FES

FOUNDATION FOR ECOLOGICAL SECURITY

Annual Report 2017-2018

Contents

COVER: *Drosera burmannii* – Commonly known as tropical sundew, the perennial herb is an insectivorous plant which grows in patches in damp and shady localities. It is one of the fastest trapping sundews which captures and digests insects using mucilaginous glands in only a few seconds. The insects supplement the poor mineral nutrition of the soil in which the plants grow.

Cover Photo: C S Saneesh

Mark Katzman

Registered under the Societies Registration Act XXI 1860, the Foundation for Ecological Security was set up in 2001 to reinforce the massive and critical task of ecological restoration in the country.

Board of Governors

CHAIRMAN
Usha Thorat

MEMBERS
Amrita Patel
Samar Singh
A N Yellappa Reddy
Nitin Desai
Deepak Tikku
Mahendra Vyas
Sudarshan Iyengar
Shailesh Nayak*

** Shailesh Nayak joined on 22nd June 2018*

Representatives of
National Dairy Development Board (NDDB)
National Bank for Agriculture and Rural Development (NABARD)

Jagdeesh Rao
(Ex-officio Member Secretary)

Paul Nordmann

Our Mission

"As 'ecological security' is the foundation of sustainable and equitable development, the Foundation for Ecological Security (FES) is committed to strengthening, reviving, or restoring, where necessary, the process of ecological succession and the conservation of land, forest, and water resources in the country."

To this end FES:

WORKS towards the ecological restoration and conservation of land and water resources in the uplands and other eco-fragile, degraded, and marginalised zones of the country, and to this end, to set in place the processes of coordinated human effort and governance, and provide relief to the poor, in particular;

WORKS either directly, or with and through a range of democratic village institutions, their federal bodies, and civil society organisations, set up through initiatives that are ecologically sustainable, and socially and economically equitable;

ENSURES the ecological integrity of all efforts by working, as far as possible, with entire landscapes and with all the inter-related communities within it, through a range of arrangements on their land and aquatic resources, whether Commons, Public, or Private;

COLLABORATES with Panchayat Raj and other democratic village institutions, as well as appropriate civil society organisations, in their efforts to fulfil the objectives of the society, and to provide technical and financial assistance to them;

UNDERTAKES and sponsors studies and research related to the understanding of ecological processes, the biology and ecology of endemic and endangered species, and the various aspects of the political-economy of the associated human communities;

ASSISTS in the creation of a coherent perspective on forest and water-related land-use policy, as well as a conducive legal and regulatory environment, and disseminates knowledge and information through dialogue with policymakers, legislators, as well as administrators, professionals, other agencies, and the public at large.

FES – In a Few Words

Environmental degradation negatively impacts the basic livelihood of more than 1.2 billion people across the world and more than 350 million rural poor in India. Some of the most degraded lands in India are the common pool resources (CPRs) or Commons, such as community pastures, community forests and "wastelands", which play a vital role in maintaining ecological balance while providing important resources that sustain rural livelihoods.

In India, Commons make up as much as 25% of its territory and are mostly administered by the government. Though the rural communities have customary rules and practices to manage and govern these lands, in absence of any recognition or legal title on these lands, they lack incentive to effectively safeguard them. As a result, Commons tend to be neglected to the point of degradation.

FES disrupts the status quo by enabling the rural communities to organize themselves, access secure legal rights to their Commons, prepare resource management and governance plans and access public investments to support environmental improvements. Concurrently, FES engages with State and National government officials to enact and implement policies and programmes (and channel funds) that promote the management and governance of Commons by local communities. FES harnesses the potential of information systems and technology for improving civic engagement, scaling up and sound use of public funds. FES partners with research institutions, nationally and internationally, to improve the understanding, add rigour in field action and build evidence.

FES works on three fundamental dimensions of rural life:

> Bringing an ecological leaning to the dominant views of 'natural resource management' and 'rural development' where 'nature and natural processes' are often disregarded or unappreciated.

> Advancing the 'Commons paradigm' in the governance of natural resources, as most bio-physical resources are common pool resources managed well under Common Property Regimes.

> An interdisciplinary approach with equal emphasis on ecological well-being, social justice and access to economic opportunity, and the unique spaces that such an interconnected world view offers.

Recognising the potential that Commons could offer for transformative action, FES aims at increasing its reach to 38 million people and impacting 30 million acres of Commons in the next five years. By building on the continuum of local level action, enabling support at government level and enhancing civic engagement, FES aims to disrupt the status quo and reposition the 50 year old metaphor of 'Tragedy of Commons' as 'Promise of Commons'.

Core Model

Assisting restoration of **5.47 million acres** of degraded common land,
touching **8.68 million lives**
and strengthening **16,072 institutions** at village and habitation level

Paul Nordmann

Mark Katzman

Cornerstones

Promise of Commons – For Nature and People

In India, more than 350 million people lack secure tenure, and access to natural resources such as forests, pastures and water bodies that are in the vicinities of villages are viewed as common resources. Weak tenure arrangements and inadequate recognition of local self-governance institutions lead to injudicious use, degradation of resources and exclusion of the needy.

These in turn manifest as reduced availability of water, fodder, firewood and small timber as well as, declining soil health, falling levels of water table and loss of biodiversity. The gaps between customary governance practices and modern laws and programmes result in alienating the very people whose lifestyles are woven around such resources.

In such a scenario, FES brings in two fundamental dimensions to promote ecological, social and economic well-being:

> A socio-ecological leaning to natural resource management and rural development
> The 'Commons paradigm' to the governance of shared natural resources.

Besides bringing to surface the inherent capacities of local people as ecological stewards and catering to a range of local benefits, conserving Commons has emerged as a promising opportunity to address climate action.

Ecological Restoration

Forests, grasslands and 'wastelands' that lie in the vicinity of villages serve critical ecological functions of regulating water and nutrient flows, sequestering carbon, contributing to pollination and pest control, serving as buffers to ecologically fragile areas and as repositories of biodiversity. Estimated at a value of USD 5 billion annually (in 2001) these shared community resources are the backbone of rural economies.

As ecological security is fundamental to economic and social well-being, FES places emphasis on hydrological and nutrient cycles as well as the biodiversity in shaping local land-use choices. Working at a landscape level, it unpacks the inter-linkages between Commons, agriculture and livestock production systems thereby connecting the farmers' constituency with conservation of forests, pastures and water bodies.

In translating such a body of thought into action, FES promotes an exchange between customary and modern knowledge systems and places rural communities at the centre of decision-making processes.

Anil Sarsavan

Acknowledging that natural resources such as forests, pastures and water bodies are not bound by administrative boundaries, we work across contiguous villages at a landscape level.

We highlight the value of birds, insects, amphibians and reptiles in pollination and pest control and in improving the resilience of farming systems.

We promote dialogue within rural communities on ecological thresholds, thereby triggering regulation on injudicious practices such as water-intensive cropping and over-extraction of forest produce.

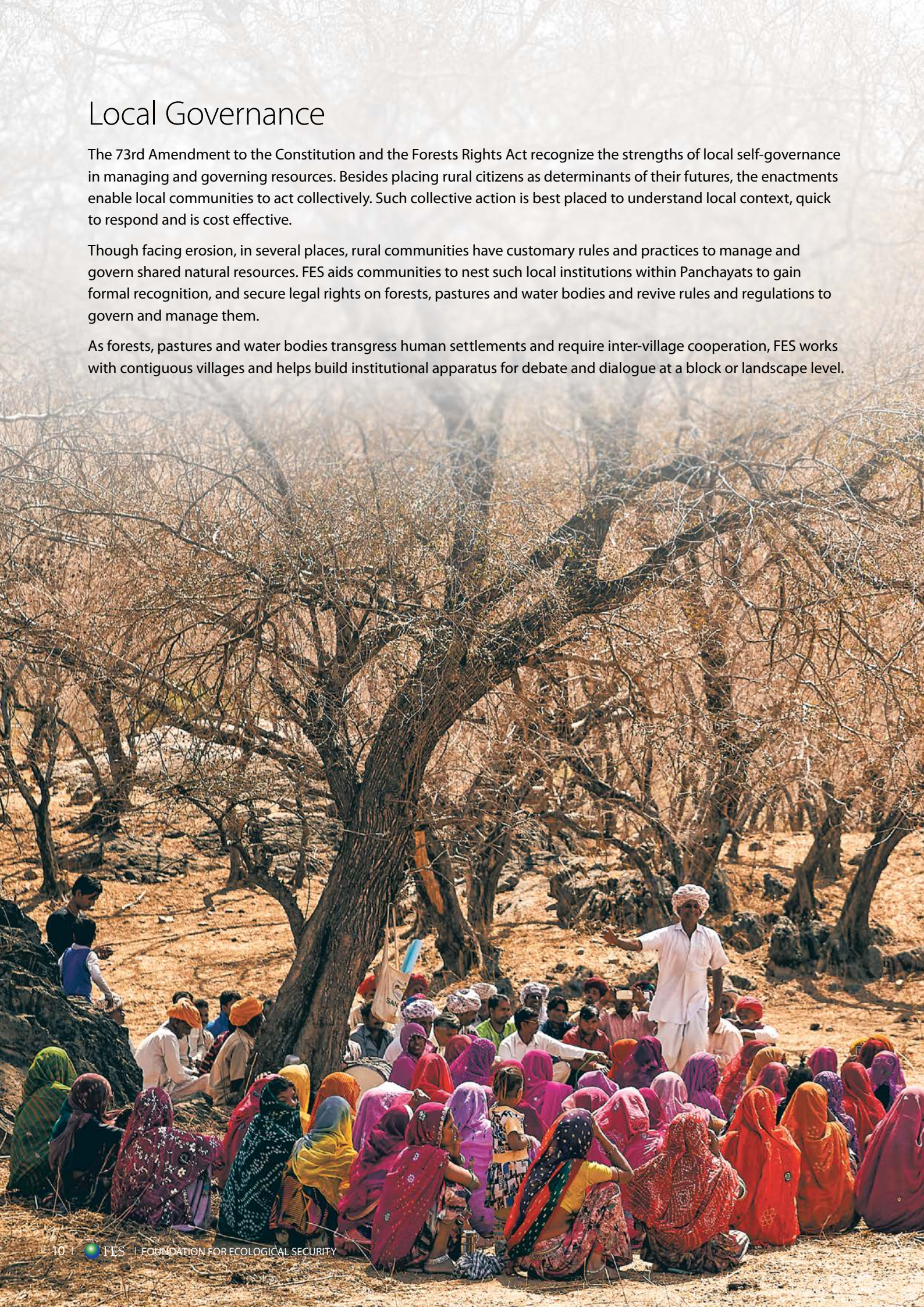
Arpit Deomurari

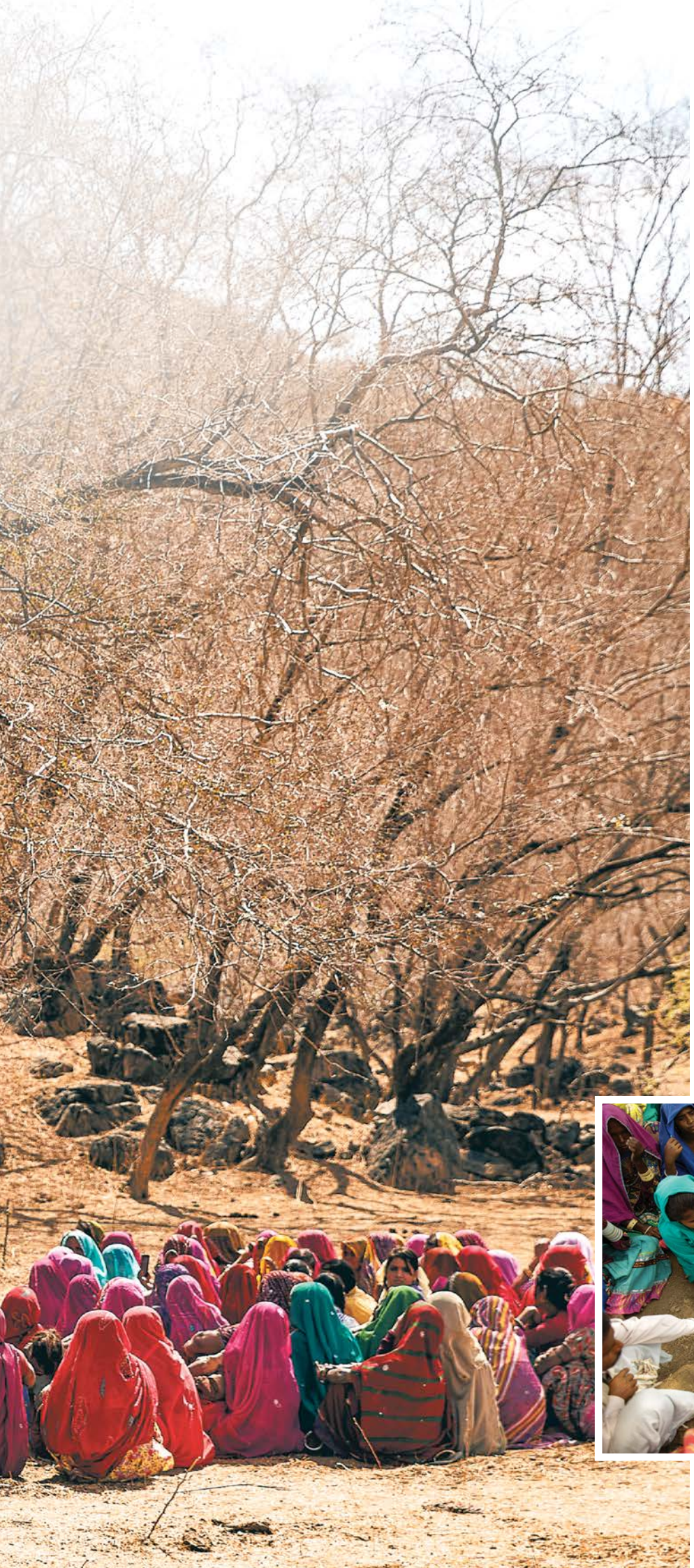
Local Governance

The 73rd Amendment to the Constitution and the Forests Rights Act recognize the strengths of local self-governance in managing and governing resources. Besides placing rural citizens as determinants of their futures, the enactments enable local communities to act collectively. Such collective action is best placed to understand local context, quick to respond and is cost effective.

Though facing erosion, in several places, rural communities have customary rules and practices to manage and govern shared natural resources. FES aids communities to nest such local institutions within Panchayats to gain formal recognition, and secure legal rights on forests, pastures and water bodies and revive rules and regulations to govern and manage them.

As forests, pastures and water bodies transgress human settlements and require inter-village cooperation, FES works with contiguous villages and helps build institutional apparatus for debate and dialogue at a block or landscape level.





Paul Nordmann

We work towards a rights-based management system that acknowledges community ownership, thereby incentivising sustainable use and management of Commons.

We stress on collective action and enable communities to bring governance of shared natural resources under their stewardship.

We create an enabling environment for equitable environmental governance by collaborating with a diverse range of stakeholders from government, civil society and community.

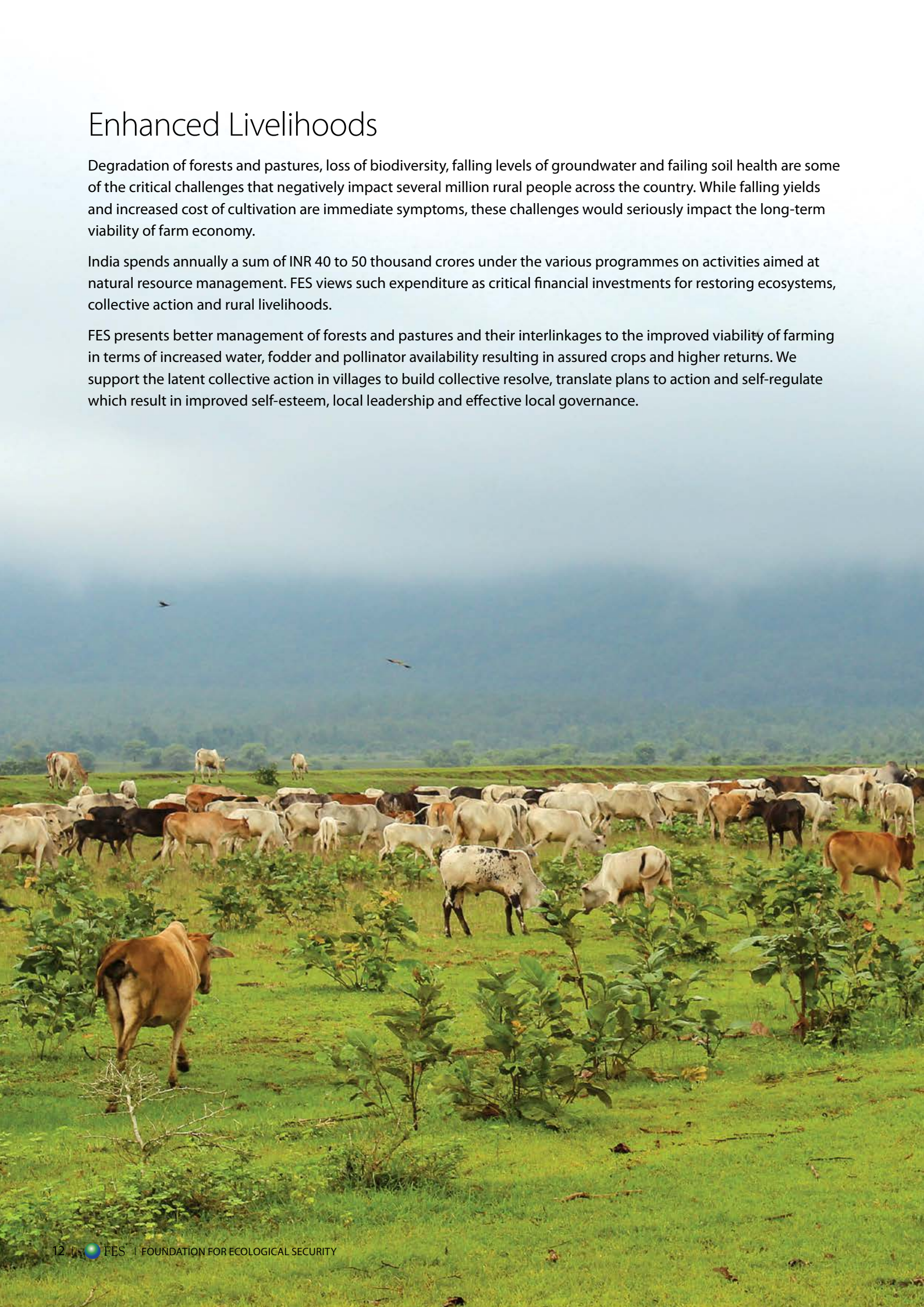
Gabriel Diamond

Enhanced Livelihoods

Degradation of forests and pastures, loss of biodiversity, falling levels of groundwater and failing soil health are some of the critical challenges that negatively impact several million rural people across the country. While falling yields and increased cost of cultivation are immediate symptoms, these challenges would seriously impact the long-term viability of farm economy.

India spends annually a sum of INR 40 to 50 thousand crores under the various programmes on activities aimed at natural resource management. FES views such expenditure as critical financial investments for restoring ecosystems, collective action and rural livelihoods.

FES presents better management of forests and pastures and their interlinkages to the improved viability of farming in terms of increased water, fodder and pollinator availability resulting in assured crops and higher returns. We support the latent collective action in villages to build collective resolve, translate plans to action and self-regulate which result in improved self-esteem, local leadership and effective local governance.



Pradip Kumar Mishra

We reconcile two fundamental components of the rural economy – the biophysical 'infrastructure' and social 'infrastructure' – in addressing contextual social-ecological challenges.

We aid the last-mile outreach of various government programmes and policies for restoration and poverty alleviation in marginalised and ecologically degraded regions.

We demonstrate the symbiotic benefits of harnessing 'right to employment' (as under MGNREGA) and 'rights over resources' together for creating durable community assets.

Jagdeesh Rao

Our Approach

Advancing Socio-Ecological Thinking

Forests and pastures adjoining villages and accessed by local communities, referred to as 'Commons', are estimated at around 180 to 210 million acres – a quarter of India's landmass. Commons are fundamental to the sustenance of various life forms and the resilience of rural livelihoods.

Common lands have been on the decline by as much as 31 to 35% in the last five decades. They continue to face widespread neglect and degradation largely because conventional developmental approaches repose great faith in centralised management or individualization of resources. The enactment of the Forest Rights Act and the Supreme Court Judgment for protection of Commons (2011) gave the much needed judicial recognition of their significance.

Paul Nordmann

In order to arrest the degradation of Commons, FES aims to decentralise the top-heavy approach of management by promoting an informed local level collective action. By locating Commons in the larger landscape, FES demonstrates the value of nature conservation and natural resource management for improving local employment, livestock production, farm productivity and overall returns that are within the ecological thresholds of the area. Importantly, it centrestages local communities as capable stewards to guide local action.

By working across varied ecological and cultural settings, FES contributes to the widespread recognition of Common Property Regimes as a promising option alongside centralised or individual property regime. Instead of leaning towards a nature or a people centred approach, FES reinforces a socio-ecological thinking for better governance of resource systems and local stewardship.

Forests in a Landscape

Conventional approaches to promote better understanding or attention rely on fostering sectorial disciplines and administrative apparatus. However, Nature and people connect different elements or sub systems for their very functioning. The connections between soil, nutrients, moisture, plant and animal life or forests, agriculture, livestock or economic, social, cultural and political spheres are very apparent both in the way Nature or human societies operate. Complementarity and reciprocity are fundamental for achieving improved and sustained ecological, social and economic outcomes.

Locating forests within the larger ecological, social and economic landscape augments conservation action as much as resilient agricultural and livestock production. Key ecological functions, such as improved transfer of nutrients, longer periods of water flows, retention of moisture, and better pollination and pest control are fundamental to sustaining rural economy. In human-dominated landscapes, forests must not only be conserved for the biodiversity and carbon repositories but must also be repositioned as critical and irreplaceable ecological infrastructure that augments water supplies to local agriculture and faraway cities.

FES defines natural boundaries such as a watercourse or a forest range and works with all the inhabitant communities to improve the governance of shared resources. FES adopts a landscape approach as it offers opportunities to manage different geographies for preservation, conservation and extraction objectives. It also highlights the importance of a systems view and the organic links between forests, pastures and production systems in the landscape. FES assists local communities in arriving at context-based action plans that conserve local ecosystems, augment incomes and enhance local decision making. By connecting agriculture, livestock and forest-based communities with forest/pasture ecosystems and larger land-use in a given landscape, FES builds a larger farmer constituency for forest conservation.

Arjun Swaminathan

We highlight the significance of forests in terms of hydrology, nutrient flows, pollination and pest control not only for such inherent value but also as building blocks for sustaining agricultural productivity.

Susanta Kumar Rout

Centre-staging community stewardship in the management of forests, we strive to dismantle the deeply entrenched conservation and protectionist frameworks that view local communities as liabilities and hindrances to ecological conservation. The remedy is in strengthening the abilities of local communities as primary decision makers.

To trigger discussions on the impact of rules and regulations on collective action, forest fires on forest growth, and changes in forest conditions on water or biodiversity, we conducted exercises of 'system dynamics'. Such exercises have highlighted the importance of soil moisture, nutrients, biomass and biodiversity, and make evident the linkages between forests' common lands and associated agriculture and livestock production systems.

To energise collective decision making on rules and regulations for permissible limits of harvesting, alternate community engagement tools such as 'experimental games' have been used with communities managing forests. Similar games have been developed for triggering discussion within village communities on containing over-extraction of groundwater.

To highlight the significance of forests in terms of hydrology, nutrients, pollination and pest control, and thereby highlight the value of forests within the discussion on improvement in agricultural productivity, we build collaborative platforms at landscape level with all stakeholders including governments and academia.

Farming and Farming Systems

Mainstream approaches aimed at increasing returns for farmers focus on increasing agricultural productivity by intensifying processes through monocropping, irrigation, application of fertilizers and pest control. While these may yield quick results, they often result in undesirable consequences such as depletion of water level, soil structure and agro-biodiversity, which in the long run are not tenable for a robust rural economy.

Instead of considering farming as crop production alone, FES views its interconnections with the larger farming system. The larger system includes – other resources beyond the farm such as forests, pastures and water bodies – livestock, pollinators and pest predators that connect different land and water resources and cater nutrients and other critical ecological services, and the tradeoffs between economic, social and ecological choices. Moreover, as our work is often located in ecologically degraded and poverty prone areas, we engage local communities in deciding options that meet subsistence requirements and generate incomes and the likely impact of their choices on the ecological thresholds, over time.

As such a systems understanding is innate and latent within farming society, the efforts on connecting agriculture, livestock and pastures/forests find ready resonance. Enabling initiatives on secure tenure over land, recognition of local self-regulatory institutions and financial investments for restoration often result in local initiatives on better management of forests and pastures for improving agriculture. It has also resulted in triggering collective decision-making on crop choices by considering groundwater as a common property, and nurturing pollinator and pest predator habitats for improving crop productivity. Besides scaling up such measures, there is an equally important need to sensitise government and research functionaries to integrate a 'systems thinking' and screen their sector-based programmes for any unintended and undesirable consequences in other domains.

Mark Katzman

Instead of intensive irrigation and fertilization in rainfed areas, it is important to evolve alternative pathways of diversified cropping and livelihood practices in general and soil health in particular.

Mark Katzman

To impact farm livelihoods we work on common lands that are often the most neglected space in developmental efforts. The community institutions evolved around such common lands – besides rapidly progressing to address issues such as agricultural productivity, use of hardy crop varieties and spread of water-saving techniques – are also viewing agriculture in continuum with other natural resources in the villages.

Initiatives on improving local incomes do not often take into account the ecological thresholds of the area. To identify key cause-and-effect pathways and eventually prepare village communities to foresee the unintended effects of their action and take suitable decisions, we are undertaking exercises to map the mental models of rural communities, using Community-Based System Dynamics modelling.

Challenging dominant perception of groundwater as private property, we trigger discussions on perceiving groundwater as a common property by preparing village communities in estimating and comparing the overall water availability and their consumptive needs, along with promoting initiatives like sharing of water from wells and less water-demanding crops.

To influence better utilisation of public funds for improved natural resource management and water conservation, in particular, we leverage opportunities in state and national level policies and programmes by harnessing digital technology to promote informed decision making regarding groundwater recharge and surface water storage.

Working with Panchayats

Panchayats and Gram Sabhas (in Scheduled Areas) have constitutional recognition for governing shared natural resources. Moreover, with the decision of the Fourteenth Finance Commission that made it possible for allocation of resources directly to the Panchayats, the renewed attention on improving planning processes through Gram Panchayat Development Plans, flow of funds through Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), offer scope to build organisational capacities of Panchayats and restore degraded natural resources. These steps have the potential to strengthen democratic vigour of the Panchayats which are the bedrock of the country's governance architecture.

The core of FES' work at village and inter-village level enhances the capacities of local communities to evolve as democratic institutions. The various forms of village level organisations managing natural resources are organically linked to Panchayats which are constitutionally recognised bodies. Besides determining the local developmental agenda, they leverage opportunities; undertake conservation action by integrating social, economic and ecological imperatives; and promote collaborative action between villages, government, NGOs, researchers, media and other interested citizens.

As natural resources are shared beyond villages and panchayat boundaries, besides enhancing village level governance, FES also strengthens the governance apparatus between the block and panchayat levels. Village communities meet periodically to resolve inter-village disputes and collectively decide on areas of common concern. These meetings are also attended by government and other actors of the region thereby creating a platform for debate and exchange as well as building local stewardship. With recent advances in information and technology systems, FES assists such platforms by making available location-specific information to help them determine local priorities, access their entitlements and plan conservation action.

Shreya Mitra

Strengthening the overall governance framework of Gram Panchayats and nesting smaller village institutions under them improves community engagement and accountability, while allowing them to find locally suited solutions to natural resource management.

Kumar Rupam

To hone leadership, knowledge and skills of representatives of villages and Panchayats, the *Prakriti Karyashala* (Rural College) was set up. Besides taking on stewardship of the area, the representatives are equipped to secure collective rights over shared natural resources as well as improve the implementation of programmes aimed at natural resource management and rural development.

Building on the strengths of villages to manage natural resources, we work in improving the interactions between villages and Panchayats – as the identity and social fabric is stronger at village level since Panchayats comprise more than one village in many states. The constitutional recognition enjoyed by Panchayats help secure the investments made on safeguarding forests and pastures from external threats.

To enable Gram Panchayats respond better in identifying citizens eligible under various government programmes, schemes and entitlements, we have developed a versatile 'GIS-Enabled Entitlement Tracking (GEET) system' which could take data from multiple sources, map the eligible persons against the available programmes and inform the decision makers to reach the most needy.

We have mobilised about a third of the villages and Panchayats in a block in restoring natural resources. We are also working towards influencing Panchayats to improve their performance in sectors such as education and health by training local cadre, extension workers and Panchayat members in planning and responding to local needs and aspirations.

Tenure over Common Lands

Secure tenure over forests, pastures, 'wastelands' and water bodies as collectively-held resources, has an immense potential to address the interconnected challenges of environmental degradation, social inequalities and unharnessed economic opportunities. As the dominant mindset reposes very little faith in the ability of rural people to effectively govern and manage such resources as a collective asset, centralising or privatising the ownership is often viewed as a superior option.

In a refreshing change, the Forest Rights Act (2006) enables secure access of local communities to forests as a collectively held resource. If the underlying rationale is also extended to the governance of 'wastelands' and pastures and similar enactments are made, about 200 million acres of collectively managed forest and pastures could be brought under better vegetative cover. This could positively impact the livelihoods of more than 350 million rural population of India, apart from contributing to national and global commitments of climate adaptation, biodiversity conservation and Sustainable Development Goals.

In order to support communities gain tenure rights, FES works with the available administrative arrangements and legal provisions, such as Grazing-Land Development Committees, Sub-committees of Panchayats and the Gram Sabhas under the Forest Rights Act.

In forest lands where the Forest Rights Act is applicable, FES assists tribal communities to claim their rights as community forests and prepare management plans for land and resource use. In Rajasthan where 'wastelands' are available, village communities' claim for an increase in the area designated as pastures by presenting evidence on the increase in livestock population and availing the existing enabling provisions. FES also assists local communities and Panchayats map boundaries of their common lands and have them registered in 'Prohibitory Order Books' or in the 'Immovable Assets Register' at Panchayat level, to restrain diversion to other uses.

Vaibhav Bhatia

Common lands are biodiversity storehouses that contribute significantly to water and nutrient flows and adds resilience to farming systems, which can be safeguarded by rural communities through tenure arrangements.

Vaibhav Bhatia

To strengthen customary use regimes on common lands, we assist with securing their recognition under modern formal laws through provisions such as Forest Rights Act for forest lands, lease arrangements and entry into Prohibitory Order Book for revenue 'wastelands', and entry into Panchayats assets register for grazing lands. Securing tenure on resources provides security to make long-term investments.

For the reclassification of 'revenue wastelands' as pastures to allow Panchayats the custody to manage such lands, we worked with the Government of Rajasthan to revisit the decade-old definition of 'cattle head' to include small ruminants. The village communities in Rajasthan are presenting the latest livestock population to the district administration for conversion of 'revenue wastelands' to pastureland.

To highlight economic value of restored common lands, present the monetary value to negotiate renewal of lease arrangements or prevent their diversion to alternate land-use, we have developed an analytical reckoner that calculates the various costs and benefits of natural resources and collective action and imputes monetary value as perceived by local communities.

We played an active role in inclusion of property rights on Commons as an important indicator for achieving SDGs and addressing climate action. As 25% of the landmass in India are Commons, assigning property rights and devolving management to Panchayats could contribute significantly to India's Nationally Determined Contributions.

Rights to Employment and Resources

Annually about INR 300 to 400 billion is spent towards restoring degraded common lands through public investments such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA aka Right to Employment Act). While these investments are highly necessary to address the challenges of failing soil health, depleting groundwater levels and loss of biodiversity in the country, the financial investments need to be backed by institutional investments such as long-term tenurial rights to communities and strong village-level institutions to build durable community assets such as pastures and forests.

FES assists Panchayats align their plans for restoration of common lands and water bodies with the Right to Employment Act. FES also aids Panchayats and other village-level institutions to establish transparent democratic decision making systems and effectively implement Commons programmes.

Our efforts involve working closely with the central and state governments to influence investments on land and water resources such that the funding is matched with better roles and responsibilities for village institutions and Panchayats. We join hands with various levels of government to conduct publicity campaigns on restoration of Commons through public funds. In response to these campaigns, we provide information and conduct capacity enhancement programmes so that communities can self-organise themselves and avail the funds for ecological restoration. We also equip village communities to use IT solutions developed by us to improve their decision making on soil and moisture conservation measures and preparing design and cost estimates.

The Right to Employment Act has already begun to bring about a long overdue adjustment in rural wage rates and improving the purchasing capacity of the rural poor. With widespread degradation of natural resources, it has a key part to play in meeting future challenges posed by food security and climate change.

S S Singh

Leveraging government funds for furthering the cause of ecological restoration, maximizes the potential of the funds, contributes towards conservation, while also positioning local communities as stewards of these of natural resources.

Mark Katzman

For effective use of funds under MGNREGS to restore collective assets such as forests, pastures and water bodies, we enter into agreements with governments where they pass the funds to Panchayats and wage seekers and we assist Panchayats improve enrollment and record-keeping and prepare conservation plans. Such agreements help apply funds to context-specific needs, address gaps in capacities and reach a large number of villages.

To improve democratic functioning of Panchayats, we make 'natural resource management' a platform for improving the effectiveness of collective decision making in the implementation of MGNREGS. We assist village institutions and Panchayats prepare long-term plans and assume roles and responsibilities for overseeing the activities that are necessary for effective implementation of MGNREGS.

For effective planning of water conservation measures under MGNREGS, the Composite Landscape Assessment and Restoration Tool (CLART) developed by FES recommends location specific measures that can be deciphered easily by rural communities, and also helps prepare the design and cost estimates, enabling local communities to prepare annual plans with little external help.

To maximize the long-term impact potential of MGNREGS, we highlight the need for viewing forests, pastures and water bodies as durable community assets and assigning funds under MGNREGS to create such assets. The climate change mitigation and adaptation solutions become possible by aligning 'Right to Employment' with 'Right to Resources'.

Strategic Overview

Aligning Practice, Science and Policy

Spread across diverse social and ecological settings the activities of FES help gain deep insights for work on natural resources, local governance and rural livelihoods. The widespread degradation of natural resources, Commons in particular, and the associated distress in rural areas necessitate concerted action to highlight ecological priorities alongside social and economic well-being.

FES' strategic priority actions include:

> Engagement on the ground in partnership with local communities, NGOs and their networks to bring visible impact.

> Enhancement of capacities to enable local communities secure rights over shared natural resources, improve local governance and access public funds to restore local ecosystems.

> Development of technology solutions that support local communities, NGOs, donors and governments in harnessing the potential of data and information for informed conservation action at scale and evidence-based decision making.

> Partnerships with Governments to mainstream Commons in government policies and programmes, and create an enabling environment for integration of innovative approaches for improving local participation, effective use of funds and application of technological solutions.

> Collaboration with practitioners, research bodies and think tanks to add rigour in analysis, build evidence-based value propositions for policy and programmatic action, amplify the impact of different actors for widespread action and elevate the profile of Commons.

© Paul Nordhaus

Enhancing Capacities

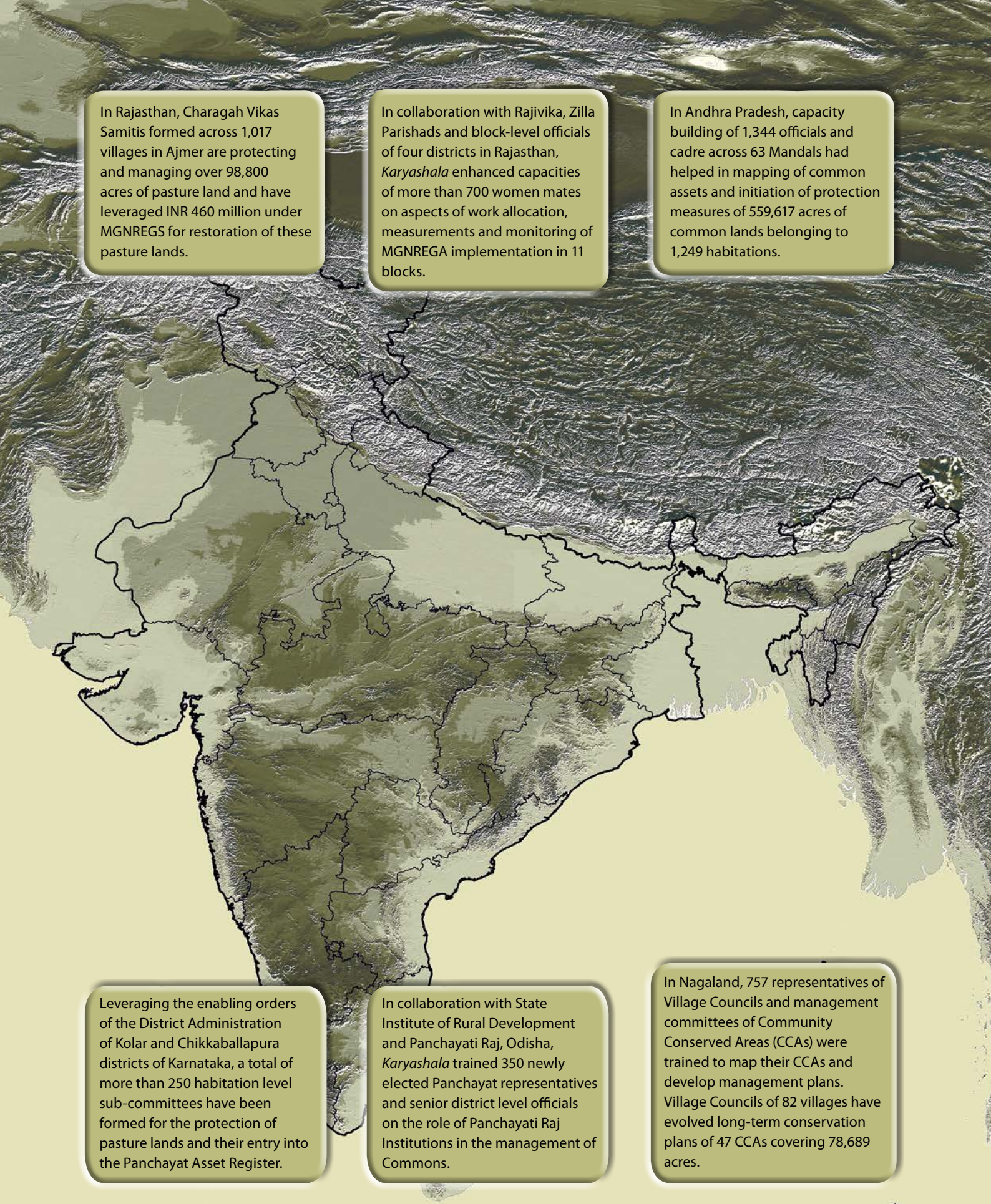
FES set up *Prakriti Karyashala* (Rural College) to respond to the learning needs of rural communities, village institutions, Panchayats, non-government organisations and block/district government officials, who can steer processes at village level and aid the development of their region in areas of local governance and stewardship of natural resources. The Colleges work closely with government programmes and institutions to provide large-scale, cost-effective and quality learning opportunities. The Colleges are now in operation in Rajasthan, Karnataka, Andhra Pradesh and Odisha.

Experiential learning methods are employed in the form of sequential training modules combined with field-level application, to reinforce learning outcomes. The modules include filing claims on community lands, effective planning and implementation of natural resource management through MGNREGS, strengthening the capacities of Panchayats and accessing social security benefits. The focus is to enhance local stewardship, improve rigour of action and build skills to bridge local practice and programme imperatives.

Besides in-person trainings where learning material and use of mobile devices are integrated, innovative use of local art forms is effective in rooting the messages in local idiom. Aiming women as rural cadre is helping women take lead in governing natural resources. With increasing access to mobile devices the delivery of training programmes is being augmented with video and audio content to help village communities share experiences. Mechanisms have been put in place to monitor the quality of the training material, their delivery on the ground, the translation of the training into outcomes and evidence to support the outcomes.

To accelerate the engagement on the ground to restore degraded landscapes and build robust collective action insititutions, the *Karyashala* is honing the capacities of a strong rural cadre through partnerships with NGOs, Milk Unions and Government bodies.

Anil Sarsavan



In Rajasthan, Charagah Vikas Samitis formed across 1,017 villages in Ajmer are protecting and managing over 98,800 acres of pasture land and have leveraged INR 460 million under MGNREGS for restoration of these pasture lands.

In collaboration with Rajivika, Zilla Parishads and block-level officials of four districts in Rajasthan, *Karyashala* enhanced capacities of more than 700 women mates on aspects of work allocation, measurements and monitoring of MGNREGA implementation in 11 blocks.

In Andhra Pradesh, capacity building of 1,344 officials and cadre across 63 Mandals had helped in mapping of common assets and initiation of protection measures of 559,617 acres of common lands belonging to 1,249 habitations.

Leveraging the enabling orders of the District Administration of Kolar and Chikkaballapura districts of Karnataka, a total of more than 250 habitation level sub-committees have been formed for the protection of pasture lands and their entry into the Panchayat Asset Register.

In collaboration with State Institute of Rural Development and Panchayati Raj, Odisha, *Karyashala* trained 350 newly elected Panchayat representatives and senior district level officials on the role of Panchayati Raj Institutions in the management of Commons.

In Nagaland, 757 representatives of Village Councils and management committees of Community Conserved Areas (CCAs) were trained to map their CCAs and develop management plans. Village Councils of 82 villages have evolved long-term conservation plans of 47 CCAs covering 78,689 acres.

Aimed at highlighting the latent potential of rural communities and building a cadre for local stewardship, *Prakriti Karyashala* reviewed its core design and is engaged in systematizing its modus operandi for scaling up its outreach to new geographies, enhancing collective cross-learning, as well as improving the outcomes of training programmes.

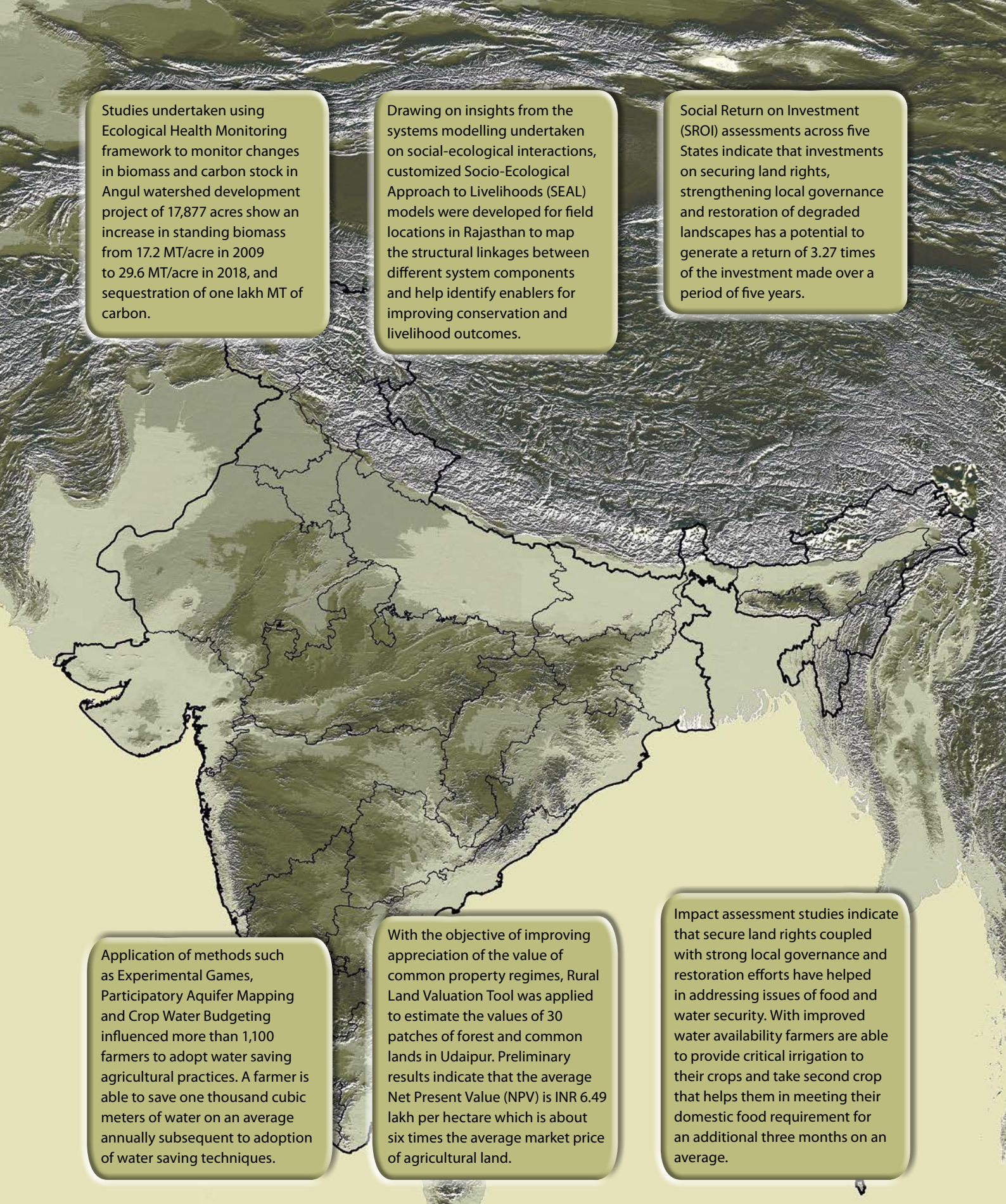
Studies and Documentation

FES undertakes studies to enhance its understanding of nature, the inter-relationships between natural and human systems, and improved governance of shared natural resources. The studies are designed to promote an exchange between local and modern knowledge systems. Conducted both internally and in collaboration with reputed universities and research institutions, the studies are aimed at locating the organisation's work in the larger social, economic and ecological context, design and plan activities that are both contextually grounded and technically rigorous and lastly, provide sound evidence of results and impacts over time.

FES monitors changes in ecological, institutional and economic conditions of villages (and landscapes) using Ecological Health Monitoring and International Forestry Resources and Institutions frameworks in collaboration with reputed national and international research institutions.

The assessment of land-use and land cover changes is undertaken through Remote Sensing Imageries coupled with ground investigations. We also use Social Returns on Investment (SROI) framework, Natural Resource Accounting System (NRAS) and System Dynamics to assess returns on investment and understand causal factors and feedbacks in the system. A socio-ecological thinking helps demonstrate the relationship between human and natural systems; System Dynamics enables a cyclical and relational understanding of the planned actions and provides insights of undesirable and unintended outcomes as well.

Along with advancing conceptual understanding, the work involves development of frameworks and tools that promote collective action, influence behavioural changes and aid decision making for landscape-level conservation action. Developments in regulatory and policy environments are analysed to improve effective use of funds, identify opportunities and gaps, harness synergies from complementary initiatives and inform policy design.



Studies undertaken using Ecological Health Monitoring framework to monitor changes in biomass and carbon stock in Angul watershed development project of 17,877 acres show an increase in standing biomass from 17.2 MT/acre in 2009 to 29.6 MT/acre in 2018, and sequestration of one lakh MT of carbon.

Drawing on insights from the systems modelling undertaken on social-ecological interactions, customized Socio-Ecological Approach to Livelihoods (SEAL) models were developed for field locations in Rajasthan to map the structural linkages between different system components and help identify enablers for improving conservation and livelihood outcomes.

Social Return on Investment (SROI) assessments across five States indicate that investments on securing land rights, strengthening local governance and restoration of degraded landscapes has a potential to generate a return of 3.27 times of the investment made over a period of five years.

Application of methods such as Experimental Games, Participatory Aquifer Mapping and Crop Water Budgeting influenced more than 1,100 farmers to adopt water saving agricultural practices. A farmer is able to save one thousand cubic meters of water on an average annually subsequent to adoption of water saving techniques.

With the objective of improving appreciation of the value of common property regimes, Rural Land Valuation Tool was applied to estimate the values of 30 patches of forest and common lands in Udaipur. Preliminary results indicate that the average Net Present Value (NPV) is INR 6.49 lakh per hectare which is about six times the average market price of agricultural land.

Impact assessment studies indicate that secure land rights coupled with strong local governance and restoration efforts have helped in addressing issues of food and water security. With improved water availability farmers are able to provide critical irrigation to their crops and take second crop that helps them in meeting their domestic food requirement for an additional three months on an average.

The 'action research' advances on frameworks of 'Ecological Health Monitoring', 'Natural Resources Accounting', 'Forest Resources and Institutions', 'Socio-Ecological Approach to Livelihoods' and 'Multi-actor Platforms' to build evidence that quantifies ecological changes, valuates the costs and benefits, maps evolving social arrangements with changes in resource conditions, provides pathways towards sustainable livelihoods and helps form principles of collaborative landscape management, respectively.

Collaborations

Collaborations are an integral part of FES' work, informing its conceptual design, extending the practice, or elevating the debate on nature conservation and Commons. FES collaborates with several like-minded practitioner and academic bodies, civic institutions, national and international networks of organisations, and government departments engaged in ecological restoration and decentralised governance of natural resources. Such collaborations help elevate the role of forests as sources of water, collective action institutions for governance of shared resources, valuation of ecological functions and collective action, and improved understanding of ecological thresholds.

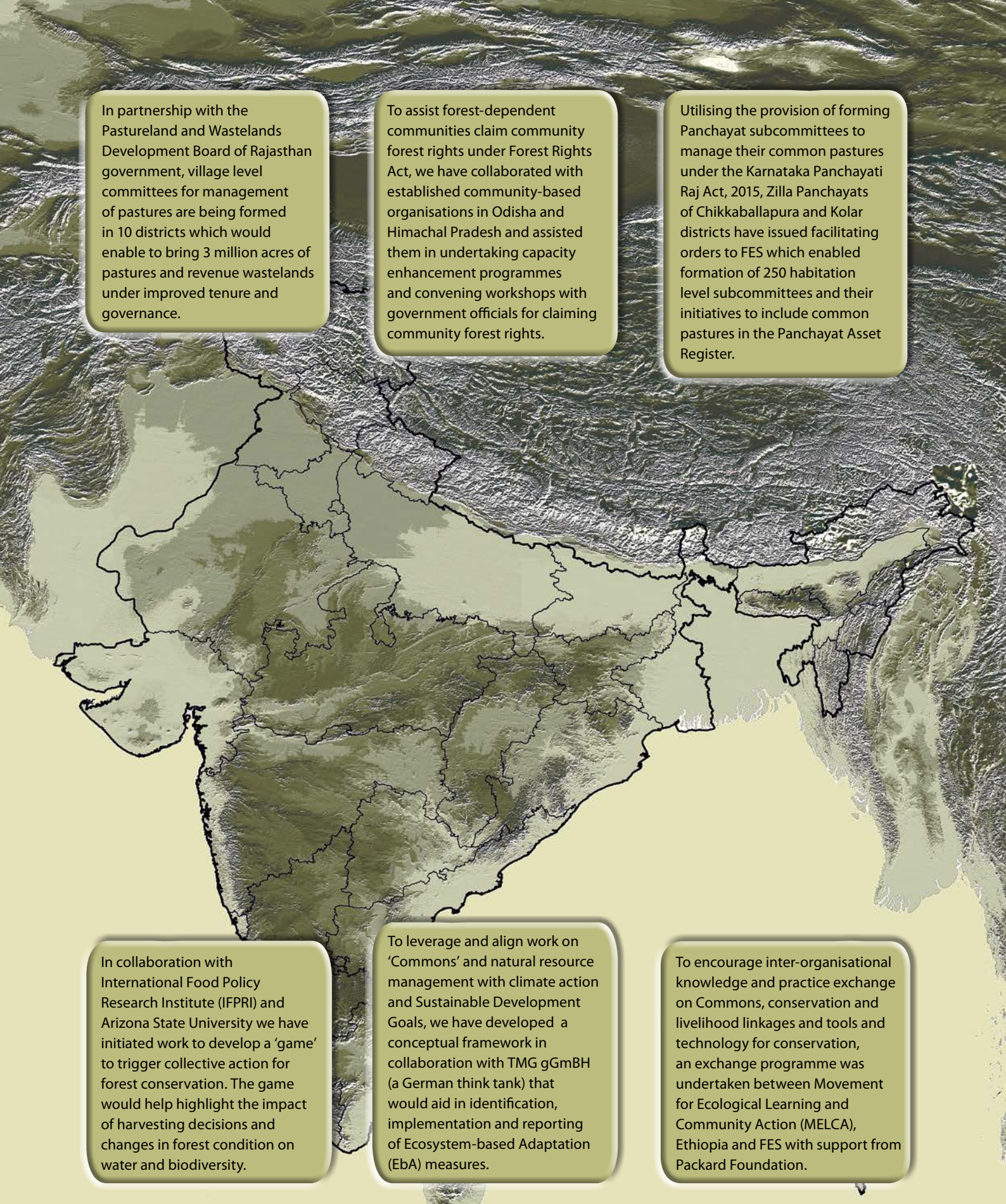
Partnerships with Government and NGOs (and networks) have been instrumental in the expansion of our direct engagement and support implementation of policy actions, such as the Right to Employment Act and the Forest Rights Act.

Work with relevant thematic groups help in advancing the thinking in neglected domains like pastoralists, small ruminant livestock keepers, community property rights and groundwater management.

Our partnerships with national and international academic and research bodies are centered on conceptual issues such as socio-ecological thinking, common property regime, natural habitat conservation and polycentric governance, and on operationalising approaches such as system dynamics, experimental games and collaborative action.

We are building on our efforts of supporting local communities and partners in harnessing the potential of data and information technology for improving planning, implementation and monitoring which will lead to informed action at scale and build good evidence.

We engage with research bodies, think tanks and other alliances to build value propositions that could influence policy and programmatic action, improve visibility and amplify the impact of different actors for widespread action and elevate the profile of Commons as well as center-stage community action on Commons as a promising solution to address Climate Change and attain SDGs.



In partnership with the Pastureland and Wastelands Development Board of Rajasthan government, village level committees for management of pastures are being formed in 10 districts which would enable to bring 3 million acres of pastures and revenue wastelands under improved tenure and governance.

To assist forest-dependent communities claim community forest rights under Forest Rights Act, we have collaborated with established community-based organisations in Odisha and Himachal Pradesh and assisted them in undertaking capacity enhancement programmes and convening workshops with government officials for claiming community forest rights.

Utilising the provision of forming Panchayat subcommittees to manage their common pastures under the Karnataka Panchayati Raj Act, 2015, Zilla Panchayats of Chikkaballapura and Kolar districts have issued facilitating orders to FES which enabled formation of 250 habitation level subcommittees and their initiatives to include common pastures in the Panchayat Asset Register.

In collaboration with International Food Policy Research Institute (IFPRI) and Arizona State University we have initiated work to develop a 'game' to trigger collective action for forest conservation. The game would help highlight the impact of harvesting decisions and changes in forest condition on water and biodiversity.

To leverage and align work on 'Commons' and natural resource management with climate action and Sustainable Development Goals, we have developed a conceptual framework in collaboration with TMG gGmBH (a German think tank) that would aid in identification, implementation and reporting of Ecosystem-based Adaptation (EbA) measures.

To encourage inter-organisational knowledge and practice exchange on Commons, conservation and livelihood linkages and tools and technology for conservation, an exchange programme was undertaken between Movement for Ecological Learning and Community Action (MELCA), Ethiopia and FES with support from Packard Foundation.

Joining hands with researchers, practitioners and government officials we continue to highlight the role of 'forests for water' and other critical ecological functions; decentralisation, collective action and property rights as effective institutional arrangements for governance of shared resources; valuation of ecological functions and collective action to highlight their economic contribution; and improved understanding of ecological thresholds to influence behavioural changes.

India Observatory

The 'India Observatory' (IO) was set up as a response to the need for providing open access to information on social, economic and ecological conditions, and equipping communities with tools and applications for judicious planning and use of natural resources, so that development can be location-specific and community-driven.

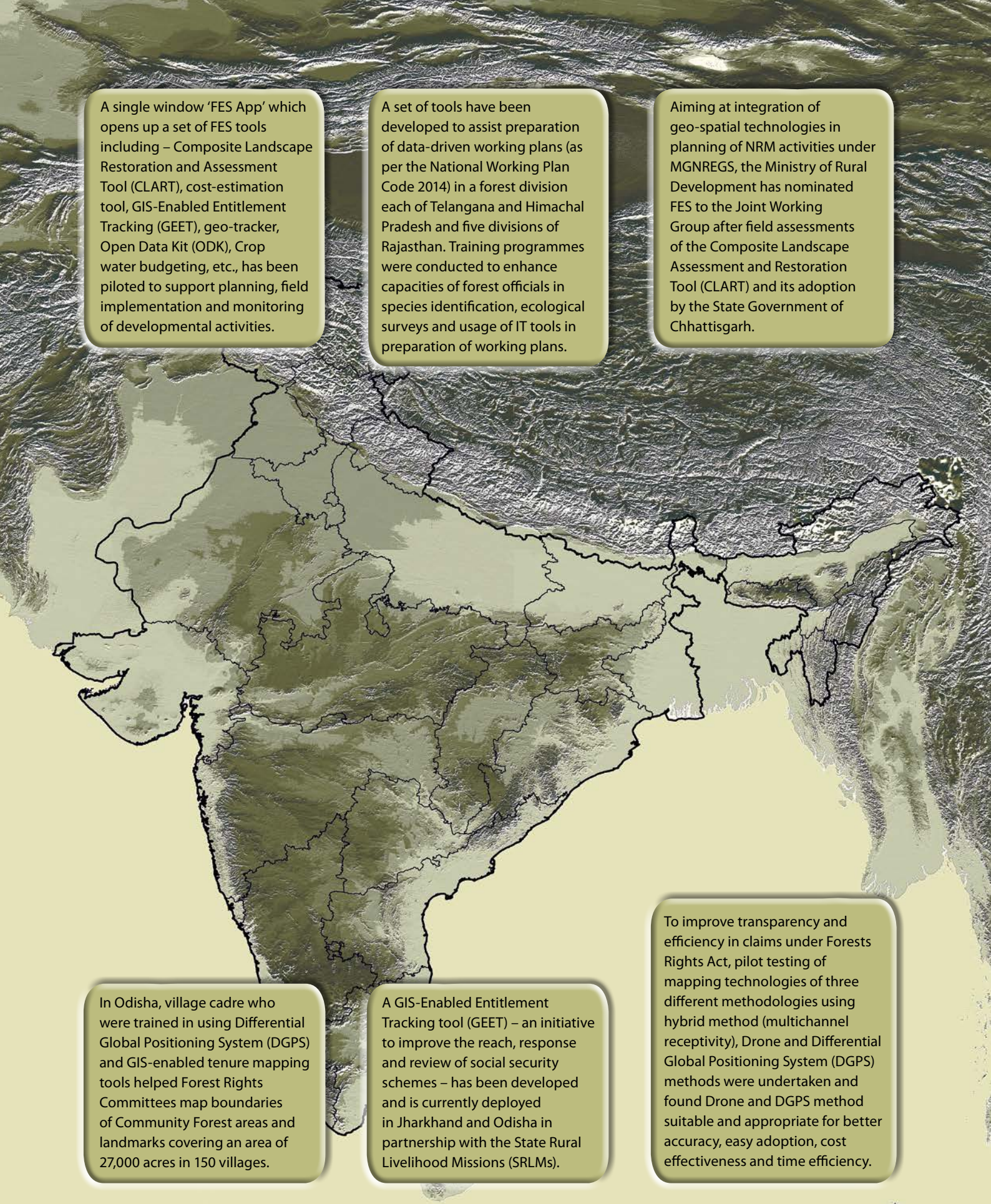
Aligning with the larger 'Digital India' drive, it is aimed at developing demystified and context-specific analytical tools using spatial technology, which are supported on mobile devices and making these available to rural communities as well as decision makers, researchers, students and citizens to influence decision making on nature conservation and land-use planning and enable efficient use of public funds. The IO is a pan-India data platform where data on 600 parameters are spatially presented from a village to the national level with a suite of innovative data visualisation and analytic tools which aids in comparison of temporal and spatial changes.

Along with IO, the Indian Biodiversity Information System (IBIS) was set up as a web-based biodiversity database with resource-rich, species-level information to serve as a conservation tool.

The 'Composite Landscape Assessment and Restoration Tool' (CLART) is a tool to support judicious use of funds under MGNREGS. It helps in undertaking suitable measures for water conservation, provides first-order design features and runs cost estimates of proposed interventions. The 'GIS-Enabled Entitlement Tracking' (GEET) system is a tool to help improve the response of government functionaries towards claims to entitlements by residents in remote rural areas.

FES intends to strengthen its collaborations with various levels of governments and reach out to communities with innovative tools and methods to drive information-based development activities.

Dawa Pemba Sherpa



A single window 'FES App' which opens up a set of FES tools including – Composite Landscape Restoration and Assessment Tool (CLART), cost-estimation tool, GIS-Enabled Entitlement Tracking (GEET), geo-tracker, Open Data Kit (ODK), Crop water budgeting, etc., has been piloted to support planning, field implementation and monitoring of developmental activities.

A set of tools have been developed to assist preparation of data-driven working plans (as per the National Working Plan Code 2014) in a forest division each of Telangana and Himachal Pradesh and five divisions of Rajasthan. Training programmes were conducted to enhance capacities of forest officials in species identification, ecological surveys and usage of IT tools in preparation of working plans.

Aiming at integration of geo-spatial technologies in planning of NRM activities under MGNREGS, the Ministry of Rural Development has nominated FES to the Joint Working Group after field assessments of the Composite Landscape Assessment and Restoration Tool (CLART) and its adoption by the State Government of Chhattisgarh.

In Odisha, village cadre who were trained in using Differential Global Positioning System (DGPS) and GIS-enabled tenure mapping tools helped Forest Rights Committees map boundaries of Community Forest areas and landmarks covering an area of 27,000 acres in 150 villages.

A GIS-Enabled Entitlement Tracking tool (GEET) – an initiative to improve the reach, response and review of social security schemes – has been developed and is currently deployed in Jharkhand and Odisha in partnership with the State Rural Livelihood Missions (SRLMs).

To improve transparency and efficiency in claims under Forests Rights Act, pilot testing of mapping technologies of three different methodologies using hybrid method (multichannel receptivity), Drone and Differential Global Positioning System (DGPS) methods were undertaken and found Drone and DGPS method suitable and appropriate for better accuracy, easy adoption, cost effectiveness and time efficiency.

Having developed a robust data platform with a suite of innovative data visualisation and analytic tools to improve access and use of a range of biodiversity, ecological and socio-economic data, we aim to expand our reach to end-users, village communities in particular, and influence decision-making on nature conservation, land-use planning, decentralisation and rural development.

The Commons Initiative

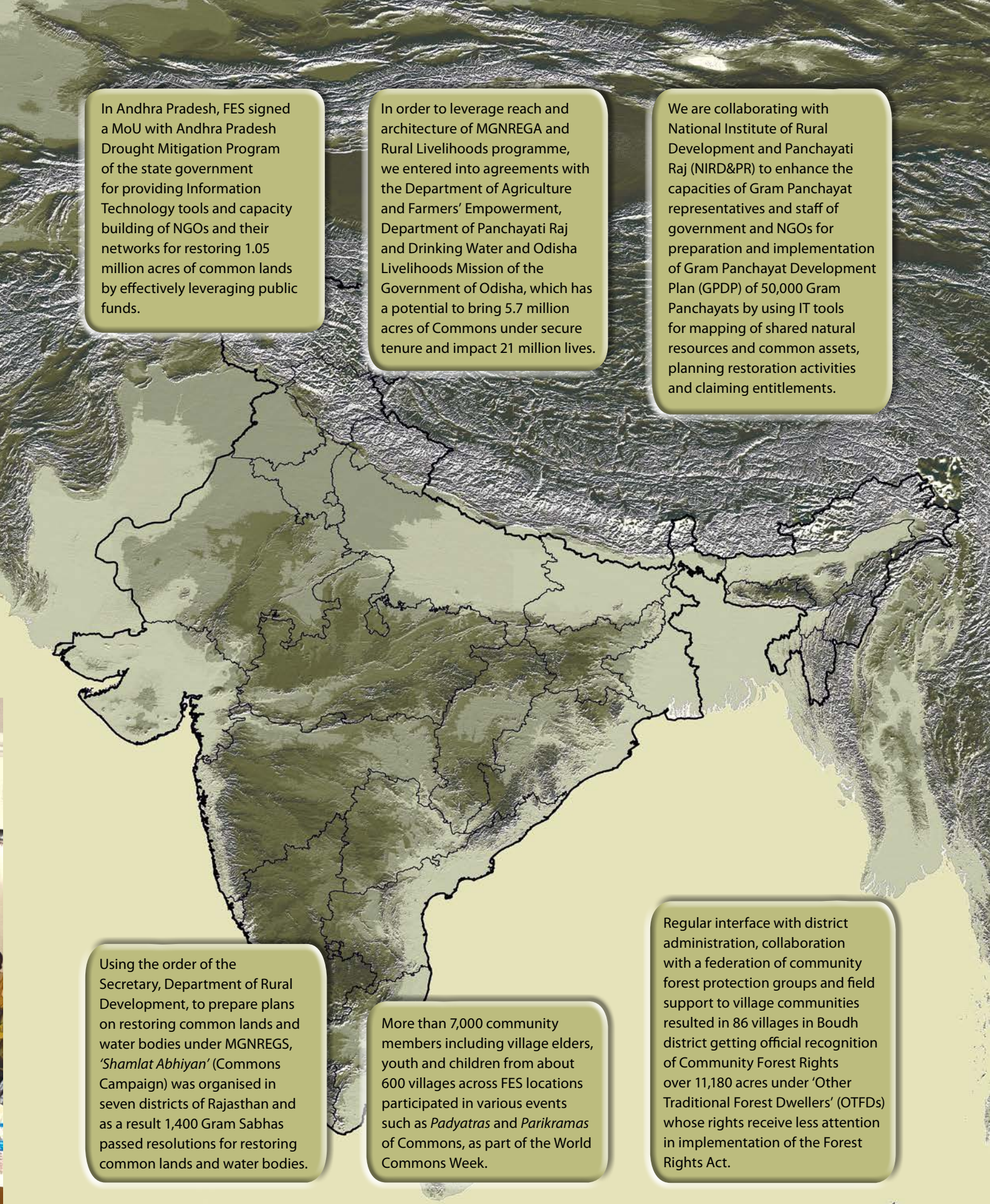
The Commons Initiative of FES is built upon three interconnected elements – the power of people and people's institutions, synchronising customary land-use with statutory property laws and potential of nature to provide economic opportunities. The Initiative is aimed to advance, discern, debate and lead to a dialogue(s) at local, regional, national and international levels, and embed the Commons in the larger goals of climate action and sustainable development.

FES' abilities to translate programmes through sound implementation into actions that can be replicated at a reasonable scale have resulted in partnerships with the state governments of Rajasthan, Karnataka and Andhra Pradesh. This has made possible shaping and implementing flagship programmes in these states and accessing new opportunities in Chhattisgarh, Himachal Pradesh, Maharashtra and Odisha.

FES has ongoing collaborations with several like-minded practitioners and academic bodies, national and international networks of organisations, and government departments. In India, this involves engaging with a network of organisations (working on issues of community forest and pastures; surface, ground and coastal waters; and extensive livestock and rainfed agriculture production systems), and adding the vocabulary of Commons into their ongoing work. FES continues to host convenings, bringing a range of actors together to build a common ground and advance thinking on emerging issues. This has promoted a good exchange of knowledge between leading scientists, practitioners and village communities on coupled human-natural systems, systems thinking and polycentric governance.

Efforts are in place to enable faster replication across different geographies through partnerships with state governments and a range of organisations, build strategic alliances with think tanks and research agencies and bring to fore the value of Commons in maintaining ecological stability, improving economic opportunities and addressing complex sustainable development and climate challenges.

Swapnasri Sarangi



In Andhra Pradesh, FES signed a MoU with Andhra Pradesh Drought Mitigation Program of the state government for providing Information Technology tools and capacity building of NGOs and their networks for restoring 1.05 million acres of common lands by effectively leveraging public funds.

In order to leverage reach and architecture of MGNREGA and Rural Livelihoods programme, we entered into agreements with the Department of Agriculture and Farmers' Empowerment, Department of Panchayati Raj and Drinking Water and Odisha Livelihoods Mission of the Government of Odisha, which has a potential to bring 5.7 million acres of Commons under secure tenure and impact 21 million lives.

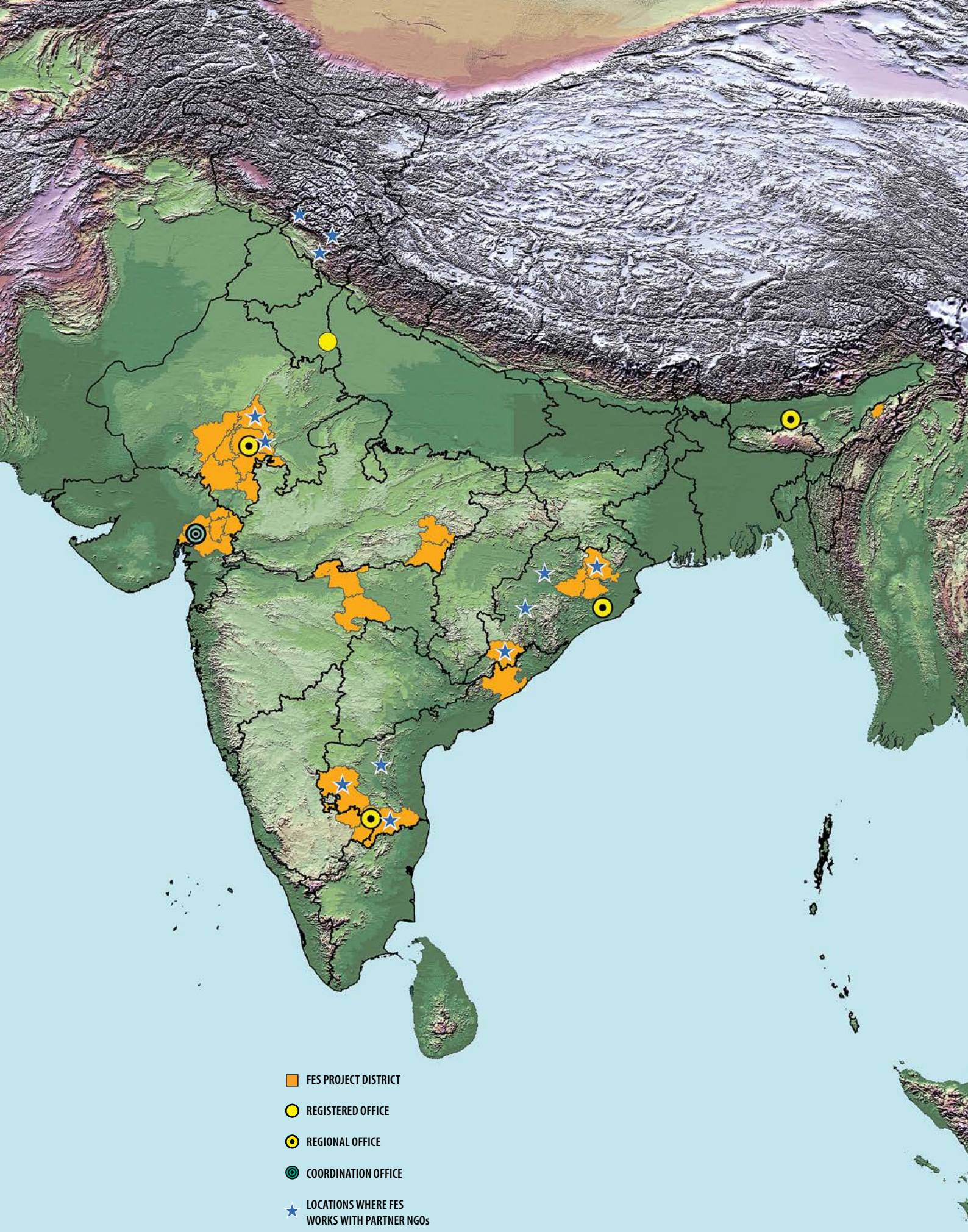
We are collaborating with National Institute of Rural Development and Panchayati Raj (NIRD&PR) to enhance the capacities of Gram Panchayat representatives and staff of government and NGOs for preparation and implementation of Gram Panchayat Development Plan (GPDP) of 50,000 Gram Panchayats by using IT tools for mapping of shared natural resources and common assets, planning restoration activities and claiming entitlements.

Using the order of the Secretary, Department of Rural Development, to prepare plans on restoring common lands and water bodies under MGNREGS, *'Shamlat Abhiyan'* (Commons Campaign) was organised in seven districts of Rajasthan and as a result 1,400 Gram Sabhas passed resolutions for restoring common lands and water bodies.

More than 7,000 community members including village elders, youth and children from about 600 villages across FES locations participated in various events such as *Padyatras* and *Parikramas* of Commons, as part of the World Commons Week.

Regular interface with district administration, collaboration with a federation of community forest protection groups and field support to village communities resulted in 86 villages in Boudh district getting official recognition of Community Forest Rights over 11,180 acres under 'Other Traditional Forest Dwellers' (OTFDs) whose rights receive less attention in implementation of the Forest Rights Act.

Partnering with other organisations, we shall elevate the profile of Commons and work on issues such as property rights over Commons to aid entitlements, information technologies to inform decision makers, polycentric governance models to nurture decentralisation and regulation, economic analyses to present the value of ecosystems and collective action, and media and communications to build a groundswell of opinion on Commons.


FES PROJECT DISTRICT
REGISTERED OFFICE
REGIONAL OFFICE
COORDINATION OFFICE
LOCATIONS WHERE FES
WORKS WITH PARTNER NGOs

Our Presence

Community-led Conservation Action

Over the past decade, FES has made a six-fold increase in improving security of tenure of rural households over Commons. The efforts paved way for improved economic opportunities of more than 8.68 million rural people, better environmental stewardship of 5.47 million acres of forest, pastures and wastelands, and 3.3 million acres of areas adjoining farm lands in 32 districts across 8 states.

The locations that FES works come with varied social-economic-ecological conditions. Robust experience and evidence demonstrate how a mix of interventions not only leads to better ecological but also economic and social outcomes.

FES works at scale, with enduring partnerships for connecting practice, research and policy discourse to replicate processes and lessons learnt across geographies, and highlight the value of Commons and nature conservation for improved rural economies.

To accelerate momentum on ground, the organisational strategies are:

> Expanding the scale and scope of engagement with village and inter-village institutions directly and through partnerships.
> Expanding the reach through programmes, campaigns and capacity building.
> Building a strong rural cadre for supporting rural populace in stewardship and accessing economic opportunities.
> Designing models for replication by governments and for working at a landscape/block-level to evolve approaches of Commons Management.
> Equipping stakeholders with tools for mapping, planning, implementation and monitoring of rights, entitlements and programmes, and assessing judiciousness in the use of natural resources.
> Building a body of evidence on Commons and their contribution to climate action (mitigation and adaptation) and achieving SDGs.
> Identifying conceptual and operational challenges in conducting action research, bringing rigour to analysis, distilling good practices/approaches and building evidence.
> Incubating a range of innovations such as polycentric governance models; economic analyses of value that ecosystems and collective action bestow; inclusion of access and management rights to property rights; systems behaviour that is consistent with local ecological thresholds; and mapping and information technologies.

River
Project Districts
Project Tahsils
Wildlife Sanctuary
Khathiar-Gir Dry Deciduous Forests
North-Western Thorn Scrub Forests

Falls in Lower & Middle Indus, Ganga Delta & Plain, and Narmada-Tapi Freshwater Eco-region

Length of Growing Period (LGP) ranges from 90 days in the north to 150 days in the south

The annual average rainfall ranges from 575 mm to 1118 mm and the number of rainy days from 42 to 53

Rajasthan

In Rajasthan, FES engages directly with communities in seven districts in the central and southern parts. In the central districts of Ajmer, Bhilwara and Pali along the Aravalli range we work with agro-pastoralist communities. In the southern districts of Chittorgarh, Pratapgarh, Rajsamand and Udaipur, our work is predominantly with tribal communities.

We support communities in securing tenure over their common lands and establish local governance systems in the central districts which are facing recurrent droughts. In the southern districts, which are facing deforestation, loss of biodiversity and increasing levels of poverty, we work towards conservation and informed management of forests and pastures.

Across the regions, we encourage village institutions and their local federations in channelizing public funds, such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and *Mukhya Mantri Jal Swalamban Abhiyan* towards restoration of forests, pastures, farmlands and water bodies. FES has MoUs with seven districts to aid restoration of Commons through MGNREGS implementation.

The *Prakriti Karyashala* (Rural College) has continued to strengthen the capacities of Panchayat representatives, local government functionaries and local stewards. In the Commons Campaign *(Shamlat Abhiyan),* we continued our approach of mass campaigning to update 9,894 Panchayats on provisions under MGNREGS and other public funds for restoration of common lands.

Having established effective working relationships with state and district governments and milk unions, engagement with Panchayats for effective implementation of MGNREGS and demonstrating the reach of *Karyashala* in promoting democratic village-level institutions for restoring Commons, we are well-poised to strategize wider replication of community-driven conservation initiatives to safeguard shared natural resources in Rajasthan.

FACT FILE

District	Bhilwara 1995*	Udaipur 2000*	Pratapgarh 2005*	Ajmer, Chittorgarh, Pali, Rajsamand 2012*
Rivers	Mej, Menali, Khari	Mansi, Wakal, Sei	Jakham, Mahi, Siwna	Luni, Banas
Common Lands other than Forestlands (%)	43.45	41.54	23.26	35.15
Forest Cover (%)	2.17	23.25	29.35	8.54
Population Living Below Poverty Line (%)	27	48	40	20.25
Scheduled Castes/ Scheduled Tribes (%)	26.46	55.85	70.39	25.1

PRINCIPAL CROPS: Jowar, wheat, maize, barley, bajra, soybean, pulses, gram

FOREST TYPES: Tropical Dry Deciduous, Dry Thorn

THREATENED SPECIES: Great Indian Bustard, Long-billed Vulture, Four-horned Antelope, Lesser Florican, Black-naped Monarch, Fat-tailed Gecko, Aravalli Red Spurfowl, White-naped Tit, *Commiphora wightii*, *Sterculia urens*

FUNDING AGENCIES: Axis Bank Foundation, Azim Premji Philanthropic Initiatives, Bajaj Auto, Bharat Rural Livelihoods Foundation, Centre for microFinance, Ford Foundation, Government of Rajasthan (various programmes), Grow-Trees.com, HCL Foundation, Hindustan Unilever Foundation, ITC Rural Developmaent Trust, NABARD (CPWDP, IGWDP, ITDP, WDF), National Remote Sensing Centre, Omidyar Network, Rajasthan Forestry and Biodiversity Project, Skoll Foundation

* Year FES started working in this location

Tribal communities dwelling in the forest-dominated hilly landscapes of Udaipur continue to remain outside the mainstream development and agricultural growth witnessed in irrigated tracts. The communities from Barawali, Pala and Padrada villages in Saira Tehsil have started protecting their upland forests since 2001 and have taken collective measures to restore their forest of 250 acres.

Building upon the local practice of diverting streams originating from the forests to farmlands through open channels, the communities have undertaken Diversion Based Irrigation (DBI) which requires only gravity and water pressure to function. The farmers have established rules for water allocation and maintenance of the 3.5 km DBI pipeline. The community-led efforts of forest restoration and subsequent installation of DBI pipelines have supported 70 households of Barawali village to farm on more than 100 acres of land earning an additional income of at least 25,000 rupees per family annually.

"My husband does not have to migrate any longer and we are able to send our daughter to school for good education."

Punni bai – *Barawali*

S S Singh

Sunil Kumar

Starting with the regeneration of degraded forestlands under Joint Forest Management arrangements in 2001 in one of its villages , the Barundini Panchayat has now eight more habitations protecting together more than 2,000 acres. Over the years, barren lands have transformed into a forested landscape, improving fodder and water availability, and resilience of their farming systems.

804 thousand acres of common land were brought under community management

2.7 million lives were touched upon through community institutions

3,315 habitations have been assisted in restoring and managing their Commons

River
Project District
Project Mandal
Deccan Thorn Scrub Forest
East Deccan Dry-Evergreen Forest
Eastern Coastal Plain, Hot Subhumid to Semi-arid
Eastern Plateau (Chhota Nagpur) and Eastern Ghats, Hot Subhumid

Falls in Southern Deccan Plateau & South-eastern Ghats Freshwater Eco-region

Length of Growing Period (LGP) ranges from 120-150 days for Anantapuramu and Chittoor, and 180-210 days for Visakhapatnam

The annual average rainfall ranges from 1200 mm to 2130 mm and the number of rainy days from 82 to 122

Andhra Pradesh

In Andhra Pradesh, we work in the rainfed catchment areas of River Papagni in Chittoor and Anantapuramu districts at the trijunction of the Deccan Plateau, Eastern Ghats and Western Ghats. The region, once known for its cascading irrigation tanks is now prone to severe droughts and depleting water tables – conditions exacerbated by increasing the area under cultivation, prevalence of water-intensive crops, escalating cultivation costs coupled with fluctuating market prices, all of which, in turn, are leading to distress migration. We also work in tribal-dominated and forested uplands of Machkund river basin in Visakhapatnam district.

The efforts here are to strengthen local habitation-level institutions and their conglomerates in conserving Commons, securing tenure over them and restoring the entire landscape.

We have built a strong base of democratic village institutions for conserving shared natural resources and the aim is to leverage this strength to expand management and restoration efforts and channel public funds for restoring forests, scrub lands and water bodies. We are supporting village institutions in the process of claiming tenure over common lands and registering them in the 'Prohibitory Order Book', to restrain alterations in land-use.

We have piloted concepts like System Dynamics and Experimental Games to map the mental models of communities around water usage and build debates on water consumption patterns – with promising results that serve as the foundation for adopting sustainable agricultural practices and in consensus building for judicious use of shared natural resources.

For wider replication of measures aimed at conservation of shared natural resources, we will be employing inter-linking strategies of outreach of *Karyashala,* collaborations with the state and district governments and effective utilisation of public investments.

FACT FILE

District	Chittoor 1991*	Anantapuramu 2000*	Visakhapatnam 2015*
Rivers	Papagni	Papagni	Machkund
Common Lands other than Forestlands (%)	33.36	19.64	18.26
Forest Cover (%)	16.97	3.59	30.81
Population Living Below Poverty Line (%)	36	22	80
Scheduled Castes/Scheduled Tribes (%)	22.63	18.06	82

PRINCIPAL CROPS: Groundnut, paddy, tomato, red gram, millets, ragi, bajra, jowar, cotton

FOREST TYPES: Tropical Dry & Moist Deciduous, Tropical Thorn and Scrub

THREATENED SPECIES: Yellow-throated Bulbul, Starred Tortoise, Indian Black Turtle, Woolly-necked stork, *Gyps bengalensis, Gyps indicus, Bridellia retusa, Chloroxylon swietenia, Anogeissus latifolia*

FUNDING AGENCIES: Axis Bank Foundation, Azim Premji Philanthropic Initiatives, Government of Andhra Pradesh (various programmes), Grow-Trees.com, HCL Foundation, Hindustan Unilever Foundation, International Food Policy Research Institute, NABARD (CPWDP, ITDP, KFW, SDP, WDP), National Remote Sensing Centre, Omidyar Network, RBS Foundation, Skoll Foundation, Washington University in St. Louis

* Year FES started working in this location

A total of 32 habitations neighbouring Sadhukonda forest range protect their forest of 16,505 acres from fire outbreaks and rampant cutting of trees for fuelwood. Members of these villages depend on this forest range for grazing, fuelwood and collection of forest produce. Understanding the criticality of good forest cover for sustained water flows, they not only undertake conservation measures but also monitor the health of their forest.

While they have indicators such as seasonal and annual variations, presence or absence of termite mounds and plant species, etc. to assess forest health, biomass estimation and spatial variation in tree demography helped communities better understand complex ecosystems and the biotic pressure on their shared natural resources. The additional scientific knowledge helps the community in ably monitoring and safeguarding their forests and refine their conservation plans.

"With minimal education, tree measurement seemed impossible until I learned the methodology. Now, I know that the trees in my forest weigh about 14 lakh tonnes, a 32% increase from 1996."

Mallikarjuna – *Eguva Boyapalle*

Jagdeesh Rao

C S Saneesh

Chennappagaripalle village has been managing the Yerrakonda hills for over two decades by evolving collective rules and regulations for protection, conservation and sharing of forest produce from the shared natural resource. Inspired by their efforts, neighbouring habitations have initiated similar conservation measures on their common lands bringing about more 5,000 acres of revenue wastelands under collective management.

876 thousand acres of common land were brought under community management

2.0 million lives were touched upon through community institutions

2,400 habitations have been assisted in restoring and managing their Commons

River
Project District
Project Tahsil
Deccan Thorn Scrub Forest
South Deccan Plateau Dry Deciduous Forest

Falls in Southern Deccan Plateau & South-eastern Ghats Freshwater Eco-region

Length of Growing Period (LGP) ranges from 120-150 days

The annual average rainfall ranges from 1078 mm to 1676 mm and the number of rainy days from 79 to 105

Karnataka

In Karnataka, it is in the hilly landscape of rocky boulders and degraded common lands that we work – specifically in the upper catchment regions of river Papagni in the districts of Kolar and Chikkaballapur. Traditionally, agriculture in the region is rainfed, primarily irrigated by traditional system of tanks. The increase in droughts and shift to water-intensive crops led to groundwater extraction through bore wells at double the recharge rate depleting the water table to alarmingly low levels.

The work here has been strengthened by the amendments to the Panchayati Raj Act enabling Panchayats to map community assets. We facilitate the formation of habitation-level Panchayat sub-committees and undertake measures to enhance capacities of youth to support Panchayats in restoration of forests, common lands and water bodies under MGNREGS.

We promote sustainable agriculture practices that improve soil health and encourage the adoption of diversified Natural Resource Management-linked livelihoods. Efforts are on to aid communities in bridging the gap between demand and supply of water resources through convergence of activities of government departments and non-government entities.

FES has trained Panchayat functionaries and facilitated the preparation of village development plans under the Gram Panchayat Development Plan for all the blocks of Chikkaballapur and three blocks of Kolar as part of the MoU signed with Zilla Panchayats of Kolar and Chikkaballapur districts.

Leveraging the favourable policy environment which enables formation of Panchayat-level sub-committees to map and restore common pastures and water bodies, we shall continue working towards securing tenure of pastures and registering them in the Panchayat Asset Registers and restoring these resources by effective utilisation of public funds.

FACT FILE

District	Kolar 1998*	Chikkaballapur 1998*
Rivers	Papagni	Papagni
Common Lands other than Forestlands (%)	24.72	28.06
Forest Cover (%)	6.05	9.19
Population Living Below Poverty Line (%)	22	22
Scheduled Castes/Scheduled Tribes (%)	35.45	37.37

PRINCIPAL CROPS: Ragi, groundnut, pulses, paddy, maize, red gram, oilseeds

FOREST TYPES: Tropical Dry Deciduous, Tropical Thorn, Scrub

THREATENED SPECIES: Yellow-throated Bulbul, Starred Tortoise, Red Sand Boa, Kolar Leaf-nosed Bat, *Wrightia tinctoria*, *Shorea roxburghii*

FUNDING AGENCIES: Axis Bank Foundation, Azim Premji Philanthropic Initiatives, Grow-Trees.com, HCL Foundation, Hindustan Unilever Foundation, ITC Limited, NABARD-SDP, National Remote Sensing Centre, Omidyar Network, SayTrees Environmental Trust, Sir Dorabji Tata Trust & Allied Trusts, Skoll Foundation, Washington University in St. Louis

* Year FES started working in this location

What started as a collective resolve to protect their 400 acres of barren pastureland *(gomala)* in the year 2009-10, the 58 household-strong Pokamakalapalli village of Bagepalli Taluk is now a vibrant institution which not only restored the *gomala* and water bodies but has framed robust rules of provision and appropriation for better management of their shared natural resources.

The village has effectively utilised INR 1.2 million worth of funds available under NREGS to undertake measures aimed at restoration of their pastures and water bodies. Rich in biodiversity, with presence of native flora and fauna including peacocks and deer, the restored *gomala* improved the water regime in the area, and provides fodder for cattle and small ruminants and fuelwood and forest produce such as broomsticks, custard apples, seeds, leaves and medicinal herbs worth INR 2.4 million every year to 90% of the households.

"Women of the village collect leaves, fodder and broomsticks from the *gomala,* and custard apples alone fetch 3,500 rupees, which serves as one of the main sources of income for old women like me."

Shivamma – *Pokamakalapalli*

Dr. Subba Rao

C S Saneesh

By framing collective rules and regulations for provisioning and appropriating from common resources, Sajjupalli and three adjoining villages have gradually restored 1,380 acres of boulder-strewn common land. The area now supports livestock needs of 12 villages, and is home to rich wildlife and flora, including threatened floral species such as Eastern Satinwood. The local people reported several sightings of sloth bears and hyenas.

114 thousand acres of common land were brought under community management

288 thousand lives were touched upon through community institutions

626 habitations have been assisted in restoring and managing their Commons

River
Project District
Project Block
Wildlife Sanctuary
Chhota-Nagpur Dry Deciduous Forest
Eastern Highlands Moist Deciduous Forest
Northern Dry Deciduous Forest
Odisha Semi-Evergreen Forest

Falls in Northern Deccan Plateau Freshwater Eco-region
Length of Growing Period (LGP) ranges from 180-210 days
The annual average rainfall ranges from 1402 mm to 1694 mm and the number of rainy days from 89 to 105

Odisha

Our work in Odisha spans the undulating landscapes of Angul, Dhenkanal and Keonjhar in central part, and the tribal-dominated district of Koraput in the Eastern Ghats. While in Angul and Dhenkanal, our work supports small and marginal farmers' dependent on rainfed agriculture, in Koraput and Keonjhar, we work with tribal communities inhabiting the upper catchments of Kolab and Baitarni river basins.

The past few decades have seen a rapidly growing economic disparity between the urban and rural areas in both regions. In the central districts, we continue to assist local communities and habitation-level institutions and their federations to strengthen forest-farming linkages by improving vegetation cover, restoring Commons, securing community rights and formalising customary-use practices. In Koraput district, we assist communities manage their forests, including supporting cultivation of lands along forests to strengthen their livelihoods by the means of water conservation measures and improved access to government programmes and schemes.

In recent years, we have gained much momentum in securing Community Forest Rights (CFR) under the Forest Rights Act (FRA) for the communities we support in collaboration with partner NGOs. A number of tribal villages have been successful in gaining legal rights that entitle them to access, use, protect and conserve forest resources. *Prakriti Karyashala* (Rural College) is helping to address capacity needs of local communities, NGOs and government functionaries in claiming CFR and for the development of management and restoration plans.

Building on collaborations with government departments and partner organisations, we plan to cover more ground for arranging CFR claims in favour of tribal communities across the state and continue to enhance local capacities in developing management and conservation plans where forest rights have been successfully conferred.

FACT FILE

District	Angul 1987*	Dhenkanal 1987*	Koraput 2008*	Keonjhar 2013*
Rivers	Mahanadi, Brahmani	Brahmani	Kolab	Baitarni
Common Lands other than Forestlands (%)	30.52	24.38	37.81	43.36
Forest Cover (%)	42.38	31.42	21.89	38.67
Population Living Below Poverty Line (%)	48	48	80	63
Scheduled Castes/ Scheduled Tribes (%)	32.90	33.21	64.80	57.06

PRINCIPAL CROPS: Paddy, pulses, oilseeds, maize, mustard, millets

FOREST TYPES: Tropical Dry & Moist Deciduous, Bamboo Brakes & Scrub, Northern Tropical Semi-evergreen

THREATENED SPECIES: Tiger, Elephant, Gharial, Hyena, Barking Deer, Pangolin, Porcupine, Monitor Lizard, *Barringtonia acutangula, Diospyros candolleana, Strobilanthes jeyporensis, Gloriosa superba*

FUNDING AGENCIES: Axis Bank Foundation, Bharat Rural Livelihoods Foundation, Grow-Trees.com, Government of Odisha (various departments), HCL Foundation, India Development Services, International Land Coalition, International Rice Research Institute, NABARD (WDF, ITDP), National Remote Sensing Centre, Omidyar Network, RBS Foundation, RSF Social Finance, Sir Dorabji Tata Trust & Allied Trusts, Skoll Foundation, The Energy and Resources Institute, UNDP

* Year FES started working in this location

Sitkabari is an 'unsurveyed' village in Boudh district where survey and settlement process has not taken place. As a result, lands under the possession of the 18 tribal households were never recorded. Using the provisions of the Forest Rights Act, villagers formed the Forest Rights Committee which was supported in mapping land-use employing Differential Global Positioning Systems (DGPS) and GIS-enabled tenure mapping tool which ensured sub-metre accuracy.

A total of 237 homestead and farm plots measuring 83.47 acres and 600 acres of community forest area were mapped. Regular interaction with the district administration created enabling environment for acceptance of maps and the communities' claims over the land resources. With the recognition of their claims, the villagers attained eligibility to access various welfare programmes that are linked to land ownership.

"Though my family has been ploughing this land for 50 years, we never had records to claim our rights. Now I am a proud owner of this piece of land and can access various entitlements from the government without hassles."

Sukanti Pradhan – *Sitkabari*

Swapnasri Sarangi

Dawa Pemba Sherpa

Conservation measures on the uplands have resulted in improved availability of water for irrigation, which resulted in increased area under cultivation. Forest protection initiatives of Sanmunda village motivated them to initiate similar systems of governance over shared natural resources such as water bodies and helped them resolve a long-standing dispute over the management of a water body with their neighbouring village.

2.0 million acres of common land were brought under community management

2.7 million lives were touched upon through community institutions

6,721 habitations have been assisted in restoring and managing their Commons

Falls in Northern Deccan Plateau, Ganga Delta & Plain Freshwater Eco-region

Length of Growing Period (LGP) ranges from 120-210 days

The annual average rainfall ranges from 956 mm to 1254 mm and the number of rainy days from 66 to 73

Madhya Pradesh

In Madhya Pradesh, FES works in the districts of Mandla and Balaghat in the Mahakaushal region, which includes the biodiversity rich zone of Kanha National Park. Mandla and parts of Balaghat are characterised by highly degraded forests, heavy infestation of invasive weeds, and poor productivity of farmlands and distress migration of the predominantly tribal population.

To address these challenges, our work focuses on improving vegetation cover and livelihood opportunities. We work with the communities, Panchayats and government officials for improved governance of Commons and better access to government programmes.

As a result of our efforts, landscape-level dialogue has gained momentum and a platform for restoration of river catchments, improving soil health and adopting of improved agronomic practices. All of these, in turn have informed measures towards restoring pastures and forests, bringing water bodies under collective management and addressing soil health through improved water and nutrient regimes.

In Mandla, our efforts are directed towards improving gender parity by promoting the participation of women and increasing their involvement in governance processes. Our work in Bichya block is diversifying to include the leveraging of robust local institutions, and engendering block-level partnerships with government bodies and other NGOs.

We plan to build on the strong foundation of existing collaborations with local communities and various stakeholders to expand our operations in adjoining geographies for managing the buffer zones of Kanha National Park. With plans to build on the restoration efforts of village, we are working on promoting collaboration at various levels and with various stakeholders, as well as meso-level governance structures for effective governance of shared natural resources.

FACT FILE

District	Mandla 2006*	Balaghat 2016*
Rivers	Gaur, Balai, Banjar of Narmada	Banjar of Narmada
Common Lands other than Forestlands (%)	19.95	25.95
Forest Cover (%)	48.88	53.94
Population Living Below Poverty Line (%)	60	60
Scheduled Castes/ Scheduled Tribes (%)	62.46	29.87

PRINCIPAL CROPS: Wheat, soybean, redgram, minor millets, paddy, maize, jowar, bajra, mustard, pulses, cotton

FOREST TYPES: Tropical Dry, Moist Deciduous

THREATENED SPECIES: Tiger, Swamp Deer, Green Avadavat, Barasingha, Vultures *(Gyps bengalensis, Gyps indicus, Neophron percnopterus)*, Indian Wolf, Striped Hyena, *Sterculia urens, Pterocarpus marsupium, Terminalia arjuna, Adina cordifolia, Dolichandrone falcata*

FUNDING AGENCIES: Bharat Rural Livelihoods Foundation, Biodiversity International, Columbia University, GIZ-India, GIZ-Germany, Hindustan Unilever Foundation, International Crops Research Institute for the Semi-arid Tropics, NABARD-WDF, National Remote Sensing Centre, Omidyar Network, RBS Foundation, Sir Dorabji Tata Trust & Allied Trusts, Skoll Foundation, Transform Rural India

* Year FES started working in this location

Infestation by the highly invasive Lantana weed has degraded the vast expanse of grassland and forest in and around the Kanha National Park, depriving tribal communities of their livelihoods. While 5,400 acres grasslands and forest in the buffer zone of the Tiger Reserve were restored by eradication of Lantana, 172 households of Takatwa village of Bichiya came together to remove the weed from 568 acres of forestland.

With the eradication of the thorny weed, the flowers and seeds of about 130 trees of Mahua *(Madhuca longifolia)* which were hitherto inaccessible were available for harvesting. Moreover, instances of crop raids by wild boars reduced and availability of grasses and *tendu patta* (beedi leaf) improved.

Annually each family earns about Rs.3,000 from tendu leaves and Rs.2,000 from collection of Mahua flowers and seeds, a critical source of income for forest-dependent livelihoods.

"With the removal of the weed from our forest, I earned Rs.5,500 from collection of Mahua flowers and tendu leaves, which ensured that I could pay for my medical expenses and also for my child's education."

Pyari Bai – *Takatwa*

Ishan Agrawal

Manohar Pawar

Overcoming boundary disputes, the village of Indravan restored 37 acres of grassland by removing Lantana camara, an extremely invasive weed species, and promoting local grass species. Through protection measures and sharing of collectively evolved mechanisms, fodder availability has improved 16 times, sufficiently serving 148 households for a period of 3 months.

114 thousand acres of common land were brought under community management

149 thousand lives were touched upon through community institutions

424 habitations have been assisted in restoring and managing their Commons

River
Project District
Project Tahsil
Khathiar-Gir Dry Deciduous Forest
Narmada Valley Dry Deciduous Forest
Indus River Delta-Arabian Sea Mangroves

Falls in Narmada-Tapi Freshwater Eco-region
Length of Growing Period (LGP) ranges from 120-150 days
The annual average rainfall ranges from 1036 mm to 1438 mm and the number of rainy days from 43 to 52

Gujarat

In Gujarat, our work is spread across six central districts that are characterised by a wide range of ecological issues, such as highly eroded ravines along the banks of River Mahi, saline mudflats in the Gulf of Khambhat endangered wetlands of Anand and Kheda districts, and the central highlands of Mahisagar district.

Along River Mahi, we work with habitation and village-level institutions and Panchayats for restoring the highly eroded ravines by leveraging government programmes like MGNREGS. For improved coordination in collective action, the ravine-affected villages along the 90-km stretch of the riverbank have been supported to form multi-stakeholder forums to effectively address the issue of land degradation.

In Mahisagar, a predominantly tribal district, we work with skilled community resource persons who in turn assist local institutions in ensuring rights and entitlements of the community, developing institutional arrangements for safeguarding upland forests, claiming recognition of community forest rights and in supporting measures to improve resilience of their dryland farming systems. We also work with the communities to promote sustainable agricultural practices, which are better suited to local conditions and contribute to strengthening their livelihoods. These practices are introduced through biannual events which serve as platforms for farmers to interact and exchange ideas.

Looking ahead, we plan to build a multi-stakeholder platform with the help of the robust habitation-level institutions and their federating bodies, including well-trained rural cadre and a supportive district administration, to anchor a range of interventions and a development agenda for the region. While we shall continue working towards safeguarding forests and rejuvenating farming systems, our efforts shall be geared towards extending support in the implementation of the Panchayats (Extensions to Scheduled Areas) Act.

FACT FILE

District	Anand 1986*	Kheda 1987*	Vadodara 1992*	Panchmahal, Mahisagar 1988*
Rivers	Mahi, Sabarmati	Sabarmati	Mahi, Narmada	Mahi
Common Lands other than Forestlands (%)	18.66	14.45	17.67	16.23
Forest Cover (%)	1.87	2.36	8.03	12.80
Population Living Below Poverty Line (%)	18	18	12	37
Scheduled Castes/ Scheduled Tribes (%)	6.18	6.62	32.92	34.38

PRINCIPAL CROPS: Banana, paddy, wheat, tobacco, maize, red gram, bajra, cotton

FOREST TYPES: Tropical Dry Deciduous

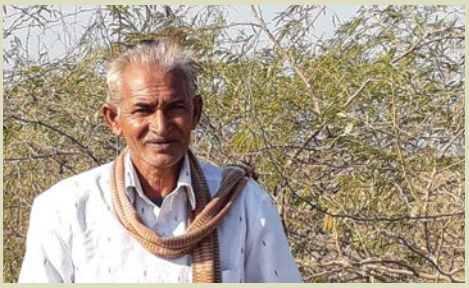
THREATENED SPECIES: Sarus Crane, Black-necked Stork, Greater Spotted Eagle, Hyena, Sloth Bear, Vultures *(Gyps indicus, Sarcoramphus papa)*, Crocodile, *Dalbergia latifolia, Dolichandrone falcata*

FUNDING AGENCIES: Axis Bank Foundation, Bharat Rural Livelihoods Foundation, Collectives for Integrated Livelihood Initiatives (CInI), Grow-Trees.com, HCL Foundation, NABARD (CCA, KFW), National Remote Sensing Centre, Omidyar Network

* Year FES started working in this location

The initial 15 years of lease of their common land in 1992 enabled the communities of Tada Talav and Juni Akhol villages of Anand district in restoring 400 acres of degraded common lands, adjacent to tidal mudflats of Cambay coast. However, when these two villages applied for renewal of lease in 2007, the district administration refused it. When shrimp ponds promoted in the area started increasing the salinity of Commons and farmlands, communities resumed their efforts, even more strongly, and mobilised their elected representatives to influence the Panchayat members, local block-level officials and the district administration.

After visiting the villages in 2018, the District Collector extended the lease of common lands for an additional period of 25 years with a special mention that restored common lands protect their farmlands from salinity intrusion. The extension of lease gave fillip to their collective endeavour and further emboldened them to revive efforts to halt further proliferation of shrimp cultivation and safeguard their land and water resources.



"Getting long-term security over our Commons will help our village to come together even more strongly to manage our shared natural resources."

Ghanshyambhai Makwana – *Juni Akhol*

J V Dhameliya

Dinkar Panchal

Khorwad village in Anand district has overcome initial hurdles to restore 100 acres of common land, which now has 72 floral species, an increase from the six species that existed before. Recognising their efforts, the government renewed the lease of the common lands for another 15 years and also granted tenure over an additional 40 acres.

68 thousand acres of common land were brought under community management

523 thousand lives were touched upon through community institutions

787 habitations have been assisted in restoring and managing their Commons

North-Eastern Region

- Community Conserved Area
- River
- Project District
- Wildlife Sanctuary
- Brahmaputra Valley Semi-Evergreen Forest
- Eastern Himalayan Broadleaf Forest
- Meghalaya Subtropical Forest
- Mizoram-Manipur-Kachin Rain Forest
- Northeast India-Myanmar Pine Forest

Falls in Ganges Delta & Plain, Middle Brahmaputra & Sitang-Irawaddy Freshwater Eco-region

Length of Growing Period (LGP) ranges from 270-300 days

The annual average rainfall ranges from 1800 mm to 2400 mm and the number of rainy days from 122 to 143

Our work in this region – with largest endemic flora and fauna found in a geographical location in India – is with diverse ethnic groups, primarily in Nagaland. Our strategy can be stated as four-pronged – direct engagement with communities, partnership with conservation organisations, undertaking studies to enable scientifically informed decision making and supporting conservation action through fellowships.

To strengthen local governance, we support villages that manage Community Conserved Areas (CCAs). During the year, we expanded our reach in Nagaland and assisted village councils and CCA Management committees to develop CCA management plans for 6,177acres, while continuing to assist earlier organised CCAs.

Over the years, we have trained community representatives and supported the Nagaland CCA Forum to promote conservation. In Meghalaya's South Garo Hills, an eco-sensitive landscape – an important habitat for elephants, hoolock gibbons and other species – we initiated engagement with communities around protected areas. These CCAs are crucial as they serve as a corridor for wildlife movement between protected areas.

While we continue to work towards studying and documenting the biodiversity of the region and support village councils in implementation and monitoring of conservation plans, we shall explore possibilities of entering into partnership with governments and like-minded organisations for conserving the biodiversity-rich landscape of the region.

From the understanding gained through studies on ecology and biodiversity and resource-use patterns, communities developed conservation plans for areas rich in biodiversity and are currently promoting collaborative platforms that can undertake conservation actions which are critical to the ecology of the region.

Yaranajit Deka

Maharashtra

River
Project District
Project Tahsil
National Park
Wildlife Sanctuary
Central Deccan Plateau Dry Deciduous Forest
Eastern Highlands Moist Deciduous Forest
Narmada Valley Dry Deciduous Forest

Falls in Narmada-Tapi & Northern Deccan Plateau Freshwater Eco-region

Length of Growing Period (LGP) ranges from 120-150 days

The annual average rainfall ranges from 1165 mm to 1283 mm and the number of rainy days from 65 to 69

Our work in Maharashtra is in the Vidharbha region which is undergoing acute agrarian distress. Ghatanji taluka, Yavatmal district and Chandur Railway taluka in Amravati district characterised by low water recharge due to the compact Deccan basalt are prone to frequent and severe droughts. Lack of formal credit arrangements to withstand high risks of cash crop cultivation and increasing agricultural costs are escalating the agrarian distress.

Our work here is concentrated on leveraging public funds towards protection and restoration of common lands, forests and water bodies. This is complemented by strengthening local governance that acknowledges ecological and economic inter-linkages thereby connecting the health of farmlands with common pastures and forests.

To revive river Waghari for improving water availability, we mobilise local communities, and Panchayati Raj institutions, local NGOs, and multi-actor platforms. To this end, schemes such as the Jalyukt Shivar Abhiyaan, State Rural Livelihoods Mission and MGNREGS are being leveraged. Efforts are on towards simultaneously assisting communities to match their consumption of natural resources with the ecological capacity of the area.

Building on the past experiences and initiative of the State Government to involve civil society organisations in the development efforts, we shall scale up our support to communities for addressing concerns regarding distress agriculture and uncertain livelihoods through management and restoration of land and water resources and promotion of sustainable agriculture practices.

In the drought-prone Vidarbha region, we work with local communities in connecting the resilience of their farm-based livelihoods to the health of shared natural resources such as forests and pastures, and support them in engendering multi-stakeholder platforms for better management of natural resources.

P Sreehari

Arpit Deomurari

Financial Highlights

The Foundation for Ecological Security (FES) is a Society registered under the Societies Registration Act XXI of 1860, New Delhi. FES is also registered under Section 12A & 80G of the Income Tax Act of 1961, and the Foreign Contribution (Regulation) Act (FCRA) of 2010.

Sources of Funds

During the year 2017-18, the receipts totalled INR 536.48 million, as against the previous year's income of INR 457.79 million, an increase of 17% over the previous year.

Of this, domestic sources accounted for INR 335.38 million (63%). The major share of domestic contributions came from -

- Philanthropic organisations - INR 245.39 million (46%)
- Government agencies - INR 63.79 million (12%)
- Interest on corpus and other receipts - INR 26.20 million (5%)

The balance of INR 201.10 million (37%) is from foreign sources.

- Covered by FCRA - INR 31.54 million (6%) – Indian Donors
  - INR 155.87 million (29%) – Foreign Donors
- Not Covered by FCRA - INR 13.69 million (2%)

At the end of the year, the corpus fund was INR 229.83 million, and reserves and surplus amounted to INR 76.26 million.

Utilisation

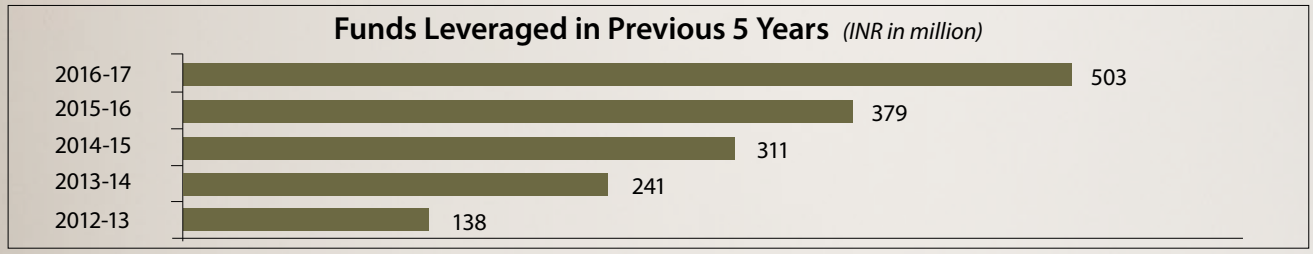
During the year, the total utilisation of funds was INR 519.51 million which is 97% of the total receipts, as against 94% (INR 430.60 million) utilisation of the previous year's receipts. The major heads of fund utilisation were:

Particulars	INR in million	Percentage
Strengthening Community-based Institutions for Conservation of Natural Resources	335.34	65
Informatics, Capacity Building, Studies, Commons Initiative, and Public Education	103.04	20
Administration and Recurring Expenses	46.47	9
Capital Expenditure	34.66	6
Total	**519.51**	**100**

Leverage of Funds

Besides utilising funds sourced from donors and government agencies, the organisation leveraged funds to the tune of INR 540.86 million from the following sources for implementing various project activities:

Funds Leveraged in 2017-18 from	INR in million
National Bank for Agriculture and Rural Development (NABARD)	16.74
Integrated Watershed Management Programme (IWMP)	21.92
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	231.97
Departments such as Agriculture, Horticulture, Forest, etc.	191.18
Community Contribution	79.05
Total	**540.86**



Sharp & Tannan Associates were the Statutory Auditors for the year 2017-18.

Auditor's Report and Financial Statements for the year ended on 31st March, 2018 are available at *http://fes.org.in/pdf/balance-sheet-2017-18.pdf*

Acknowledgement

We thank the Government of India, Department of Land Resources, Department of Rural Development, Ministry of Rural Development, and Ministry of Environment, Forest and Climate Change, New Delhi. We thank the District Administration of Anantapur, Chittoor and Visakhapatnam of Andhra Pradesh; Chikkaballapur and Kolar of Karnataka; Angul, Dhenkanal, Keonjhar and Koraput of Odisha; Mandla and Balaghat of Madhya Pradesh; Ajmer, Bhilwara, Chittorgarh, Pali, Pratapgarh, Rajsamand and Udaipur of Rajasthan; Anand, Dahod, Kheda, Mahisagar, Panchmahal and Vadodara of Gujarat; Mokokchung, Zunheboto, Kiphire, Phek and other districts of Nagaland; and Amravati and Yavatmal of Maharashtra. Our efforts would not have been possible without the assistance and support from the respective state governments. We also thank the National Dairy Development Board and the National Bank for Agriculture and Rural Development for nurturing and supporting our work for many years.

We thank the International Food Policy Research Institute, Centre for International Forestry Research (CIFOR), Collaborating for Resilience, TMG ThinkTank, Washington University at St. Louis, University of Michigan at Ann Arbor, United States Forest Service-International Programs, Columbia University-New York, International Forestry Resources and Institutions, Arizona State University, University of Iowa, Boston College, Ulster University, University of Montana, International Centre for Social Franchising, International Union for Conservation of Nature, The David and Lucile Packard Foundation, Rudolf Steiner Foundation (RSF) Social Finance, World Resources Institute, Cadasta, Indufor, Land Alliance, Forest-PLUS, Global Footprint Network, University of Queensland, International Land Coalition, Kalpavriksh, Indian School of Business, NIRD & PR Hyderabad, Research and Information Systems for Developing Countries-New Delhi, Advanced Centre for Water Resources Development and Management, Dakshin Foundation, Watershed Organisation Trust, Rainfed Livestock Network, Revitalising Rainfed Agriculture, Lokhit Pashu-Palak Sansthan Anthra, Sahjeevan, International Crops Research Institute for the Semi-Arid Tropics-Hyderabad, Institute of Advanced Sustainability Studies (IASS), Council for Social Development, University of Colorado at Boulder, Kanchi Kohli, and Shalini Bhutani for collaborating with us on various initiatives.

We would like to thank Barbara Sargent, Blake Ratner, Chris Short, Gautam Yadama, Liz Alden Wily, Marco A. Janssen, Michael Taylor, Peter Hovmand, Ruth Meinzen-Dick, Satish Sharma, Ton Dietz, Tiffany Marie Knight, Ved Arya, Apoorva Oza, Jayesh Bhatia, Sreedhar, Rajiv Singh Thakur, Praveen Kumar, Thomas Falk, Wei Zhang, Steven Lawry and Frank Place for helping us in many ways. We are also thankful to Ashwini Chhatre, Binoy Acharya, G.B. Mukherji, Harini Nagendra, Lakshmi Lingam, N.C. Narayanan, N.D. Khurody, Mihir Mathur, S. Siva Raju, Rucha Godbole, Sushil Saigal, Pranab Choudhary, Rita Brara, K. Rajesh, Rucha Ghate, Fred Nelson, Stephanie Cohn Rupp, V.S. Prakash, Ellis Ballard, Kelsey Werner, Rajeswari Raina, Kamal Kishore, Ilse Köhler-Rollefson, Jugal Mohopatra, S.M. Vijayanand, Arun Maira, C.S. Rajan, Dr. T. Haque, Ravindra, Sisir Pradhan, K.N. Raja, Arun Aggarwal, Kristen Anderson and Nitya Ghotge for their continued support and guidance.

We thank Spring Impact (formerly ICSF) for helping us with systemising the operations of the Karyashalas, Bharat Rural Livelihoods Foundation (BRLF) and Indian Institute for Health Management Research (IIHMR)-Jaipur for the certificate course for tribal youth.

We offer our thanks to Survey of India, National Bureau of Soil Survey and Land Use Planning-Nagpur, Forest Survey of India, Census of India, National Remote Sensing Agency-Hyderabad, and ESRI-New Delhi for providing data and technical assistance to our GIS Cell. We thank Panchayat and Rural Development Department-Chhattisgarh, Government of Maharashtra, Vodafone Foundation, NASSCOM Foundation, and National Remote Sensing Centre (NRSC)-Hyderabad.

We thank Alka Narang, Sushil Chaudhary and Shashi Sudhir of United Nations Development Programme (UNDP)-Delhi; N.N. Sinha, Paritosh Upadhyay and Brajesh Dash of Government of Jharkhand. We thank Joint Secretary of MGNREGA Ms. Aparajita Sarangi, Director of MGNREGA Mr. Raghvendra Pratap Singh, Dr. W.R. Reddy-Director General, NIRD&PR, Commissioner of Panchayati Raj Department of Chhattisgarh, Principal Secretary of Agriculture Department-Odisha, Director of Panchayati Raj and Drinking Water Department of Odisha, CEO of Odisha Livelihood Mission (OLM), CEO of Andhra Pradesh Drought Mitigation Programme (APDMP), CEO of Jharkhand State Livelihood Promotion Society (JSLPS), and State Forest Departments of Rajasthan, Himachal Pradesh and Telangana for supporting application of various tools of India Observatory.

We thank the Duleep Matthai Nature Conservation Trust (DMNCT) and GIZ for their support in developing tools and framework for better forest management. We thank Ashok Chandrashekar, Juliana Kurmen and Brian Curci of IBM Global for their support in project management methodologies, Harekrishna Mishra from IRMA for leading the network and security committee, Aaron Addison from Washington University in St. Louis, Wildlife Institute of India (WII), and Dr. A.R. Dasgupta and Dr. Balakrishna Pisupati for their support in developing India Observatory.

We appreciate Hitesh Bhat and K. Srinivas for making time for us, and Senthil Ganesh for facilitating training programmes on Team Building.

We are also thankful to the Xavier Institute of Social Service-Ranchi, Tata-Dhan Academy-Madurai, Tata Institute of Social Science-Mumbai, Hyderabad and Tuljapur, Azim Premji University-Bengaluru, Shiv Nadar University, and the Institute of Rural Management-Anand for a fruitful association with all of them.

In Rajasthan, we thank the Deputy Chairman, Chief Minister's Advisory Council, Advisor (Finance) to Chief Minister, Chief Secretary, Departments of Rural Development and Panchayati Raj, Finance and Revenue, Forest, Social Justice, Animal Husbandry, Watershed Directorate, Wasteland and Pasture Land Development Board, State Biodiversity Board of Government of Rajasthan, and Commissioner-MGNREGS. We thank NABARD Regional Office-Jaipur, Institute of Development Studies-Jaipur, Indira Gandhi Panchayati Raj Sansthan, RTI Manch-Jaipur, National Campaign for People's Right to Information-Jaipur, and Rajasthan Cooperative Dairy Federation.

We thank the District Administration, Zilla Parishad, Watershed, Forest, Agriculture, MGNREGS Departments and all Panchayat Samitis in Ajmer, Bhilwara, Chittorgarh, Pali, Pratapgarh, Rajsamand and Udaipur for their continuous support and collaboration.

In Bhilwara, we thank the Milk Union Bhilwara Dairy, MGNREGS Department, Dryland Farming Research Station-Arjiya, Krishi Vigyan Kendra, Mazdoor Kisan Shakti Sangathan, Government Departments, CUTS, Parivar Seva Sansthan, Mewar Seva Sansthan, Jal Dhara, Mr. Bajrang Lal Sharma, Mr. S.C. Mathur, Mr. Anil Tripathy, DDM-NABARD, and School for Democracy-Thana. In Udaipur, we acknowledge support from Rajasthan College of Agriculture, SRLM, Ajeevika Bureau, ARTH Sansthan College of Technology and Engineering of MPUAT, Krishi Vigyan Kendra, the DDM and Programme Management unit of IGWDP & NABARD, and Wildlife & Territorial Forest Division-Udaipur. In Pratapgarh, we thank the Krishi Vigyan Kendra, Government departments of Agriculture and Animal Husbandry, Watershed, Prayas, Prakruti Foundation, SRIJAN, and Manjari Foundation. In Ajmer, we thank the Department of Watershed, Agriculture, MGNREGS, Animal Husbandry and Milk Union. In Pali, we acknowledge support of MGNREGS, Watershed Department and DDM-NABARD. In Rajsamand, we acknowledge support of MGNREGS & Watershed Department, SRLM, and Wildlife division. In Chittorgarh, we acknowledge support from DDM-NABARD and Wildlife division.

In Andhra Pradesh and Karnataka, we thank the Department of Panchayat Raj and Rural Development, Department of Agriculture, Government of Andhra Pradesh; State Project Monitoring Unit (SPMU), APDMP; Department of Rural Development and Panchayat Raj, Government of Karnataka; Andhra Pradesh and Karnataka Regional Offices of NABARD; Ananta Paryavarana Parirakshana Samiti and Avantika-Bengaluru. We acknowledge the support of WASSAN, Centre for People's Forestry, Andhra Pradesh Mahila Abhivruddhi Society, Mahila Samkhya-Karnataka, Abdul Nazir Sab State Institute of Rural Development-Mysore, and Regional Fodder Station-Hesaraghatta-Bengaluru.

We thank the District Collectors of Anantapur and Chittoor for their support. We acknowledge the support of Commissioner, Rural Development-Karnataka and Commissioner, Watershed Development Department-Bengaluru, Deputy Commissioners and CEOs of Chikkaballapur and Kolar districts, and Kolar Milk Union.

In Odisha, we would like to thank the Departments of Panchayati Raj, Forest and Environment, Revenue and Disaster Management, Rural Development, Agriculture and Farmers' Empowerment, Water Resources, and SC and ST Development Department, NABARD, OLM, SIRD, OTELP, Central Institute for Women in Agriculture, Central Tuber Crops Research Institute, International Rice Research Institute, Central Horticultural Experiment Station, Central Institute of Freshwater Aquaculture, Xavier Institute of Management, SC and ST Research and Training Institute, KIIT School of Rural Management, Odisha Jungle Manch, WOSCA and Prakalpa-Keonjhar, NIRMAN-Rayagada, CLAP-Keonjhar, Seba Jagat-Kalahandi, NEWS and District Environment Society-Angul, Rangers' Training College-Angul, ATMA-Angul and Dhenkanal, Central University of Odisha, ITDA-Koraput and Keonjhar. We are also thankful to District Collectors of Angul, Dhenkanal, Keonjhar and Koraput.

In Madhya Pradesh, we thank the Departments of Revenue and Agriculture, Panchayat and Rural Development, Animal Husbandry, Forest, and NABARD for their support. We acknowledge the support of APCCF and Director, Rural Development and PMKSY, Sh. J.S. Chauhan; CCF and Field Director, Kanha Tiger Reserve; Sh. Shahbaz Ahmed, Madhya Pradesh; Chief Wildlife Warden, PCCF, State Biodiversity Board, Council for Science and Technology, Commissioner-Land Records, Director Skill Development, M.D Civil Supplies; MGNREGS Parishad; Climate Change Cell of EPCO, Mrs. Sufiyah Faruqui Wali, IAS, Sh. Sujan Singh Rawat, CEO Zila Panchayat Mandla, Janpad Panchayats of Bichiya, Niwas, Parawada and Baihar, Director, State Education Centre, Divisional Commissioners of Jabalpur and Narmadapuram division; Centre for Rural Bio-Technology, Jawaharlal Nehru Krishi Vishwavidyalaya-Jabalpur, Krishi Vigyan Kendra-Mandla, WWF India-Mandla, DISHA, NIRMAAN, PRADAN and NWCYED, ASA, HARD, Reliance Foundation, Institute of Advanced Sustainability Studies-Germany, Columbia University-New York, and ICRISAT-India. We thank the Indian Institute for Forest Management-Bhopal, Indian Institute of Soil Sciences-Bhopal, State Forestry Research Institute, Tropical Forestry Research Institute, Biodiversity International-Delhi, Vikas Samvad-Bhopal, Eklavya-Bhopal, Freedom from Hunger-Delhi, and S.S. Rathor of National Commission on Nomadic and Semi-nomadic Tribes, GoI.

In Gujarat, we would like to express our thanks to NABARD, the Centre for Environment Education, UNNATI, ANANDI, Janvikas, Central Soil & Water Conservation and Research and Training Institute-Vasad, Anand Agriculture University, Vidyanagar Nature Conservancy, Gramin Vikas Trust-Dahod, N.M. Sadhguru Foundation-Dahod, VIKSAT, Gujarat Vidyapith, Krishi Vigyan Kendra-Vejalpur, Maize Research Station-Godhra, Centre of Excellence for Vegetables-Vadrad, National Seed Corporation-Godhra, Gujarat State Seed Certification Agency-Ahmedabad, Gujarat State Watershed Management Agency-Gandhinagar, Commissionerate of Rural Development-Government of Gujarat, State Institute of Rural Development,Gujarat Green Revolution Company Ltd, District Panchayats of Anand, Kheda, Vadodara and Mahisagar, District Watershed Development Unit-Anand and Kheda, Forest Division of Anand, Kheda and Mahisagar District, and Community Science Centre-Vadodara.

In the North-East region, we thank the Government of Nagaland, Nagaland Empowerment of People through Economic Development (NEPED), Department of Forest and Environment-Nagaland, Village Councils of Nagaland and Meghalaya, Meghalaya Basin Development Authority, Karbi Anglong Autonomous Council, Additional PCCF, Department of Environment and Forests-Government of Assam, NABARD-Nagaland, Nagaland State Biodiversity Board, Land and Water Resource Department-Nagaland, NERCORMP, TISS Guwahati, and WWF-Assam. We also thank Director, Northeastern Space Application Centre-Shillong, Nagaland GIS & RS Centre, Department of Rural Development-Nagaland, Deputy Commissioner and Administration-Mokokchung District for their support to implement EPRIS, and Additional Secretary, Tribal Welfare Department-Government of Tripura for their support in our initiatives.

In Maharashtra, we would like to thank the Dept. of Employment Guarantee Scheme, Departments of Forest, Agriculture, Water Resources and Rural Development-Government of Maharashtra, State Rural Livelihoods Mission, District Administration-Yavatmal, DILASA, AFARM, Rashikashraya, Vikas Ganga, GSMT, CTARA-IIT-Mumbai, Savitri Jyotiba Phule College of Social Work-Yavatmal, Paani Foundation, NAAM Foundation, Dilip Gode and Mohan Hirabai Hiralal.

In Himachal Pradesh, we thank Environics Trust.

We would also like to thank the village communities of project areas, families of the staff members, and many individuals and organisations who have been associated with us over the years and have provided encouragement and support to our endeavours, and whose names do not find mention here.

The Staff

COORDINATION OFFICE, ANAND, GUJARAT

Alkesh Patel
Amit S Sindhawa
Anandkumar Biswas
Anil Sarsavan
Anita Khristi
Apoorva C Bishwas
Ashish B Contractor
Ashok M Jani
Bharatbhai Patel
Bipinbhai P Vankar
Brajesh Kumar Dubey
Dallubhai L Vasawa
Dinesh Reddy
Gagan Bhatia
Hemantkumar K Patel
Himani Sharma
Jagdeesh Rao Puppala
Jashvant Dhameliya
Jayasree Sreenath
Kaja Tejaswini
Kalpesh P Bhoi
Kunal Shah
Liya Bensy Thomas
Maheshkumar Jadav
Manish M Parsania
Mayuri A Parekh
Minity Skaria
Mitesh M Tandel
Neeraj Tripathi
Rahul Chaturvedi
Rajaram Gupta
Rajesh Kumar Mittal
Rajesh Verma
Rajiv Nanavati
Rama Ramnathan
Ranjit K Mohanty
Robin Mathew
Samir Uday Fanse
Sanjay Joshie
Sanjay Parmar
Sanoop V
Satish Macwan
Sayanangshu Modak
Sham Vaman Davande
Subrata Kumar Singh
Sudhakar C
Sunilkumar J Parmar
Sushant Agarwal
Vaishnavi Singh Rathore
Vijayalakshmi A Kumar
Vinita Rodrigues
Vishalkumar Barot
Vishnubhai Patel
Yogeshkumar G Patel

FIELD TEAMS

ANDHRA PRADESH

Ameer Basha Shaik
B Chengalva Prasad
C S Saneesh
Dhanasekaren V
E Sahadevan
G Sankar
K P Sree Ramulu
Manisudha K
N Daniel
Narasimharao S
P K Prabhakar
P Ubedulla Khan
P Gangi Reddy
Raksha Balakrishna
Ramesh Babu Bethi
S Sudheer Kumar
S Vijaya Sekhar
Shreerang K Hegde
Snehesh K.D
Soumya Bhat
Sreenivasulu Pulundala
Subbireddy Gudla
Umamaheshwara Rao
V Ranga Swamy
Venkat Raj Dyda

GUJARAT

Ashok Kumar Dangar
Baghabhai R Khant
Chetana Nand Jha
Devabhai Gambhalya
Dinkarbhai B Panchal
Ishwar T Sargara
Karansingh Bhuria
Manabhai Damor
Pratap Singh
Sanjay Khandhar
Shamji K Dama
Sureshkumar Mahavar
Vikramsinh Solanki

KARNATAKA

Avinash Chowdhary
C Narayanaswamy
C Sowbhagya
Chandrasekhar Kannan
D R Suresh
G B Leelavathi
M Uthanna
Muniraja M
Nikhatparveen M Khatib
P Vijay Kumar
S G Gopi
S Venugopal
Sahana Srinath
Shilpa S Nalavade
Shivaraja Shetty
Sunil Kumar V V
Y N Narashimappa

MADHYA PRADESH

Abhisek Panda
Alok Vishnoi
Amar Singh Kusare
Anoop Kumar Thakur
Dheeresh K Namdeo
Ganesh P Singroure
Ishan Agrawal
Kavita Suresh
Keertan Baghel
Mithun Bisen
Mohammed Ayub Khan
Padma Uttam Uike
Pradyumna K Acharya
Puneet Shukla
Rajesh Kumar Yadav
Ramkumar Yadav
Rodrick Foster John
Sachin Dubey
Samson David
Suhas K S
Suryasing Soren
Swapnil Ganvir
Umesh Kartikey

MAHARASHTRA

Abha Joglekar
Dinesh B Hundekar
Govind A Pednekar
P Sreehari
Santosh Nathu Pawar
Satyajit Jena
Vishal Tulsiram Chavhan

NORTH-EAST

Ningduanguangliu P
Tapas Das
Yarana Jit Deka

ODISHA

Anand Chandra Pati
Ashok Satpathy
Ashwini Pati
Barna Baibhaba Panda
Bibhudendra Dehury
Bijay Kumar Toppo
Bikash Das
Binoy C
Dawa Pemba Sherpa
Dhirendra Kumar Sahoo
Dilip Kumar Khosla
Dron Kumar Chandrakar
Dushasana Mahanta
K Murali Krishna
Kartik Chandra Prusty
Laxmidhar Pradhan
Mashkoor Alam Khan
Mayadhar Mishra
Meena Das Mohapatra
Naresh C Pradhan
Niranjan Sahoo
Nirmalendu Jyotishi
Pradeep K Maharana
Pradeep K Mohanty
Pradip Kumar Mishra
Prativa Mohapatra
Raghuram Muthai
Ranjan K D Samant
Swapnasri Sarangi
Trinath Guntha

RAJASTHAN

Abhijeet Kumar
Alka Tirkey
Aman Jain
Amit Chourey
Amrit Pal Singh Kalra
Anita Kumari
Ankur C Bodalker
Arjun Ameta
Arun Sharma
Arvind Kumar Uikey
Asha Cholaviya
Bandana Sambyal
Bharat Singh Udawat
Brij Kishor Sharma
Chetan R Dubey
Devendra Kathat
Dhanna Singh Rawat
Dibyendu Mondal
Dileep Singh Solanki
Dimpal Kumari
Fateh Lal Bheel
Gajendra Kumar Kalal
Garima Mishra
Gautam Bhargava
Girdhari Lal Verma
Giriraj Prasad Kumawat
Hariram Garasia
Harnath Singh Khadiya
Heera Lal Seevna
Kailash Chandra Balai
Kanha Ram Gujar
Kesu Lal Meghwal
Kuldeep Singh Khadia
Kumar Rupam
Laxmanbhai Cholaviya
Laxmi Lal Suthar
Mahesh Chandra Lohar
Mayur Vaishnav
Mitthan Lal Sharma
Muhammad Zuber
Narayan S Chundawat
Narendra Kumar Pandey
Narendra S Shaktawat
Pankaj Pancholi
Parmeshwar Lal Regar
Pawan Atkari
Prakash Sharma
Pratiti Priyadarshini
Prince Vaseem
Raghunandan Bairagi
Rajesh Ranjeet Tete
Ramesh Patel
Ramjas Sharma
Ranjeet Lal Rebari
Rupendra Singh
Sahyog Tiwari
Shailendra Sharma
Shambhu Lal Verma
Shantanu Sinha Roy
Sohan Lal
Sunil Kumar
Suresh C Parashar
Sushil Oraon
Tejendra Kumar Meena
Umesh Paliwal
Vaibhav Trimukhe
Veerendra S Deshwal
Veerendra S Rathore
Vijay Prakash
Vikash Kumar

As on 31st March 2018

Mark Katzman

Contacts

FES

FOUNDATION FOR ECOLOGICAL SECURITY

PB No. 29, Anand 388 001, Gujarat, India
Tel: +91 (2692) - 261402 / 261238 / 260537
email: *ed@fes.org.in*
www.fes.org.in

COORDINATION OFFICE

ANAND
PB No. 29, Anand - 388 001,
GUJARAT

Contact: Jagdeesh Rao
Tel: +91 (2692) - 261303 (O)
email: *ed@fes.org.in*

Contact: Sanjay Joshie / Dinesh Reddy
Tel: +91 (2692) - 261402 / 261238
sanjayjoshie@fes.org.in /
dinesh@fes.org.in

Courier Address
Foundation for Ecological Security
C/o. First Flight Courier Ltd,
UG-02, Shivashray Complex,
Nr. Laxmi Cinema, Subhash Road,
Anand - 388 001

NEW DELHI OFFICE

Contact: Neeraj Tripathi
Tel: 011 - 26713525 (O),
(M) 07046702872
IDA House, Sector - IV, R K Puram,
NEW DELHI - 110 022
delhi.fes@ecologicalsecurity.org

REGIONAL OFFICES

ARAVALI REGIONAL OFFICE (WEST)
Contact: Shantanu Sinha Roy
Tel: 01482 - 264470 (O),
(M) 09460376236
A-160, Near Subhas Nagar Sr. Sec.
Govt. School, Subhas Nagar,
Bhilwara - 311 001,
RAJASTHAN
aravalicell.fes@ecologicalsecurity.org

PAPAGNI REGIONAL OFFICE (SOUTH)
Contact: P K Prabhakar
Tel: 08571 - 231014 (O),
(M) 09493364772
16/620-B, 1st Cross, Seshappathota,
Madanapalle - 517 325,
ANDHRA PRADESH
papagnicell.fes@ecologicalsecurity.org

REGIONAL OFFICE – EAST
Contact: Meena Das Mohapatra
Tel: 0674 - 2554498 (O),
(M) 09437232123 / 09437576223
1/1, Shreemaa Enclave, Plot No. N-2/43,
IRC Village, P.O. Nayapalli,
Bhubaneswar - 751015, Dist. Khordha,
ODISHA
rceast.fes@ecologicalsecurity.org

REGIONAL CELL – NORTH-EAST
Contact: Tapas Das
Tel: 0361 - 2669922 (O),
(M) 07576032328
House No. 13, J. Baruah Road,
Guwahati Club,
Guwahati - 781 003,
ASSAM
northeast.fes@ecologicalsecurity.org

ANDHRA PRADESH

MADANAPALLE
Contact: P K Prabhakar
Tel: 08571 - 230300 (O),
(M) 09493364772
16/620-B, 1st Cross, Seshappathota,
Madanapalle - 517 325
madanapalle.fes@ecologicalsecurity.org

GUJARAT

DAHOD
Contact: Chetana Nand Jha
Tel: 02673 - 220768 (O),
(M) 09427309208
2nd Floor, Anand Bhavan, Chakalia Road,
Dahod - 389 151
dahod.fes@ecologicalsecurity.org

KARNATAKA

CHINTAMANI
Contact: P Vijay Kumar
Tel: 08154 - 290690 (O),
(M) 09449856526
1-2342, N.R. Extension,
Behind Sri Raghavendra Swamy
Temple,
Chintamani - 563 125,
Dist. Chikkaballapur
chintamani.fes@ecologicalsecurity.org

MAHARASHTRA

YAVATMAL
Contact: Satyajit Jena
Tel: 07232 - 242015 (O),
(M) 08605102886
1st Floor, House No A-6, Siddhesh
Nagar, Near R.K.S. School, Raut Nagar,
Yavatmal - 445 001
yavatmal.fes@ecologicalsecurity.org

MADHYA PRADESH

MANDLA
Contact: Ishan Agrawal
Tel: 07642 - 260218 (O),
(M) 09425163681
Behind Sidh Motors,
Mridu Kishore Colony,
Mandla - 481 661
mandla.fes@ecologicalsecurity.org

ODISHA

ANGUL
Contact: Swapnasri Sarangi
Tel: 06764 - 230610 (O),
(M) 09437030173
5th Lane, Amalapada,
Angul - 759 122
angul.fes@ecologicalsecurity.org

KORAPUT
Contact: Bijay Kumar Toppo
Tel: 06852 - 250203 (O),
(M) 09437496208
Kanheiput,
Koraput - 764 020
koraput.fes@ecologicalsecurity.org

RAJASTHAN

BHILWARA
Contact: Alka Tirkey
Tel: 01482 - 264470 (O),
(M) 09829778705
A-160, Near Subhash Nagar Sr. Sec.
Govt. School, Subhas Nagar,
Bhilwara - 311 001
bhilwara.fes@ecologicalsecurity.org

UDAIPUR
Contact: Girdhari Lal Verma
Tel: 0294 - 2453419 (O),
(M) 09414786825
18, New Ahinsapuri, Opp. Jyoti School,
Fatehpura,
Udaipur - 313 001
udaipur.fes@ecologicalsecurity.org

PRATAPGARH
Contact: R N Patel
Tel: 01478 - 221570 (O),
(M) 09414651080
8, Siddhivinayak Colony,
Near Nakoda Nagar, Arnod Road,
Pratapgarh - 312 605
pratapgarh.fes@ecologicalsecurity.org

Our Funders

We are thankful for the support of funding agencies:

Omidyar Network, Sir Dorabji Tata Trust & Allied Trusts, Hindustan Unilever Foundation, Axis Bank Foundation, Axis Bank Limited, HCL Foundation, Bajaj Auto Limited, Azim Premji Philanthropic Initiatives Pvt Ltd, Skoll Foundation, RSF Social Finance, Mulago Foundation, Bharat Rural Livelihoods Foundation, The National Bank for Agriculture and Rural Development (NABARD), NABARD-Watershed Development Fund, NABARD - Indo-German Watershed Development Programme, NABARD - Tribal Development Fund, NABARD - Climate Proofing (KfW), NABARD - Sustainable Development Plan, ITC Ltd. (Mission Sunehra Kal), ITC Rural Development Trust, RBS Foundation, National Remote Sensing Centre (NRSC), Ford Foundation, Grow-Trees.com, SayTrees Environmental Trust, International Food Policy Research Institute (IFPRI), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Collectives for Integrated Livelihood Initiatives (CInI), Bengal Finance and Investment Private Limited, Centre for microFinance (CmF), International Land Coalition, The Energy and Resource Institute (TERI), NASSCOM Foundation, The Duleep Matthai Nature Conservation Trust, Rajasthan Forestry and Biodiversity Project, Watershed development projects under Integrated Watershed Management Programme (IWMP) in Andhra Pradesh, Gujarat and Rajasthan, and programmes of various government departments of Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Odisha and Rajasthan, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), The International Rice Research Institute, World Resources Institute, India Development Services, Bioversity International, Washington University in St. Louis, Boston College, The Regents of the University of Michigan, The David and Lucile Packard Foundation, New York University, The University of IOWA, U.S. Forest Service - International Programs, Columbia University, and United Nations Development Programme.

We are members of:

United Nations Economic and Social Council (UNECOSOC) – Special Consultative Status

International Association for the Study of the Commons (IASC)

International Union for Conservation of Nature

International Society for Ecological Economics

International Land Coalition (ILC)

Indigenous Peoples' and Community Conserved Areas and Territories (ICCA) Consortium

International Forestry Resources and Institutions

Rainfed Livestock Network

Indian Society for Ecological Economics

National Consortium on NREGA

Future of Conservation in India Network

We are grateful to Mark Katzman, Hilary Skirboll, Nicolas Therin, Paul Matthew Nordmann, Gabriel Diamond *and* Maggie Katzman *for contributing their wonderful photographs.*

Design & Print: IMAGINE (Tel: 022-66765106 / 09821173244)

Nicolas Therin

Mark Katzman

FES

FOUNDATION FOR ECOLOGICAL SECURITY

PB No. 29, Anand 388 001, Gujarat, India.
Tel: +91 (2692) - 261402 / 261238 / 260537
email: *ed@fes.org.in* www.fes.org.in