two Decades of Land Cover Changes in the Upper Nilgiris in The Context of Global Climate Change. 2016.



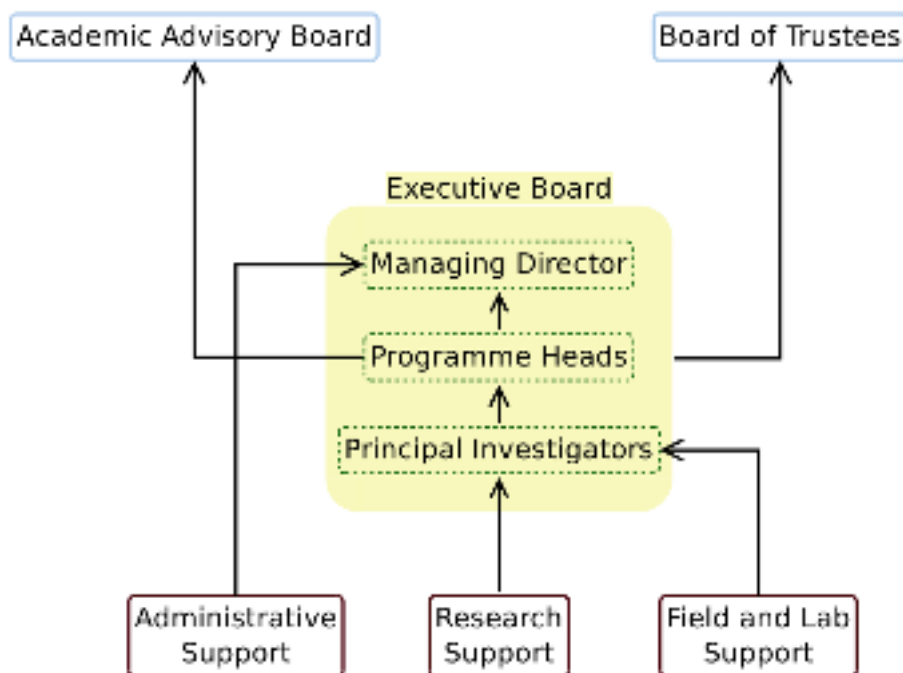
## Magazines, newspaper articles and blogs

- (1) R. Bhalla. An Ecologist View of Challenges in Restoring Coastal Habitats. 2016.
- (2) S Bharathidasan and N. Lakshminarayanan. Dr. Schaller: Five Decades of Untiring Research on Endangered Species. 2016.
- (3) Divya Karnad. Heading West. *Samudra*, (75):17–19, 2017.
- (4) Srinivas Vaidyanathan and A. J. T. Johnsingh. Restoring The Western Ghats Ariyankavu Corridor. 2017.
- (5) Vikrant Jathar. Checklist of Butterflies of kadumane Tea Estate. *ButterflyIndia - India Biodiversity Portal*, 2016.

## Administrative Information

FERAL is a non-profit trust founded under the Indian Trusts Act (1882), on July 1997. We are certified as a Scientific and Industrial Research Organisation (SIRO) by the Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, New Delhi. Donations made to FERAL attract deduction under section 80G of the Income Tax Act, 1961 and we are registered and authorised to receive foreign funds under the foreign contribution regulation act (FCRA) 2010, [updated reports](#) of which are published on our web site.

We have a simple organisational structure which provides a supportive framework for our researchers while ensuring them functional autonomy. As per the DSIR and Trust Act rules, we are advised by an academic advisory board for all scientific matters and governed by a board of trustees for overall administration and organisational policy.



FERAL's organisational structure.



## Advisory board

Deviprasad K. V., Ph.D.  
Jagdish Krishnaswamy, Ph.D.  
Ajith Kumar, Ph.D.  
Neil Pelkey, Ph.D.  
Keshavnath Perar, Ph.D.  
Mahesh Sankaran, Ph.D.  
Kartik Shanker, Ph.D.  
Arjun Sivasundar, Ph.D.

## Board of trustees

R.S. Bhalla, Ph.D. (Managing Trustee)  
Mahesh Sankaran, Ph.D.  
Srinivas Vaidyanathan

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## Partners

FERAL's work is made possible through grants from the Government of India and international agencies. Often these grants are made to multi-institutional consortia of two or more partner organisations. The agencies who have supported our work and those who have collaborated in project implementation are listed below.

### Supporting partners

Ministry of Earth Sciences, Government of India, New Delhi.

Rufford Foundation, UK.

The Rockefeller Foundation and US Agency for International Development via The Nature Conservancy.

Centre for Wildlife Studies, India.

### Collaborating Institutions

Ashoka Trust for Research in Ecology and Environment, Bangalore, India.

Centre for Wildlife Studies, India.

Lancaster Environment Centre, Lancaster University, UK.

National Centre for Biological Sciences, Bangalore, India.

National Institute for Advanced Studies, Bangalore, India.

Wildlife Conservation Society - India Programme.

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## The FERAL Team

**F**ERAL's team is a mix of researchers and professionals from various disciplines who are supported by a small but competent and highly trained team. Below is a short introduction to the people who make FERAL tick (arranged alphabetically).

### Researchers



*Farshid Ahrestani*

Farshid is a wildlife ecologist who studies the mechanisms that drive the distribution and dynamics of populations and communities in space and time. Farshid is interested in understanding how species and ecosystems are coping and responding to global change. Farshid has studied large herbivores (deer, antelope etc.) for nearly two decades, and is a leading global expert on the ecology of large herbivores in Asia.



*R.S. Bhalla*

Ravi works on community based natural resources management and ecosystem services. Monitoring and building resilience among communities to mitigate impacts of climate change on these resources and services is another aspect of his research. He holds a Ph.D. in GIS and remote sensing based tools and models on water resources and watershed management.



*Suman Jumani*

Suman completed her Master's degree in Wildlife Biology and Conservation from the National Centre for Biological Sciences (NCBS), Wildlife Conservation Society – India Programme. The current focus of her research is on understanding the ecological and social consequences of small hydro-power development in the Western Ghats. She is primarily interested in conducting applied interdisciplinary research on river ecosystems, with the ultimate aim of influencing conservation and policy interventions





*Divya Karnad*

Divya is a marine ecologist working on fisheries and threatened fish species along the west coast of India. She recently completed her PhD at the Rutgers University, USA for which she studied sustainable livelihoods of fishermen and conservation of threatened marine fish species in the West Coast of India.



*N Lakshminarayanan*

N Lakshminarayanan is a wildlife biologist. He completed his Post-Graduation in Wildlife Science and Conservation from National Centre for Biological Sciences, WCS-India Program, Bangalore. He is particularly interested in applied research and conservation of large mammals. He actively engages with local advocacy groups working on large mammal conservation in the Western Ghats.



*Rajat Ramakant Nayak*

Rajat has completed his Masters in Wildlife Biology and Conservation. He has a special interest in grassland ecosystems, both low and high altitude, semiarid and wet. He is currently part of the team focusing on the biology and conservation of ecosystems and connectivity for large mammals.



*Sunita Ram*

Sunita has an MPhil in Biological Sciences from Fordham University, USA. She is currently working on factors delineating distribution of langurs in southern India. Her research interests lie in understanding the ecology and distribution of primates and finding long term conservation strategies in the southern Western Ghats.



*Srinivas Vaidyanathan*

Srinivas is a wildlife biologist with an interest in understanding changes in landscape level processes and structure and how they affect large mammal populations. He is a guest faculty at the M.Sc course in Wildlife Biology and Conservation at NCBS, where he has been co-guiding students for their Master's thesis. Srinivas uses spatial approaches for finding innovative and practical solutions to conservation problems.



*Nishant Srinivasaiah*

Nishant is currently pursuing his PhD at the National Institute for Advanced Studies (NIAS) and he is also instrumental in starting a multi-institution, multi-disciplinary collaboration to manage Asian elephants in India. Over the last decade he has been monitoring elephants, understanding their behaviour and interactions with humans to find solutions to conserve elephants.

## Research support



*Vikrant Jathar*

Vikrant completed his masters in zoology from Mumbai University. He is interested in studying butterflies and their role in biodiversity assessments. He is also interested in studying parasites infecting butterflies in their different life stages.



*Kumaran K.*

Kumaran has been working as part of our field teams in Pondicherry and in the Western Ghats. He recently completed his Masters degree in Ecology at Pondicherry University and has worked on land cover changes in the Nilgiris with focus on invasive species in the shola grasslands.



*Vinod M.*

Vinod works as part of the field team in the Agastyamali landscape.



*Saravanan S.*

Saravanan holds a masters in human resources development and coordinates field activities and manages the teams at the Emerald field station in the Nilgiris. He is also the liaison between the project and various officials in the Nilgiris and is a resource person for GIS and GPS workshops conducted at FERAL.



*Kamal S.*

Kamal started off at FERAL as a field assistant about a decade ago. Since then, he has become an invaluable part of our research support through his ability to pick up techniques and accepting responsibilities in field. Kamal is adept at handling a range of field equipment and data loggers and downloading data. He is a reliable driver in tough forest terrain and is good with managing field staff and taking over running of field stations at a pinch.



*Nitya Sathish*

Nitya has a BE in Electronics and Communication Engineering. She is currently assisting with data management and analysis.



## Field assistants



Shanker.N



Jagan.S

## Administrative support



Shanthi R.

Shanthi is our Accounts Manager handling the day to day accounting responsibilities of the organisation. She is a postgraduate in commerce and is versatile in the use of a range of accounting software.



Sumathi

Sumathi manages the upkeep of the FERAL campus at Morattandi which includes handling the boarding and lodging arrangements during training programmes and events.

# Balance Sheet for the year 2016–2017

FOUNDATION FOR ECOLOGICAL RESEARCH ADVOCACY AND LEARNING  
No .170/3, Morattandi Village, Avroiville Post, Tamilnadu - 605101  
BALANCE SHEET AS AT 31.03.2017

(Amount in Rs )

Particulars	Sch.Ref	31.03.2017	31.03.2016
<b><u>SOURCES</u></b>			
Corpus	1	(24,490)	10,43,853
Project Asset Reserve	2	33,55,190	36,35,623
Projects Account (Cr)	3	17,75,951	-
		<b>51,06,651</b>	<b>46,79,476</b>
<b><u>APPLICATION</u></b>			
Fixed Assets less Depreciation	4	20,46,791	23,77,783
<b><u>CURRENT ASSETS, LOANS AND ADVANCES</u></b>			
Cash and bank balances	5	28,82,144	19,49,225
Loans and advances	6	5,50,323	4,47,733
Projects Account (Dr)	3	-	2,70,744
	(i)	<b>34,32,467</b>	<b>26,67,702</b>
Less: Current liabilities	7	3,72,607	3,66,009
	(ii)	<b>3,72,607</b>	<b>3,66,009</b>
Net Current Assets (i) - (ii)		30,59,860	23,01,693
		<b>51,06,651</b>	<b>46,79,476</b>
Notes on Accounts	10		

As per our report of even date attached

For ECOLOGICAL RESEARCH ADVOCACY AND LEARNING

  
R S BHALLA  
Managing Trustee

FOR ASA & ASSOCIATES LLP

Chartered Accountants  
Firm Reg No: 009571N/N500086

  
K. VENKATRAMAN  
Partner  
M.No:200/21914

Place : Chennai  
Date : October 29, 2017



