FES

FOUNDATION FOR ECOLOGICAL SECURITY

Annual Report 2015-2016

Contents

Arpit Deomurari

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, 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;

WORKS for and promotes stability of the ecosystems through protection and restoration of biological diversity, including the diversity of species, age diversity, genetic variability as well as that of structural composition;

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.

COVER: Millipedes are slow-moving detritivores that feed on decomposing vegetation, feces, or organic matter, much like earthworms. They break down dead plant material, thus increasing the surface area for the bacteria and micro fungi to contribute to the process of decomposition and the recycling of nutrients.

Cover Photo: Arpit Deomurari

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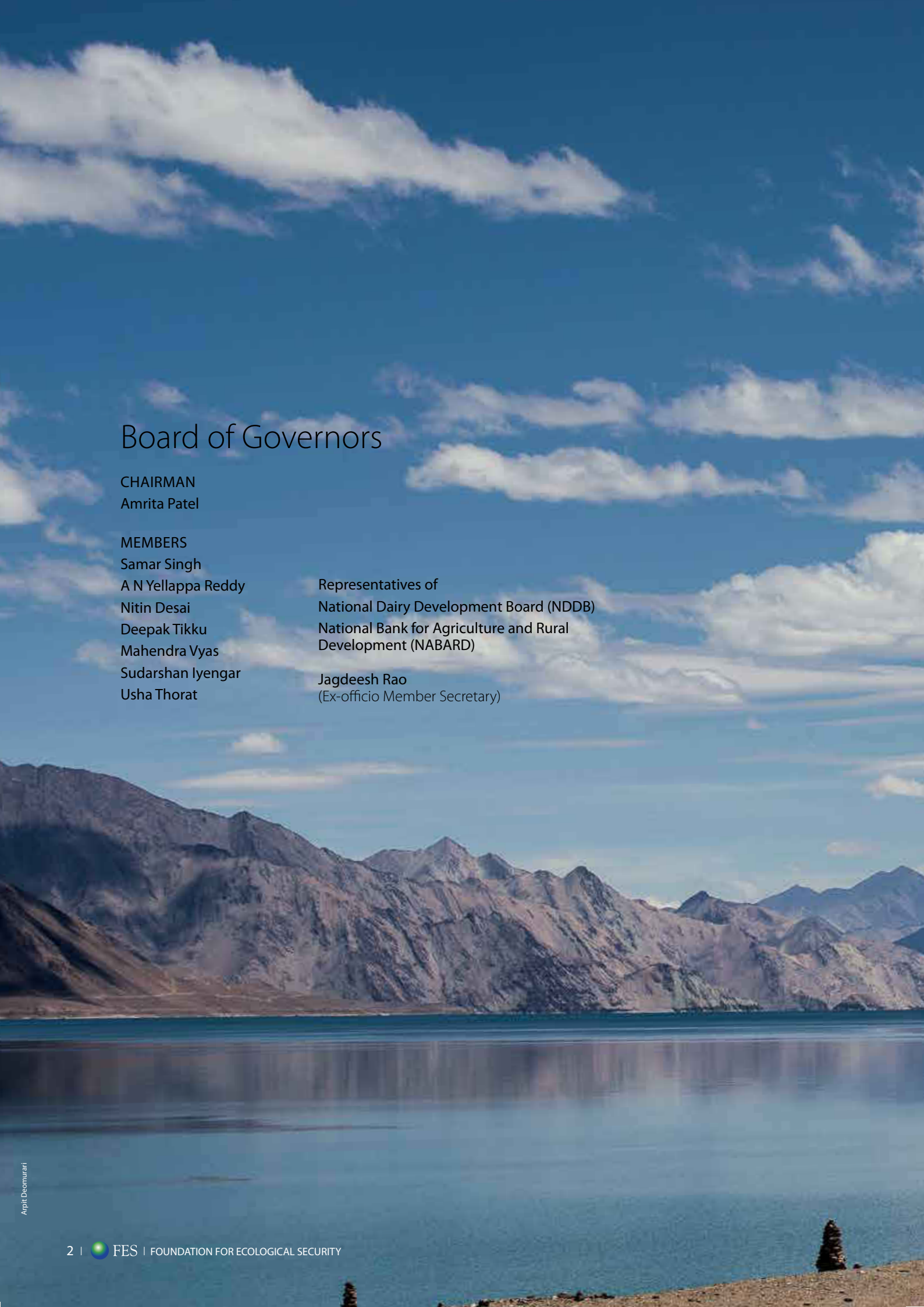


Arpit Deomurari

Our Organisation

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.

The Foundation strives for a future that is based on a holistic understanding of the principles that govern the inter-relationships of various life forms and natural systems. By working on systemic issues that can bring about a multiplier change, we look forward to a future where local communities determine and move towards desirable land-use practices based on principles of conservation and social justice.

The FES Signature

The Foundation for Ecological Security (FES) highlights ecological pre-eminence as the bedrock of sustainable development and reorients the worldview on 'progress' from a perspective of nature conservation and social justice.

FES repositions the dominant views of 'rural development' by embedding' nature and natural processes' as fundamental elements of rural infrastructure and, secondly, community-led collective action as a critical space in the governance of shared natural resources such as forests, pastures, and water bodies.

FES embeds three fundamental tenets in its approach to sustainable natural resource management – nature's potential to heal itself; secure tenure over shared resources; and community institutions for self-regulation. Working with Panchayats and local institutions as partners, FES helps decentralise environmental management and demonstrates strength of local communities to collaborate and deploy local knowledge to cost-effectively manage complex problems.

FES assists villagers on the pathways to gaining communal title to the land and helps unlock government resources to support environmental improvements (e.g., checking soil erosion and water runoff, habitat restoration). Such efforts expand to neighbouring villages to cover a landscape and draw from the advantages offered by natural (e.g., hydrological and nutrient flows) and social boundaries (e.g., marriage radii, affinity groups) that usually go beyond a village.

FES collaborates with leading national and international universities and research institutes to improve rigour in its engagement with village communities, while drawing scientists to the challenges and aspirations emerging from the ground.

FES has a rich repository of spatial and non-spatial information that is used for evidence-based context-specific planning, implementation, and monitoring on nature conservation, natural resource management, and other rural development activities.

FES works from local to national level and is well positioned to feel the pulse on the ground, undertake comparative assessments, and spread good practices across geographies. FES works with state and national government officials to enact and implement policies and programmes and influence wider replication.

In India, FES has played a pioneering role in furthering the concept of Commons both as an effective property regime of local governance and shared resource systems as an important economic asset of the poor as well as a repository serving critical ecological functions.

Arpit Deomurari

Kumar Rupam

Women's World Summit Foundation Prize for Women's Creativity in Rural Life

Women's World Summit Foundation (WWSF) is an international non-profit NGO serving the implementation of women and children's rights and the UN development agenda. Smt. Kesi Bai, from 'Sanjadi ka Badiya', one of the villages FES works with in Bhilwara, Rajasthan, was one of nine International Laureates to receive the prestigious 'WWSF Prize for Women's Creativity in Rural Life' in October 2016. The Prize honours women and women's groups around the world exhibiting exceptional creativity, courage, and commitment towards improving the quality of rural life.

Taking on deeply entrenched gender biases, Kesi Bai's work as the elected head *(Sarpanch)* of her village has transformed the way both men and women think about gender equality in the region. Kesi Bai says of this change, "Earlier, we were not allowed to sit on the *hatai* (a raised platform traditionally reserved for men during village meetings) and had to walk barefoot carrying our slippers near the *hatai*, but today we sit alongside the men."

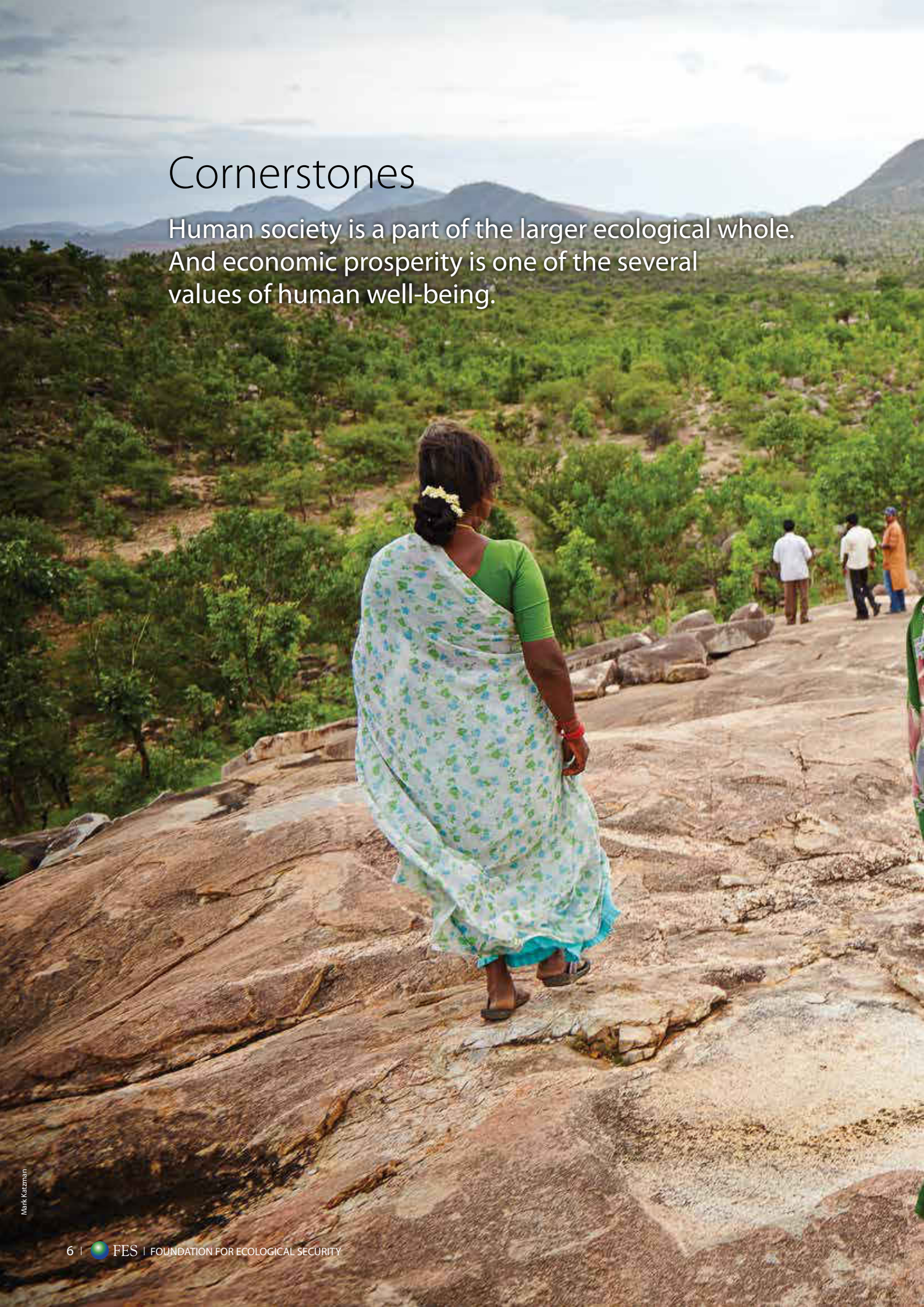
In this drought-prone and livestock-dependent region, Kesi Bai's mobilisation efforts have enabled women's groups in the village to restore and manage 173 acres of pasture land, and have had an enduring impact in the region.

"I am very happy and honoured to have received the 2016 WWSF Prize. I would like to use the prize money to install fans in the local school building, and also towards repairs in the village grazing land."

Smt. Kesi Bai
(21st October, 2016)

Cornerstones

Human society is a part of the larger ecological whole. And economic prosperity is one of the several values of human well-being.



Mark Katzman

Mark Katzman

Do we,

- realise that most natural endowments are finite?

- agree that all human beings are equal?

- believe in inter-generational responsibility?

A dominant notion that delinks Nature and People and relies excessively on centralised or individualised approaches for governance of shared resources, contributes to the widespread degradation of natural surroundings.

Mark Katzman

Acute degradation of shared natural resources, such as forests, pastures, and water bodies has led to grave social and economic consequences, particularly for today's rural society whose livelihood and growth are inextricably linked to the health and productivity of natural resources. World over, the management and governance of shared natural resources rely excessively on centralised approaches; although now there is growing evidence of the capabilities of rural communities to self-govern shared resources in a cost-effective manner. At another level, the debate on viewing Nature and People as separate systems is making way for a new 'socio-ecological' way of thinking that links the two; hence, offering scope to address nature conservation, social justice, and economic opportunities together.

FES advocates for the centrality of ecological and social value creation for the economic well-being of rural communities. The three fundamental dimensions that FES builds on are:

Ecological Restoration

Conserving, restoring, and managing shared natural resources such as forests, land, and water.

Local Governance

Advancing self-governing capacity of rural communities and mobilising local institutions to promote inclusion and participation in collective decision-making.

Enhanced Livelihoods

Improving the economic opportunities of communities directly dependent on natural resources, the poor in particular, and assisting communities to tailor their consumption of natural resources to suit the ecological capacity of the area.

Ecological Restoration

Rapid loss of biodiversity, acute water scarcities, failing soil health, and receding natural forests are some of the most critical problems facing the world.

Ecological security is the bedrock of sustainable development and is also fundamental to economic and social well-being.

Restoration of India's 74 million acres of so-called "wastelands" could significantly contribute to our NDCs for Climate Action, besides serving critical ecological functions.

FES predominantly works in areas where there is a preponderance of common lands, operating across diverse landscapes such as forests, scrublands, grasslands, farm fields, and water bodies. We work in areas where there is widespread degradation of natural resources, which adds distress and instability to vulnerable rural livelihoods.

In restoring degraded lands and stressed ecosystems, our efforts are to emulate natural processes. We assist rural communities to draw up conservation plans to improve soil health and water regime and measures aimed at improving biodiversity and biomass to restore habitats. While doing so, we help them integrate their local knowledge and practices with the knowledge and views that others bring in by creating interactive platforms for them.

Alongside, FES helps build debate on ecological thresholds through assessments aimed at availability and use of biomass and water. In turn, this triggers corrective action on imprudent practices such as growing water-intensive crops in dryland areas and extracting forest produce beyond regenerative capacity. Such measures have led to significant improvements in soil health, groundwater levels, biomass productivity, and biodiversity – and therefrom, to extended area under cropping, as well as increased crop productivity and availability of fodder and water.

Bharat

Mark Katzman

Local Governance

FES builds on existing social infrastructure to strengthen local self-governance institutions, whose key features are representation of all residents, including marginalised groups such as women and the poor, in managing and benefiting from shared resources; collective decision making; and defined roles and responsibilities as a community. To ensure constitutional recognition, these institutions are nested within the elected Panchayats and Gram Sabhas.

FES assists rural communities secure legal rights to access, improve, and manage their common lands and water bodies, which enables village communities to invest in restoring and safeguarding resources such as forests, pastures, and water bodies. It also helps keeping in check individuals from appropriating the access and benefits at the cost of collective good.

Connections are established amongst neighbouring villages by identifying natural (sharing of water, pastures, or forests) and social affinities (kinship, marriage, or occupation), thus extending collective action over a landscape. These groups of local communities play a critical role in engaging with local government officials in gaining title to the common lands and accessing resources to finance environmental improvements (such as checking soil erosion, water runoff, habitat restoration, etc.).

By building platforms for exchange of information, views, and resources at a local level, we also promote a larger stewardship for governance of natural resources by bringing together representatives of communities, government personnel, NGOs, and interested citizens.

Across the globe, widespread degradation of shared natural resources negatively impacts about 1.2 billion people who depend on them.

Decentralised governance of shared resources with secure tenure and robust village institutions frees governments to focus on land-use planning and regulatory functions.

The Prime Minister's promise of 'Minimum Government, Maximum Governance' points to the need for greater devolution to Panchayats and community institutions.

Enhanced Livelihoods

World over, opinions continue to differ on whether conservation of nature contributes to poverty alleviation or the other way round.

'Infrastructure' that is fundamental to rural economy includes natural assets like soil, water, nutrients, biomass, and biodiversity, as well as social fabric and collective action.

A landscape approach provides ample scope to restore ecosystems, engender collective self-regulation, and improve economic opportunities.

FES aims at promoting livelihood options that are ecologically sound, socially just, and economically rewarding. Efforts are made to spread the understanding that natural infrastructure, such as soil, water, nutrients, biomass, and biodiversity, is fundamental to the viability of farming systems.

Our focus is on making livelihoods more secure and resilient by reviving the natural processes of ecosystems, thus bringing a range of benefits to villagers, such as improved food production, reduced expenditure, and multiple sources of income generation.

Collective action inherent in village life is a key part of social infrastructure, which is the bedrock of local self-governance. Improved collective action leads to cost-effective management of natural resources, effective use of public investments, improved leadership, and reduced conflicts – which together translate into significant economic benefits at local and national levels.

Mainstream approaches to strengthening rural livelihoods do not necessarily include deliberations around the threshold limits of ecosystems among communities, causing unsustainable exploitation of resources. FES helps build debate with local communities in choosing livelihood pathways that are sustainable. Moreover, the interventions conceived are designed to suit local ecological and social contexts as against having one prescription for diverse settings.

Mark Katzman

Mark Katzman

Yaraslau Dzia

Our Approach

A 'systems view' builds on relationships and reciprocities between Nature and People – ecological, social, and economic domains; forests, land, and water resources; and agriculture, and livestock production.

Mark Katzman

Arpit Deomurari

Are we,

- missing the wood for the trees?
- building on local democracies?
- furthering a blueprint approach?

A sectoral focus coupled with a top-down approach might compromise on the potential benefits of a systems view and the latent wisdom of society. And what is rural development if it does not build on the backbone of society?

Jagdeesh Rao

Common pool resources such as forests, pastures, and water bodies, when managed as common property, provide a unique opportunity to work on reducing poverty and inequalities, and promoting ecological health – together transforming rural areas.

However, the work on Commons faces many challenges – a mindset that sees Nature and People as separate systems, a property system that relies either on individual or government ownership, and a force that values economic growth over ecological footprints. In this scenario, FES' approach is twofold – promoting Commons as a paradigm for ecological governance, and a 'socio-ecological' understanding to appreciate coexistence of various life forms.

FES' practice embeds three fundamental tenets: harness nature's potential to heal itself; secure legal rights over shared resources; and engage in self-regulation through community institutions. FES builds on natural, social, and cultural landscapes, in contiguous villages, following a range of hills or the flow of streams. FES helps strengthen the inherent institutional fabric of village communitarian life to add a democratic character, and supports platforms across villages to deliberate on inter-village issues. To enable communities build sounder long-term conservation plans, FES helps map and inventory resources and shares context-specific data backed by scientific ecological assessments, which helps communities appreciate the threshold limits of natural resources. FES assists village communities leverage the much-needed public investments to repair degraded ecosystems and position them as durable community assets.

Forests in a Landscape

Forests play critical ecological functions and provide valuable services, such as sheltering rich biodiversity and absorbing harmful greenhouse gases. They lend resilience to nearby farming systems and local livelihoods, and also offer hydrological supplies to remote cities. It is thereby critical to view forests as part of the larger physical, social, and economic landscape rather than in looking at them in isolation. Such a bird's-eye view helps plan for judicious land-use with areas marked out for preservation, conservation, and exploitation. It is also important to plan institutional arrangements that would strengthen local stewardship and project the economic contribution of forests to farm economies.

Our efforts are directed towards linking systemic drivers (soil, moisture, nutrients, biomass, and biodiversity) with different components of landscape (forest, common lands, and water) and associated production systems (agriculture, livestock-keeping, and fisheries).

Connecting forests to other production systems leads to a larger stewardship of forest conservation and an institutional apparatus that cuts across villages as well as forests, land, and water, as well as agriculture and livestock sectors, thus linking forests to farm economies. When such an apparatus is fortified with sound information and exchange platforms between local communities and administrative and scientific bodies, then the much-needed landscape-level collaborative action is possible. To advance understanding on the linkages between forests and farming systems, we build platforms to bring together rural communities, academia, government officials, and development practitioners.

Mark Katzman

Rajasthan: In collaboration with United States Forest Services, a regional workshop on 'Forests within a Landscape: Connecting Forest and Farming Systems' was organised as a platform for academia, government officials, and development practitioners to build a larger farmer constituency for conserving forests.

Bhilwara (Rajasthan): Pollinator surveys in Kalyanpura watershed show that bee populations are comparatively higher in farmlands closer to common lands, and that hedgerows on farmlands and large trees, often within villages, act as nesting sites for bee species.

Dahod (Gujarat): Conservation efforts by communities on degraded forest land were recognised, and 9 villages received Community Forest Rights, thereby encouraging communities to conserve 5,500 acres of forest land that form the upper reaches of their farmlands.

Mokokchung (Nagaland): Inspired by the impact of Community Conserved Areas further upstream, collective mobilisation in an additional 14 villages along the banks of Dikhu river resulted in framing 'improved river ecology' as the conservation objective of collectively managing forests.

Chikkaballapur (Karnataka): Conservation action of 4 villages to protect 1,350 acres of Yerrakonda forest range, home to threatened floral species, is fulfilling critical requirements for fodder and water for livestock from 12 neighbouring villages in adjoining Andhra Pradesh as well.

Chittoor (Andhra Pradesh): Studies reveal that implementation of NREGS and introduction of improved cooking stoves in local eateries is weaning households off the practice of harvesting fuelwood for sale, resulting in perceptible biodiversity improvement in Sadhukonda Reserve Forest.

Farming and Farming Systems

India's diverse topographies, agro-ecological conditions, farming systems, cultures, and populations face severe crises from widespread ecological degradation and poverty.

The dominant trend of increasing incomes from agriculture disconnects farming from its larger farming system, which is connected to other natural resources, such as forests, pastures, and water, the symbiotic nature of livestock and agriculture, or the use of surface and groundwater with agriculture. Moreover, attempts at increasing farm productivity are not differentiated for diverse geographies, resulting in a 'one size fits all' approach often to the detriment of soil health, water resources, and biodiversity and the long-term viability of farm economies.

Rainfed areas constitute 60% of sown area in the country. Of these, dryland areas produce about 44% of the annual food production and meet the food requirements of 72% population. Majority of FES' work spreads across geographies where water scarcities, failing soil health, and distress agriculture are common.

The focus of FES is to position farmers' decision making at a farming system level by integrating common land and water bodies to the farm and connecting crop-livestock interfaces. This helps capture the benefits of biodiversity and flow of nutrients and water from beyond the farm as well as triggers thinking of sustainable consumption at a systems level.

Other approaches are to promote diversified cropping strategies and less water-demanding crops so as to increase income under favourable rainfall conditions – or at least reduce expenses in drier seasons.

Mark Katzman


Rajasthan: Successful trials on improving soil microbial action using locally available resources have paid off with farmers reporting good yields, superior quality of produce, and improved moisture-retention capacity of soil, thus encouraging farmers to expand the area and neighbouring villages to join.
Mahisagar (Gujarat): Community institutions meant to conserve forests are now taking up widespread action on improving agricultural yields from maize. Periodically convened by local institutions as farmers' fairs, these enable dialogue between farmers, NGOs, research bodies, media and government functionaries on issues including soil health, crop varieties, livestock, pastures, and government programmes.
Mandla (Madhya Pradesh): Instead of constructing new dams, repairing the defunct dams by providing sluice gates and helping draw rules for sharing and maintenance have resulted in bringing in 785 acres of farmland under assured irrigation at minimal costs.
Karnataka: Revolving funds set up by village institutions, with initial provision for seed and agricultural inputs to farmers and subsequent reflows returning to the common fund, has helped multiply reach as well as build collective action and accountability.
Koraput (Odisha): Having brought the upper forest reaches under community management, the village communities used gravity to guide the improved water flows to support additional irrigation and bring new areas under irrigation. Improvising on cost reduction, adjoining villages are replicating on their own.
Andhra Pradesh: Attempts to build debates on water consumption through experimental games are showing promising leads, such as viewing groundwater as Commons, and resulting in discussions on less water-demanding crops and sharing of tube wells.

Working with Panchayats

Panchayats and Gram Sabhas (in Scheduled Areas) have constitutional recognition for governing shared natural resources. Moreover, substantial public funds directed towards village development, such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), offer scope to build organisational capacities of Panchayats and restore degraded natural resources. Unless village-level development includes improving the character and capacities of Panchayats, the very bedrock of India's democracy will remain weak.

In many states, Panchayats charged with restoring natural resources constitute several villages/habitations, which distances them from their interests. Hence, smaller institutions such as Grazing Land Committees or sub-committees of Panchayats are better suited for managing resources at village level. This provides scope to draw on the strengths of both arrangements – smaller institutions for their dialoguing at village level and Panchayats for providing official sanction and tending to inter-village issues.

FES assists Panchayats and village institutions to articulate their local development perspectives, draw up structured action plans, and devise systems based on customary resource-use. We help build a cadre of community youth to assist Panchayats and subsidiary institutions in drafting ecologically-sound, socially-just development plans, and in implementing government and other ongoing programmes.

Alongside, we promote multi-actor platforms where representatives of Panchayats, local communities, government personnel, NGOs, academicians, and interested citizens at block-level come together to deliberate on issues related to the judicious use of natural resources.

S S Roy

Ajmer (Rajasthan): Sustained efforts in supporting 240 Panchayats across the district have resulted formation of 1,017 pasture land sub-committees under the Panchayats. The sub-committees have identified and developed plans for restoring 105,237 acres of pasture lands under MGNREGA and have mapped boundaries for 17,500 acres.

Gujarat: Identified as a resource support agency to impart training on Intensive Participatory Planning Exercises, 935 Panchayats and government functionaries were trained with special emphasis on restoration of common land and water bodies.

Rajasthan: In a campaign mode, 1,500 Panchayats spread across 7 districts passed resolutions to identify, map, and record the common lands in Panchayat assets register and develop plans to restore them under MGNREGA.

Chikkaballapura (Karnataka): In order to effectively use NREGS funds for restoration of Papagni river's catchment area, representatives of Panchayats and Block departments were trained to use mobile handheld devices to determine areas fit for recharge of groundwater, storage of surface water, and natural regeneration of biomass.

Odisha: Following the Government selecting FES as a resource-support agency for developing and conducting training programmes in four districts, 920 representatives of Panchayats and government officials were trained in preparing long-term Panchayat development plans.

Andhra Pradesh: To better understand the influence that various actors have on village priorities and build a multi-actor dialogue platform, 'network mapping' exercises helped identify and determine linkages, levels of influence, and goals of respective actors and the arrangements required for collaborative action.

Tenure over Common Lands

Common lands are rich repositories of biodiversity and contribute majorly to regulating water and nutrient supplies to the lower lands. But common lands have deteriorated by as much as 31-55% over the last half century – for which the key reasons cited are weak or absence of tenurial rights in favour of local communities; erosion of local institutions; and an unfounded view that communities are ineffective managers of shared natural resources.

With rich evidence of community institutions capably managing shared resources, FES assists rural communities in securing tenurial rights over the Commons which includes forests, pastures, and water bodies. These cover not only access, management, and ownership rights but also responsibilities to monitor and prevent unjust use of Commons.

FES engages with state governments to lease revenue wastelands to communities on a collective tenure and long-term basis. Simultaneously, to prevent the diversion of common lands to other uses, we help local communities and Panchayats to map the boundaries of their common lands and enter such lands in Prohibitory Order Books or the Immovable Assets Register at the Panchayat level. In places where the land assigned as pastures is markedly less than the growing or grazing requirements, we assist communities approach governments to increase the extent citing latest livestock census and the legal provisions that allow an upward revision.

In areas where the Forests Rights Act is applicable, we engage with the local tribal communities and administration to file claims for collective rights over forest lands. We assist the communities in preparing managements plans once the rights have been secured.

Avadhoot Khanolkar

Bhilwara (Rajasthan): Availing a government provision where revenue 'wastelands' could be converted to pastures depending on the increase in livestock population, 20 villages applied for conversion of wastelands to pastures.

Gujarat: In a move that would bolster the confidence of local communities to continue to invest in collective management of common lands, the Government renewed the lease of revenue wastelands for an additional 15 years to 10 village cooperatives.

Nagaland: As ownership of community land alone does not provide good environmental and social outcomes, 81 village councils managing 30 Community Conserved Areas are being assisted in demarcating physical and customary use boundaries and preparing conservation plans for 73,000 acres.

Mandla (Madhya Pradesh): As rights over water are usually manifested in terms of access and use at local level, and as local arrangements are mostly eroded, rules and regulations for equitable sharing of common water bodies for irrigation and fishing are being evolved by villages.

Odisha: Assistance provided, in partnership with an NGO, helped 69 villages obtain official recognition of Community Forest Rights over 10,098 acres under Forests Rights Act. In addition to usufruct rights, the villages were also provided with management rights over the community forests.

Odisha: Capacity building and training for revenue, forest, and tribal welfare departments on Community Forest Rights and processes of verification for village community claims resulted in improved turnaround-time and recognition of rights. Trained village cadres helped map Community Forest boundaries using GPS technology for 165 villages in Boudh district.

Rights to Employment and Resources

Annually about INR 300,000 to 400,000 million is spent towards restoring degraded common lands through public investments such as MGNREGA. While these investments are highly necessary to restore the lands, 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. We join hands with various levels of government to conduct publicity campaigns to spread the message of the Commons, as well as inform local communities of the schemes and policies being offered by the governments. In response to these campaigns, we provide information and conduct capacity building programmes so that communities can self-organise themselves.

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 as much as building an appreciation for the dignity of labour.

Shailendrakumar Sharma

Rajasthan: For effective implementation of soil and water conservation measures in water-scarce villages, and to ensure effective worksite management of MGNREGA, 700 women mates were trained in Rajasthan on aspects such as registration of work demand, allocation of work, record keeping, and attendance logging in muster rolls.

Kheda (Gujarat): By innovatively combining NREGA with reclamation of ravines along Mahi river, degraded lands are being brought into productive use to provide good and enduring environmental and social outcomes. Institution building and secure rights over the land could multiply the benefits from MGNREGA.

Rajasthan: Improved implementation of NREGA funds for common land restoration has added to rural incomes and helped reduce migration by minimising fodder costs, and increasing livestock units per household. In Bhilwara, restored common land contributes an average of INR 10,000 to annual household incomes and meets more than 60% of their fodder requirements.

Yavatmal (Maharasthra): Appointed by the Government to facilitate wider MGNREGA awareness, strategies were developed for information dissemination, training, and hand-holding support across the block. The approach resulted in improving demand for employment and employment generation of 5.35 lakh person-days, leveraging INR 123.1 million under MGNREGS in 131 habitations of Ghatanji block.

Andhra Pradesh: Coordinating the Common Pool Resources (CPR)-IWMP programme on behalf of the Government, FES undertook capacity building programmes for government officials and NGO staff and helped them leverage INR 266.51 million for restoring common lands in five districts since 2014.

Chikkaballapura (Karnataka): Using MGNREGA funds to remove silt from the tank bed and funds from Zilla Panchayat to strengthen the tank bund, villagers of Tolapalli improved the storage capacity of their tank to irrigate a command area of 95 acres belonging to 87 farmers.

Strategic Overview

The common mindset reposes poor faith in the capacities of rural people. Our partnership with village communities is founded on mutual respect and is guided by their local wisdom and rationale.

Gabriel Diamond

Mark Katzman

Is our action,

- reflecting rigour of analysis?

- facilitating exchange between knowledge systems?

- influencing positive shift in mindsets?

Mainstream approaches in rural development treat village communities as beneficiaries, not determinants of their own future. Should we not turn the tide and call the 'last mile', the first mile?

Gabriel Diamond

Our strategic action aims at improved management and governance of forest, land, and water resources through coordinated action involving village communities, partner NGOs, researchers, and government officials. Our approaches are aimed at improving engagement with local communities at village and landscape level; enhancing the rigour of our understanding through analytical studies; assisting decision-making by enabling information access; partnering with like-minded organisations; and programmatic action for judicious land- and water-use planning, and connecting communities and decision-makers.

Priority areas are:

Assisting rural communities committed to restoring ecosystems and landscapes in democratising the functioning of local institutions and crafting institutional spaces to safeguard interests of the poor.

Pursuing informed decision-making by building knowledge platforms on nature conservation, natural resource management, land-use and water-use practice, local self-governance and rural development, and making available such information to a range of audiences.

Enhancing the capacities of Panchayat representatives, village communities, government officials, and NGO functionaries to promote local stewardship.

Building a large constituency comprising village representatives, decision-makers, practitioners, academia, civil society, and local elected representatives for promoting local-level dialogue and convergence of interests towards conservation.

Highlighting the value of Commons in rural economy and establishing the critical role of community self-governing institutions for managing shared natural resources.

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 practise experiential and experimental learning methods and are designed to be local centres for exchange of ideas and experiences.

To facilitate capacity building programmes, the *Karyashalas* developed training modules, reference material, and training aids on claiming and securing Commons in vernacular languages. Similarly, training modules have been prepared for Panchayati Raj Institution (PRI) members, MGNREGS Mates, and Wage Seeker Group members to prepare them as para-engineers for the effective use of MGNREGA funds for soil and water conservation.

Building on lessons from the last two years on embedding the training within the ongoing efforts on natural resource management, the Colleges combine strategies of capacity building with mass mobilisation, and align them with government programmes for effective translation of the training to activities on the ground. In 2015-16, the *Karyashalas* conducted 668 training programmes, guiding more than 32,000 village representatives on programmes aimed at restoration of common lands and water bodies, and the effective use of MGNREGA funds.

The range of capacity building programmes include awareness and training on MGNREGA and claiming Community Forest Resource Rights under the Forest Act, alongside planning and measuring activities such as writing books for accounts and preparing watershed development plans. The programmes are segmented into sequential modules and the participants are assigned with field-level tasks to translate their learning to activities and report back on the outcomes. 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. The training programmes are aligned with the activities of a partner NGO or a milk union to ensure their effective application in the area.

Uma Maheshwara Rao

The *Karyashalas* have been mandated with the massive task of mobilising communities at scale for the restoration and management of their common lands through the guided process of repeated capacity building inputs with a community action component over a period of two to three years. We are also exploring the possibility of setting up *Prakriti Karyashala* in the eastern region with a focus on building capacities of partner organisations and rural communities in gaining access to forest commons through the Community Forest Rights.

Village elders take children on 'wisdom walks' to instill appreciation for ecosystem services, their interconnectedness to farming, and the rules that govern collective self-regulation.

Studies and Documentation

Arjun Ameta

Socio-economic and ecological assessment data are collected and analysed together with village communities for developing informed, long-term conservation plans.

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 involve local communities in a search for appropriate solutions, and strengthen their knowledge base for informed community-level actions. These studies, conducted both internally and in collaboration with reputed universities and research institutions, aim to firstly, locate the organisation's work in the larger social, economic, and ecological context; secondly, help design and plan activities that are both contextually grounded and technically rigorous; and thirdly, provide sound evidence of results and impacts over time.

The broad areas covered are:

- Consolidation of economic evidence on the criticality of Common Pool Resources and associated collective action in diverse production systems.
- Development of spatial and non-spatial databases to capture development trends, and longitudinal surveys to assess ecological, economic, and social changes at household, village, and landscape levels.
- Measurement of changes in biodiversity, biomass, soil, and water resources through a 'biophysical monitoring framework' to assess ecological health and conservation actions.
- Understand interactions between human and natural systems through a socio-ecological systems framework, and developing tools and techniques to guide conservation action based on better comprehension of the systems and underlying drivers.
- Analyses of institutional arrangements for local governance of natural resources at village and inter-village levels.
- Development of tools and methods for advancing community engagement.
- Analyses of biophysical processes in ecologically-important areas, such as sanctuaries and wildlife habitats, to help develop appropriate conservation plans.
- Understand the implications of climate change and mapping community-level institutional adaptations to climate-induced vulnerabilities.

Documentation

Ecological Health Monitoring: Based on a comprehensive Ecological Health Monitoring (EHM) framework to monitor and study ecological changes over time, we continued monitoring exercises in three selected watersheds in Rajasthan, Andhra Pradesh, and Odisha. During the year, we assessed changes in biomass, biodiversity, soil nutrient status, carbon sequestration, and land-use and land cover over the last six years in one of the watersheds and also assessed pollinator diversity and habitats to understand their role in crop production.

Improving Understanding of Human-Nature Interaction: Continuing to improve our understanding of how local communities address collective action problems for management of forest and common lands, track changes in social and ecological conditions over time, value ecosystem services, and interpret the role of secure tenure rights for better governance, studies were undertaken using the International Forest Resources and Institutions (IFRI) protocol and Natural Resource Accounting System (NRAS) in around 20 sites in Rajasthan, Madhya Pradesh, Andhra Pradesh, and Karnataka.

Tools for Strengthening Community Engagement: In collaboration with International Food Policy Research Institute (IFPRI), Arizona State University, and University de los Andes, we continued efforts to develop a repertoire of experimental games on governance of common lands and water resources for promoting collective action at village level and exploring behavioural changes. Building on our collaborative work with Washington University in St. Louis on Community-Based System Dynamics, we engaged with communities who were developing village-level perspective plans to create a process manual to equip practitioners in identifying the dynamic problems, feedback structures driving the dynamic problem, and identifying leverage points that could help them in achieving the desired outcomes.

Mapping Impact and Drivers of Change: Social Returns on Investment (SROI) framework and Community-Based System Dynamics were used to map community perceptions and mental models on the social, environmental, and economic outcomes of the work on strengthening institutions and ecological restoration.

Local Communities as 'Water Stewards': A learning framework on 'Understanding Community as Local Stewards to Improve Local Governance of Water Resources', was developed based on the scoping exercise undertaken in one of the villages in Bhilwara, Rajasthan, using the Alliance for Water Stewardship (AWS) framework. The process helped in gaining deeper insights on how communities perceive and approach problems related to water use, access, and availability. The outcomes furthered the view that communities are equally capable of managing their water resources, while maintaining balance between availability and consumption.

Tools for Landscape Level Planning: In order to assist local field-level decision-making in key issues like selecting the location or deciding the type of water-harvesting intervention, shortlisting the eligibility for government social security schemes, collecting the field-level data with evidences in the form of photographs and geo-locations, FES has developed tools such as Composite Landscape Assessment and Restoration Tool (CLART), Social Security Scheme Tool, and Field Data Kit (FDK) tool. With a user-friendly format, multi-lingual support, and the ability to work offline, 450 tablets have been distributed in the field so that village-level resource persons can help villages plan and track various developmental activities.

Networking and Collaborations

Collaborations are an integral part of FES' work, for both informing its conceptual design and practice as well as furthering its mandate. 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.

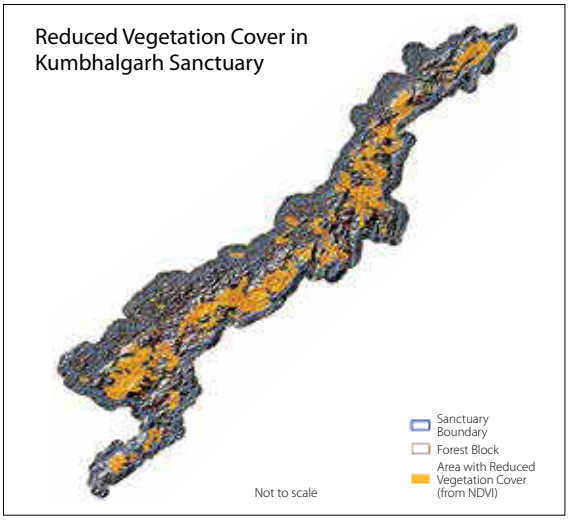
- We have tied up with district-level Milk Unions in our efforts to restore common lands and water bodies. In addition to building a larger constituency for Commons, their 'village to district' cooperative architecture helps reach out to a large number of milk producers and strengthening capacities.
- To reach out to and assist forest-dependent communities claim their community forest rights under the Forest Rights Act, we collaborate with Odisha Jungle Manch, and NGOs (SEWAK, Nirman, Centre for Action and Rural Reconstruction, Committee for Legal Aid to Poor and Forum for Green Governance in Odisha, and Environics Trust in Himachal Pradesh).
- Through MOUs with the district administrations of Kolar and Chikkaballapur in Karnataka, we have begun a phased approach to reach out to around 1,500 villages of 300 Panchayats for implementing common land restoration programmes.
- We have entered into an agreement with the Agriculture Skill Council of India (ASCI) under the aegis of National Skill Development Corporation (NSDC) for the certification of master trainees of *Prakriti Karyashala* (Rural College).
- We anchor the Rainfed Livestock Network, a consortium of NGOs that seeks to frame an alternative narrative for livestock development in rainfed areas of India focusing on low-input livestock production systems.
- We collaborate with the Tata Institute of Social Sciences (TISS), Hyderabad, to offer a two-year Masters course on Natural Resource Governance with a strong emphasis on field-level learning.
- We collaborate with several international universities – Washington University in St. Louis, to study subjects related to systems dynamics, energy conservation, coupled human and natural systems; University of Michigan, Ann Arbor, and Indiana University, Bloomington, on forest resources and institutions and climate change; and University of Queensland on energy-environment and livelihood interface in rural India.
- We collaborate with the International Food Policy Research Institute (IFPRI), Collective Action and Property Rights Initiative (CAPRi), and Arizona State University to improve our understanding of the application of experimental games in strengthening collective action in managing groundwater.
- We have initiated collaborations with Wildlife Institute of India, US Forest Service, and Forest PLUS to address the larger need to connect 'Forests with Farming Systems', and to build a larger farmer constituency for forest conservation.
- We are a member of the International Land Coalition and the UN Economic and Social Council as part of our endeavour to promote secure and equitable rights over community land for the poor. We are also a member of the Indigenous Peoples' and Community Conserved Areas and Territories (ICCA) Consortium.

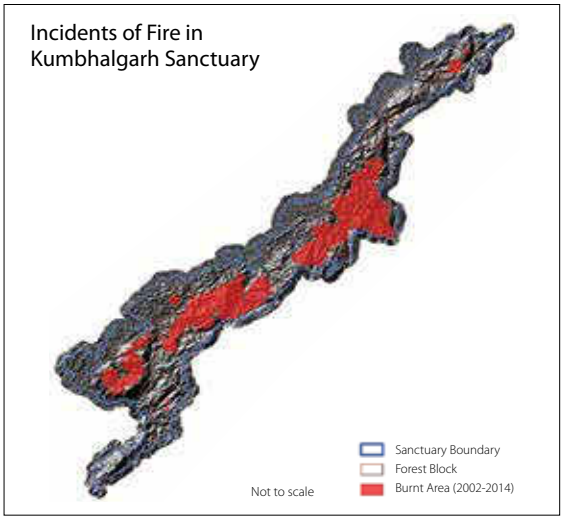
India Observatory

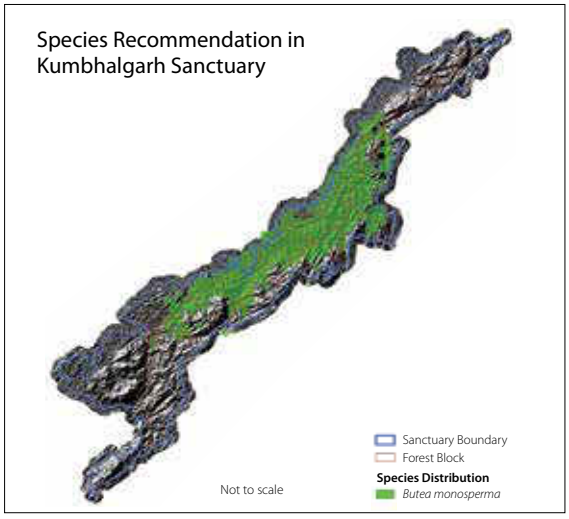
Well-analysed information on location-specific ecological and socio-economic trends, and results of previous interventions can aid efficient and appropriate utilisation of public investments for restoring degraded ecosystems and alleviating poverty. 'India Observatory' (IO), an initiative by FES, aims at improving access to reliable and up-to-date data for rural communities to enable better stewardship of natural resources.

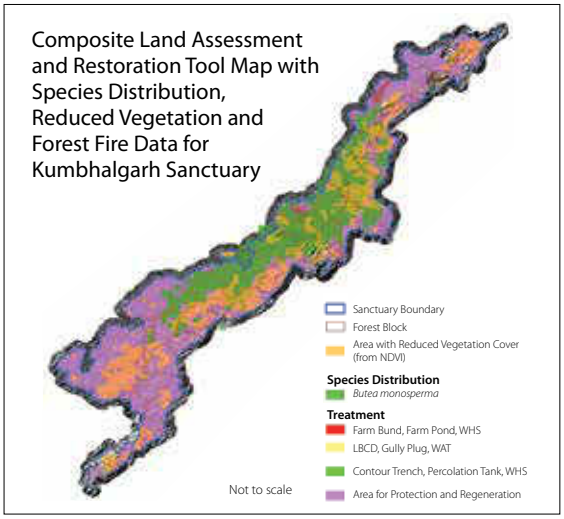
The Data platform, the foundation of the India Observatory, has been constructed in a manner that allows easy navigation, addition of parameters, spatial presentation from national to block levels, and comparison of temporal and spatial changes. FES has compiled data on a range of longitudinal 'Spatial and Non-spatial' parameters for all the districts of India, and for some states starting from the 1950s. This compilation spans an exhaustive array of datasets, covering approximately 603 data layers.

To assist local-level decision-making on key issues, such as deciding type of soil and water conservation measures activities in a location, eligibility to social security schemes, or collecting field-level data in the form of photographs and geo-locations, tools have been developed on an Android platform, with the ability to work offline, and with multi-lingual translations. The tools have been loaded on to tablets for easy portability and have been distributed to village resource persons so they can assist Panchayats and village institutions.









Public investments for conservation action could be improved with location-specific and historical data. Using publicly available datasets, FES developed prototypes and tools that could help plan the areas that require attention in terms of required revegetation, suitability of species to a particular location, likely occurrence of invasive species and historical fire occurrence, and planning soil and moisture conservation depending upon the potential to recharge aquifers.

Indian Biodiversity Information System (IBIS)

(www.indianbiodiversity.org)

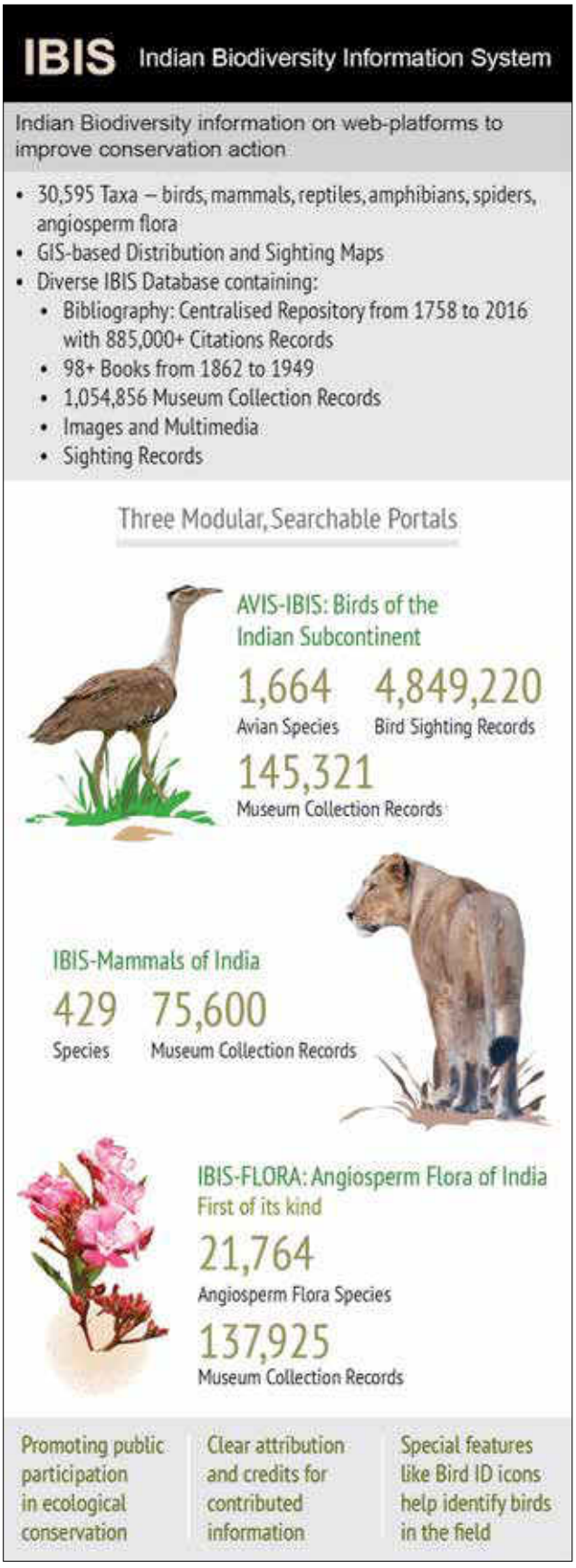
Initiated in 2010 as a web-based, modular, and searchable biodiversity database, Indian Biodiversity Information System (IBIS) provides resource-rich, species-level information on a user-friendly format and is a conservation tool for a range of stakeholders such as wildlife enthusiasts, researchers, educationists, and amateurs. IBIS-Flora follows the portals on Birds and Mammals (titled AVIS-IBIS and IBIS-Mammals) while similar portals on reptiles, amphibians, corals, fish, and spiders are being developed.

AVIS-IBIS carries information on 1,664 species of birds found in the Indian subcontinent, bibliography of 685,000 records, multiple taxonomies, and distribution information including 4,849,220 locations and maps, collection of bird calls, photographs of all species, and 23,191 book excerpts from archives. Further, the portal has compiled 145,321 museum records from Museum Database, an identification tool called Bird-ID with an array of 34 parameters to assist enthusiasts to identify any bird of the Indian subcontinent.

IBIS-Mammals provides species-related information of all the 429 Indian mammals on a single platform, aiding species conservation and promoting data-sharing for conservation. The data archives include general species profiles, excerpts from copyright-free books, a wide range of literature, all indexed on one platform. The portal has 75,000+ museum records of mammals in India, supplemented by maps of museum records as geo-spatial layers, overlaid on the distribution maps.

The IBIS-Flora portal was launched in the year 2014, with information on 21,764 species, 515 sub-species, and 2,514 varieties belonging to 3,667 genera, 271 families, and 50 orders. Around 95,161 synonyms have been compiled from a variety of national and international open-access sources. Approximately 65,000 bibliographies from regional flora have been compiled, distribution data collected from various sources, and distribution maps prepared for 14,899 species. The IBIS-Flora has a centralised repository of bibliography of more than 165,000 citations.

FES collaborates with different NGOs, research institutes, and citizen science groups for enhancing IBIS databases.



The Commons Initiative

The engagement of FES at four levels – with village communities, district, state, and national governments, presents us unique opportunities to feel the pulse on the ground and suggest suitable changes at policy and programmatic level. It also provides equally good opportunities to extend the larger programmes designed at national and state levels to the last mile, or the first mile as we see it.

Launched in the year 2009, the Commons Initiative strives to bring to the fore the role of two significant but highly neglected components of the rural economy – the Common Pool Resources such as forests, pastures, and water, and collective action in concert with self-governing institutions. FES promotes Commons as a paradigm for ecological governance for better localised and cost-effective management of natural resources and to allow governments to focus their efforts and resources towards regulatory functions.

As discussion on land rights is usually steered towards individual land rights, FES joined hands with International Land Coalition and prevailed on the inclusion of community land rights alongside individual land rights in the build-up towards shaping the Sustainability Development Goals 2015. FES also assisted the Institute for Advanced Sustainability Studies in preparing a technical guide on community land tenure to support the translation of the 'Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests' into practice.

During the year, the Chairman, FES, was nominated to the Central Employment Guarantee Council (CEGC), set up under the statutes of the Mahatma Gandhi National Rural Employment Guarantee (MGNREG) Act, providing a good opportunity to 'package' forests, pastures, and water bodies as 'durable community assets' and prevail on the decision-makers to match the financial investments made under MGNREG with suitable institutional investments.

To gain deeper insights into the historic Supreme Court Judgement in January 2011, FES supported in bringing out a policy brief, 'The Case for the Commons: Lessons from Implementation of the Landmark Judgement of the Supreme Court of India'. The brief captures the SC's judgement, the course it has taken thereafter, the policy options that prevail, and points to the lessons that can be drawn from the judicial orders and administrative steps to build a case for the Commons.

FES' ability to translate programmatic action into sound implementation at a reasonable scale; train village communities and government officials for larger replication; apply science and technology to improve evidence and rigour; and lastly, provide inputs on policy and programmes, has resulted in state governments of Rajasthan, Karnataka, and Andhra Pradesh inviting it to participate in shaping and implementing flagship programmes in their respective states. In Rajasthan, FES took active part in the unfolding of the Mukhyamantri Jal Swawlamban Abhiyaan (MJSA – Chief Minister's Campaign for Self-Sufficiency in Water). Nominated as a committee member of MJSA, FES provided critical inputs on restoration of water bodies. FES held consultations with pastoral communities along their traditional grazing routes in Rajasthan and Madhya Pradesh and presented

Anil Sarsavan

FES facilitated an interaction between the leaders of Rajasthan's nomadic pastoralist Raika Deras and government officials to seek policy support that may enable them to continue their age-old nomadic herding practice, which is currently threatened by neglect and sometimes even conflicts with settled habitations.

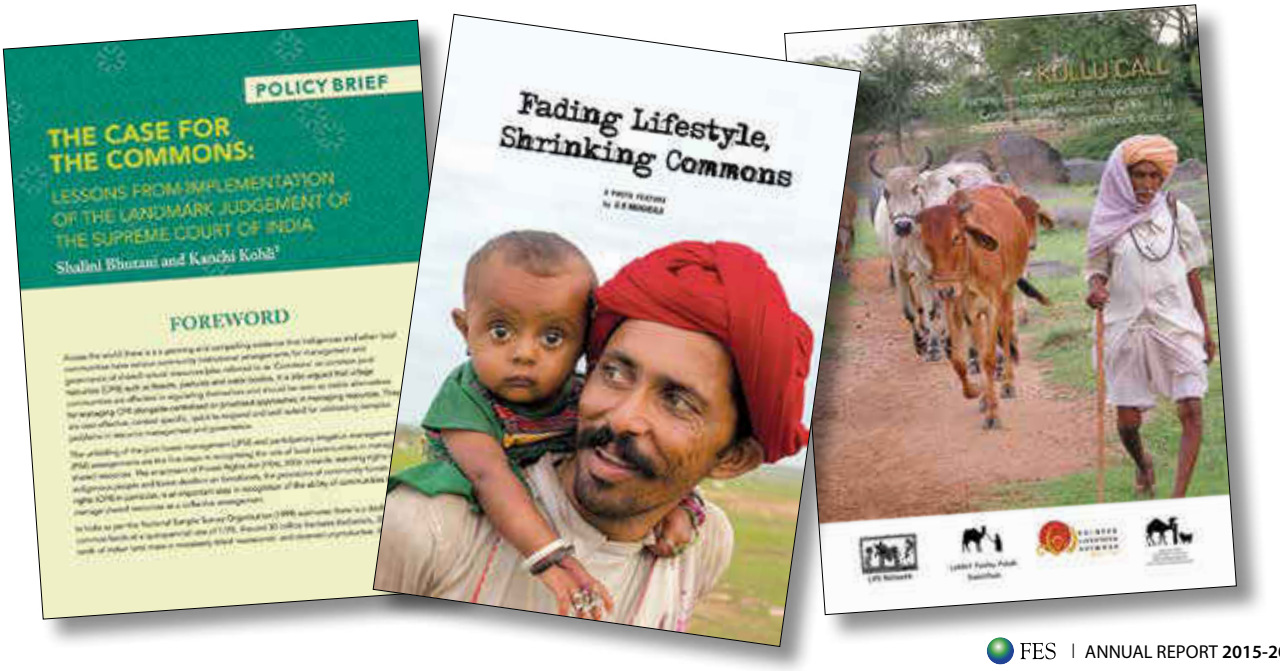
Dawa Pemba Sherpa

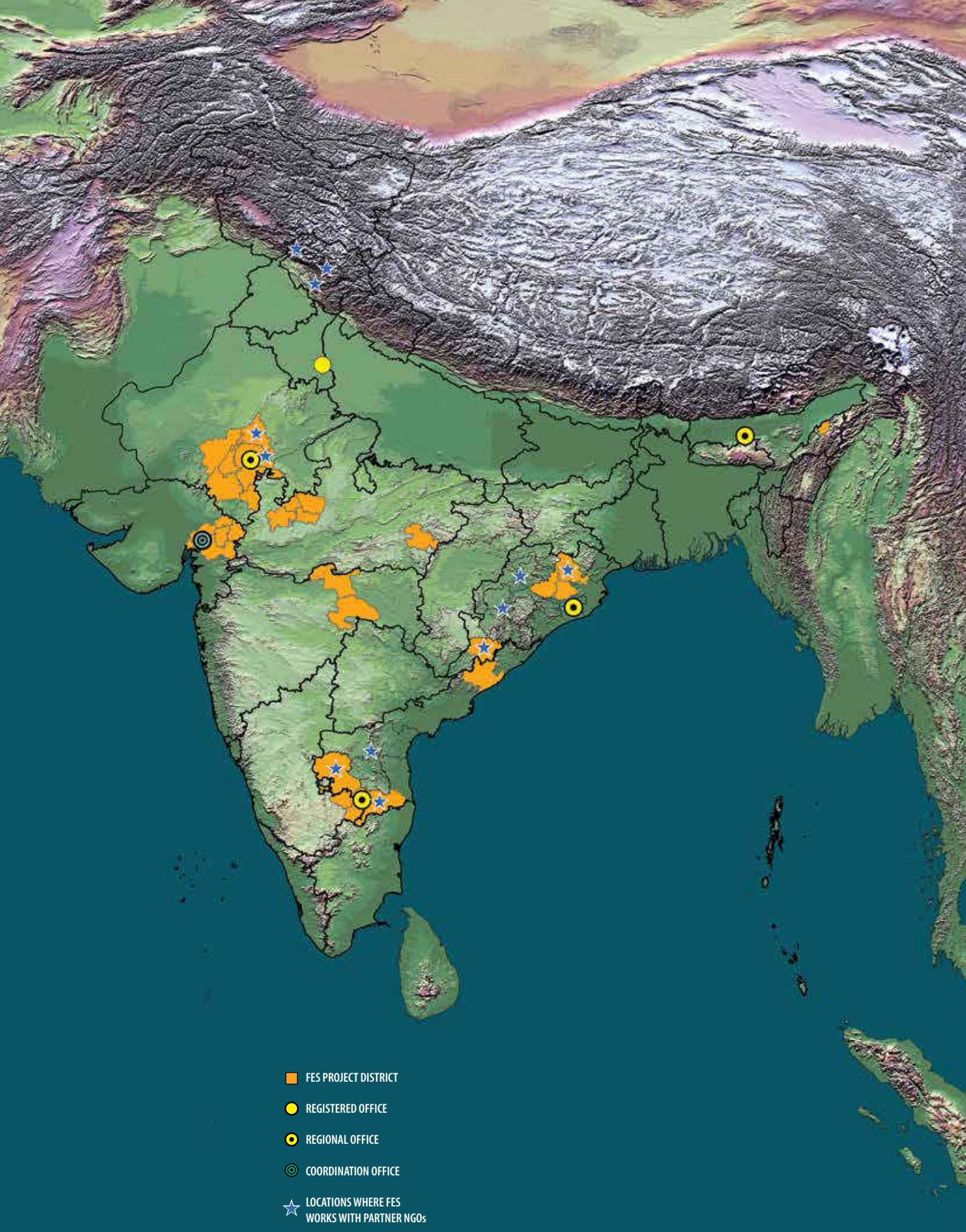
FES continued to broaden its collaborations with the governments of Rajasthan, Andhra Pradesh, and Karnataka by participating in shaping and implementing flagship programmes in their respective states, and with the government of Odisha on Community Forest Rights through training and capacity building programmes for revenue, forest, and tribal welfare departments.

their views at several forums. The Government of Rajasthan has agreed to consider framing a policy on the continuance of the practice of nomadic herding for the state and link the same to the optimal use, nurturing, and utilisation of degraded lands along the routes that they follow. A draft policy framework is being worked on for further consultations and a decision on policy.

Building on the recent amendment of further devolving powers to Gram Panchayats under the Karnataka Gram Swaraj Panchyati Raj Act, FES will work to draw attention at policy and programmatic level for the formation and strengthening of habitation-level institutions to manage natural resources, common land, and water bodies, in particular. This would also aid in the mapping of community pastures and water bodies and their recording as community assets in the Panchayat assets register.

In Maharashtra, following the launch of Jal Yukt Shivar Abhiyaan, aimed at making the state drought free, FES initiated a campaign with the support of the district administration of Yavatmal, that resulted in the initiation of a multi-stakeholder process for improving the flow of the Waghari river. The campaign has encouraged the communities to look at pasture restoration as a key driver in restoring water flows and has helped revival of MGNREG, which had been almost defunct in the district.




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

Our Presence

Years of experience of working across a wide range of socio-cultural and agro-ecological geographies on common lands and water bodies has helped FES spread across 11,704 habitations. As of March 2016, we assist in improving governance and management of 4.25 million acres of common lands reaching over 6.52 million people in 32 districts across eight states.

During the year, we initiated direct engagements with 536 village institutions, and through partnerships, with an additional 1,425 institutions for community-based natural resource management and governance. We continued to enhance capacities of rural communities, volunteers, and local government officials through the Rural College initiative launched four years ago.

The broad organisational strategies are:

- Reviving the criticality of forests and other common lands, and their inter-linkages with agriculture and livestock production systems, thereby connecting the farmer constituency with the conservation of forests and common lands.

- Facilitating the democratisation of local institutions in partnership with village communities and crafting institutional spaces to safeguard interests of the poor, and enable village communities to access, share, and conserve common lands and water bodies.

- Nesting village-level institutions under the umbrella of Panchayats, and integrating natural resource management into their developmental efforts.

- Strengthening platforms for discussion at inter-village level by convening meetings of village representatives, government functionaries, academia, and the larger civil society to jointly deliberate on issues of conservation and use of natural surroundings, and build a strong knowledge base for informed decision-making.

- Assisting Panchayats to leverage funds available under the MGNREGA to restore degraded ecosystems, and nesting village bodies within the ambit of Panchayats.

- Assessing the impact of climate change on various natural and production systems, and integrating the traditional coping mechanisms of village communities in the planned adaptation measures.

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

Situated between 23-31'N to 26-58'N and 72-45'E to 75-49'E

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

The annual average rainfall ranges from 620.32 mm to 1009.3 mm and the number of rainy days from 29 to 46

FACT FILE

From intervention districts of **Bhilwara, Pratapgarh, Udaipur,** and **other districts (Pali, Rajsamand, Ajmer, Chittorgarh)**

River Basin: Mej, Menali, Khari; Jakham, Mahi, Siwna tributaries of Chambal; Mansi, Wakal, Sei; Luni, Banas

Forest Types: Tropical Dry Deciduous and Dry Thorn; Tropical Dry Deciduous, Grasslands; Tropical Dry Deciduous; Tropical Dry Deciduous

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*; Lesser Florican, Great Indian Bustard, *Commiphora wightii, Sterculia urens*

Principal Crops: Jowar, groundnut, pulses, wheat, gram; Maize, soybean, sorghum, cotton, wheat, gram; Wheat, maize, barley, sugarcane; Wheat, maize, sorghum, bajra, jowar

% of Common Lands other than Forestlands: 43.45; 23.26; 41.54; 35.15

% of Forest Cover: 2.17; 29.35; 23.25; 8.54

% of Population Living Below Poverty Line: 27; 40; 48; 20.25

% of Scheduled Castes/Scheduled Tribes: 26.46; 70.39; 55.85; 25.19

Year in which FES Initiated Work: 1995; 2005; 2000; 2012

Funding Agencies: Omidyar Network, Skoll Foundation, Sir Dorabji Tata Trust & Allied Trusts, Axis Bank Foundation, NABARD-IGWDP, NABARD-WDF, Sunehra Kal-ITC, Various Programmes of Rajasthan Government, Rajasthan Forestry and Biodiversity Project, Grow-Trees, Fondation Ensemble, GIZ India, International Land Coalition, Hindustan Unilever Foundation, IIT-Bombay, Bharat Rural Livelihoods Foundation, ITC-Rural Development Trust, Centre for microFinance, The University of IOWA, U.S. Forest Service International Programs

Rajasthan

In Rajasthan, we work with agro-pastoralist communities in the central districts of Bhilwara, Ajmer, and Pali, and with predominantly tribal communities in the southern districts of Udaipur, Pratapgarh, Chittorgarh, and Rajsamand.

Frequent droughts in the central districts adversely impact agriculture and cause distress migration of poor livestock keepers. We support local communities to secure long-term tenure over common lands, improve local governance of shared natural resources, promote local federations, and channelise public investments such as MGNREGS to restore forests, common pastures, and water bodies.

The southern districts suffer from widespread deforestation and biodiversity loss, alienation of communities from forests, and increased levels of poverty. Here we work towards regeneration and informed management of forest lands by building on customary practices of access and use, securing community tenurial rights, and improving coordination between local communities and Forest Departments. We also focus on highlighting the critical ecological functions of forests for viable agriculture, including strengthening livelihoods, and meeting food, fodder, firewood, and water requirements.

The *Prakriti Karyashala* (Rural College) continues to build on collaborations with local district administrations and Milk Unions, enabling capacities of Panchayat representatives, government functionaries, and local stewards for securing community rights over shared resources, and channeling MGNREGS funds for restoration. A total of 1,017 Charagah Vikas Samitis (Pasture Land Committees) were promoted, which have submitted restoration plans for 105,237 acres of common pastures under NREGA.

Through the Commons Campaign *(Shamlat Abhiyan)*, we continued to update 9,894 Panchayats on various enabling governmental provisions under MGNREGS for them to leverage public funds for the restoration of common lands. Instead of beginning with a smaller group of villages and then reaching all the villages in the block as we used to earlier, we have piloted, in collaboration with the Government, a multi-pronged strategy, that would enable us to reach out to all the constituent villages in a block.

With gaining recognition as Project Implementing Agency for MGNREGS, government-supported programmes for capacity building on restoration of common pastures, collaborations with Milk Unions, outreach of *Karyashala,* and our engagement with Panchayats and government, we are well-poised to strategise wider replication of conservation measures for shared natural resources in Rajasthan.

489 thousand acres of common land were brought under community management

1.9 million lives were touched upon through community institutions

2,191 habitations have been assisted in restoring and managing their Commons

In a remarkable show of unity, the women of Amritya village, Bhilwara district, who were already instrumental in mobilising their village to conserve the village forest, took to conserving groundwater. According to the Central Ground Water Board, 69% of the blocks in Rajasthan are 'overexploited', 10% are critical, and 7% are semi-critical. Realising that borewells could lead to over-exploitation, the village outlawed them, resisting water mining, and instead turning to more sustainable water harvesting structures. The community-led collective action has restricted digging of borewells, and deterred the Public Health Engineering Department from extracting water from their village to supply the adjoining town. The women's efforts have had a significant impact on groundwater governance in their rural community leading to *jal swawlamban* (self-sufficiency by using local water resources). This has influenced larger community solidarity and interest in taking up water conservation activities.

"In protest, the women lay down in front of the giant machines to stop them from entering our village. Now no one dares dig borewells here and our village has not been affected by drought since 2002."

Sarju Bai Meena,
Village Representative

S S Roy

Sunil Kumar

Sunil Kumar

Sustained efforts by the people of Meena-ka-jhopdia, a habitation in Barundani village, Bhilwara district, in protecting 123 acres of degraded forests inspired seven neighbouring habitations to join them in restoring an additional 1,827 acres of forestland, under Joint Forest Management arrangements. Now, barren lands have transformed into open forests, improving water regime and increasing fodder availability.

River
Project Districts
Project Mandals
Deccan Thorn Scrub Forests
East Deccan Dry-Evergreen Forests
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

Anantapuramu and Chittoor situated between 12-37'N to 15-13'N and 76-45'E to 80-3'E; Visakhapatnam 17-14'N to 18-33'N and 81-50'E to 83-30'E

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 972.56 mm to 2379.5 mm and the number of rainy days from 50 to 103

FACT FILE

From intervention districts of **Chittoor, Anantapuramu,** and **Paderu**

River Basin: Papagni; Papagni; Machkund

Forest Types: Mixed Dry Deciduous, Tropical Thorn, Scrub; Mixed Dry Deciduous; Tropical Dry and Moist Deciduous

Threatened Species: Yellow-throated Bulbul, Starred Tortoise, *Chloroxylon swietenia, Anogeissus latifolia*; Yellow-throated Bulbul, Indian Black Turtle, Woolly-necked Stork, Starred Tortoise; *Gyps bengalensis, Gyps indicus, Bridelia retusa*

Principal Crops: Groundnut, paddy, chilli, mango; Tomato, groundnut, redgram, brinjal, sunflower, paddy, jowar, cotton; Millets, paddy, ragi, bajra, coffee

% of Common Lands other than Forestlands: 33.36; 19.64; 18.26

% of Forest Cover: 16.97; 3.59; 30.81

% of Population Living Below Poverty Line: 36; 22; 80

% of Scheduled Castes/Scheduled Tribes: 22.63; 18.06; 82

Year in which FES Initiated Work: 1991; 2000; 2015

Funding Agencies: Omidyar Network, Skoll Foundation, Sir Dorabji Tata Trust & Allied Trusts, RBS Foundation, NABARD-ITDP, NABARD (Distress Districts Programme), NABARD RSO Programme, Various Programmes of Andhra Pradesh Government, Grow-Trees, Hindustan Unilever Foundation, International Food Policy Research Institute, Washington University in St. Louis

Andhra Pradesh

In Andhra Pradesh, our work is located predominantly in the rainfed catchment areas of river Papagni in Chittoor and Anantapuramu districts. Lying at the trijunction of the Deccan Plateau, the Eastern Ghats, and the Western Ghats, the area is prone to severe droughts, characterised by depleting water tables due to excessive extraction of groundwater for raising water-intensive crops and distress migration stemming from increased cultivation costs and fluctuating market prices.

Restoring forests, scrub lands, and water bodies; arranging for security of tenure; and building on community-level collective action forms the core of our work. During the year, by accessing public funds, around 2,221 acres of common lands and 390 water bodies were restored and renovated. In partnership with the Anantapuramu district administration, we offered training programmes to about 6,000 ward members of Panchayats in claiming and restoring common lands. We also trained rural volunteers and NREG functionaries to support villages and Panchayats with the preparation of NREGS plans, mainly restoration measures of shared resources. Besides channeling funds for the restoration of common lands and water bodies, we helped village communities claim tenure over common lands and register them in the 'Prohibitory Order Book' maintained by the Government.

In addition to directly engaging with village institutions and helping them claim access to common lands and restore them, we also joined hands with like-minded NGOs in the adjoining areas to scale up the restoration efforts. In arrangements designed together with the Government, a framework was developed to cover additional common land under the conventional watershed programmes, align funds from other government programmes for their restoration, and secure the tenure in favour of the respective villages. Initiated in 2014, INR 260 million was leveraged under this arrangement for restoring common lands.

We received encouraging results from our pilots on integrating the concepts of Systems Dynamics and Experimental Games into our ground-level operations, enriching our engagement with communities and other stakeholders. Designed to map the mental models of communities around water usage and build debates on water consumption patterns respectively, they have proved to be promising concepts and tools to aid reflective discussions that help establish causal linkages as well as bring to surface issues of availability and consumption, which can help influence future use of this scarce common resource.

835 thousand acres of common land were brought under community management

1.9 million lives were touched upon through community institutions

2,208 habitations have been assisted in restoring and managing their Commons

In an area known for recurrent droughts, and where groundnut crop replaced many dryland crops such as millets and pulses 50-60 years ago, the farmers of Anantapuramu district face problems every season in procuring quality groundnut seeds. When the state government piloted the 'Community Managed Seed Systems' programme in the 2011-12 Rabi season in some villages, Somarajukunta village volunteered to produce seeds to reduce dependency on external supply and improve self-sufficiency.

Following successful pilots in decentralising seed production and distribution, it was made an ongoing programme. Since then, the cooperative society of Somarajukunta, consisting 192 farmers, has continued engaging with the programme. And in the recent 2016 Kharif season, the cooperative managed procurement, processing, and distribution of 287 quintals of certified seeds to 700 farmers of adjoining 42 villages, thus engendering a self-sufficient system where local resources are used locally and the overall control remains with the farmers.

"The uniqueness of this programme is that it has reinforced collective action in the village and of having our destiny in our own hands."

S. Kondaiah
Chairman, Somarajukunta Cooperative Society

Suresh Jones

Johnson Topno

Saneesh C S

Gudlavaripalle and Yeddulavarikota villages of Chitoor district have restored 300 acres of common land, overcoming challenges from within their villages as well as neighbouring villages, when the setting up of a stone quarry on the common land seemed to be a lucrative alternative. The area now supports rich avian diversity and a highly endangered plant species *Dolichandrone crispa*.

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

Situated between 12-45'N to 13-57'N and 77-21'E to 78-35'E

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

The annual average rainfall ranges from 1068.57 mm to 1935.02 mm and the number of rainy days from 68 to 93

Karnataka

Our work in Karnataka is in the upper catchment of the Papagni river covering three of its tributaries in the two districts of Kolar and Chikkaballapur. The region is characterised by hilly terrain with rocky boulders and sparse vegetation. The patches of degraded forests and common pastures are a mix of dry-deciduous, tropical thorn, and scrub forests infested with the invasive lantana.

Alarming rates of groundwater extraction for water-intensive crops have resulted in the government deciding to take up concerted action in implementing contextually relevant strategies. The recent amendments to the Panchayati Raj Act enabling Panchayats to map their community assets, including common pastures and water bodies, provided an opportunity to enhance the capacities of Panchayats and for them to play an active role in addressing the challenges. We facilitated the formation of habitation-level sub-committees and capacitated rural youth to help Panchayats plan for the restoration of forest, land, and water bodies. We also conducted hydro-geological studies and water audits and supplemented Panchayats with information on groundwater availability, patterns of current use, and options to regulate and promote judicious use of water.

As a Resource Support Organisation for the district administration of Chikkaballapur, we trained government officials and village representatives on the mobile-device enabled Composite Landscape Assessment and Restoration Tool (CLART), which simplifies identification of water recharge and discharge areas and aids in context-specific planning for conservation of water.

Following the execution of MoUs with the Zilla Panchayats of Kolar and Chikkaballapur districts in 2012, we developed comprehensive Commons restoration plans for 78 of the 300 Panchayats, and a total of INR 51.3 million was leveraged through MGNREGS and other programmes towards the restoration of common pastures and water bodies. The *Prakriti Karyashala* (Rural College) actively engaged with Panchayats of four taluks of Chikkaballapur and Kolar districts to improve the planning process in 122 Panchayats under Intensive Participatory Planning Exercise for improved implementation of MGNREGS.

We envisage scaling our work on improving groundwater levels through restoration of Commons by leveraging the village-level architecture of Milk Unions, the mandate of Panchayats to restore common pastures, funds under NREGS programmes, and the enabling capacity of the district administration to bring about large-scale restoration of common land and water bodies critical to the economy of the region.

FACT FILE

From intervention districts of **Kolar** and **Chikkaballapur**

River Basin: Papagni; Papagni

Forest Types: Tropical Dry Deciduous, Tropical Thorn, Scrub; Tropical Dry Deciduous, Tropical Thorn, Scrub

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

Principal Crops: Ragi, groundnut, pulses, paddy, oilseeds, mango, tomato; Ragi, groundnut, maize, red gram

% of Common Lands other than Forestlands: 24.72; 28.06

% of Forest Cover: 6.05; 9.19

% of Population Living Below Poverty Line: 22; 22

% of Scheduled Castes/Scheduled Tribes: 35.45; 37.37

Year in which FES Initiated Work: 1998; 1998

Funding Agencies: Omidyar Network, Skoll Foundation, Sir Dorabji Tata Trust & Allied Trusts, Axis Bank Foundation, NABARD-WDF, Grow-Trees, Hindustan Unilever Foundation, Avantika Foundation, International Food Policy Research Institute, Sunehra Kal-ITC, Washington University in St. Louis

69 thousand acres of common land were brought under community management

159 thousand lives were touched upon through community institutions

346 habitations have been assisted in restoring and managing their Commons

Affected by Chinese silk imports, Shri Devaraj, a young sericulture farmer from Sidlaghatta, Chikkaballapur district, shifted to dairying which, after two years of steady income, ran into trouble due to consecutive years of drought. Despite challenging conditions, he tried to mobilise the Panchayat to access NREGS funds for restoration of small tanks in the village. Soon he realised that there was a dearth of information about government schemes and programmes at village and Panchayat level. With the knowledge gained from a training programme, he mobilised his village to undertake NREGS activities to restore common pastures and small tanks, a critical source of water for livestock.

After getting elected to the Panchayat, he ensured that NREGS activities were undertaken to improve shared natural resources and was also instrumental in setting up a Women's Milk Producers' Cooperative Society (MPCS) in his village.

"The collective action acted as peer pressure to remove encroachments on the feeder canal of the water body on our *gomala* (common pasture), which serves as a critical source of water for our livestock."

Devaraj
Community Resource Person

Dr Subba Rao

Saneesh C S

Saneesh C S

In the drought-prone area of Bagepalli taluk, Chikkaballapur district, four villages have come together to protect 500 acres of common pasture lands and water bodies that cater to the fodder and drinking water needs for livestock of 12 surrounding villages. This proved to be a starting point for all the neighbouring villages to come together to protect and manage adjoining forestlands against forest fires.

River
Project Districts
Project Blocks
Wildlife Sanctuary
Chhota Nagpur Dry Deciduous Forests
Eastern Highlands Moist Deciduous Forests
Northern Dry Deciduous Forests
Odisha Semi-Evergreen Forests

Falls in Northern Deccan Plateau Freshwater Eco-region
Situated between 18-14'N to 22-11'N and 82-5'E to 86-25'E
Length of Growing Period (LGP) ranges from 180-210 days
The annual average rainfall ranges from 1237.68 mm to 1613.72 mm and the number of rainy days from 79 to 93

Odisha

In Odisha, we work across the undulating landscapes of Angul, Dhenkanal, and Keonjhar in central Odisha and the tribal-dominated district of Koraput in the Eastern Ghats. In Angul and Dhenkanal, we work with small and marginal farmers dependent on rainfed agriculture, whereas our work in Koraput and Keonjhar districts revolves around tribal communities inhabiting the upper catchments of Kolab and Baitarni river basins respectively. These regions are rich in green cover but have seen a visible increase in economic disparity between urban and rural populations due to growing industrialisation.

To strengthen inter-linkages between forests and farming systems in the central districts, we work with local communities, their institutions, and habitation-level federations. These efforts have led to improvements in vegetation cover and restoration of Commons while formalising customary use patterns and asserting community rights over resources.

In Koraput, our work with the community centres around regeneration of degraded forests and assisting them to frame rules and regulations for the protection and restoration of forest commons. To improve planning and enable investment of funds under MGNREGS for restoration of forest commons, we assisted 302 habitations conduct Intensive Participatory Planning Exercises.

We gained momentum on securing recognition of Community Forest Rights under the Forest Rights Act in 19 districts, with 181 villages gaining recognition. On the request of the district administration of Boudh, we also mobilised communities for the conversion of forests and unsurveyed villages into revenue villages as per the Forest Rights Act. We piloted technology-enabled surveying options to map existing land use. We also conducted two studies namely, 'Documentation of Good/Best Practices and Development of Learning Documentaries Within and Outside the State (Andhra Pradesh, Chhattisgarh, Maharashtra, Kerala, and Odisha)' and 'Indigenous Knowledge for Management of Land and Water Resources of the Tribes of South Odisha and Andhra Pradesh'.

To further our efforts during the year towards recognition of Community Forest Rights under the Forest Rights Act, we entered into partnerships with the Committee for Legal Aid to Poor (CLAP), Centre for Action and Rural Reconstruction (CARR), Seba Jagat, the Odisha Jungle Manch, and NIRMAN, and supported 611 habitations in claiming community forest rights, of which 69 habitations in Rayagada district have received recognition for over 10,000 acres of forest land.

FACT FILE

From intervention districts of **Angul, Koraput, Dhenkanal,** and **Keonjhar**

River Basin: Mahanadi, Brahmani; Kolab; Brahmani; Baitarni

Forest Types: Tropical Dry and Moist Deciduous, Bamboo Brakes and Scrub; Tropical Moist Deciduous; Northern Tropical Semi-evergreen; Tropical Moist Deciduous

Threatened Species: Tiger, Elephant, Gharial, *Barringtonia acutangula, Diospyros candolleana;* Elephant, *Themeda saxicola, Strobilanthes jeyporensis;* Pangolin, Porcupine, Monitor Lizard, *Gloriosa superba, Albizia thompsonii; Diospyros candolleana,* Hyena, Elephant, Barking Deer, Porcupine, *Gnetum ula*

Principal Crops: Paddy, pulses, oilseeds, onion, potato, mango; Paddy, maize, millets, pulses, niger, ginger, mustard, beans; Paddy, pulses, oilseeds; Paddy, millets, pulses, oilseeds

% of Common Lands other than Forestlands: 30.52; 37.81; 24.38; 43.36

% of Forest Cover: 42.38; 21.89; 31.42; 38.67

% of Population Living Below Poverty Line: 48; 80; 48; 63

% of Scheduled Castes/Scheduled Tribes: 32.90; 64.80; 33.21; 57.06

Year in which FES Initiated Work: 1987; 2008; 1987; 2013

Funding Agencies: Omidyar Network, Skoll Foundation, Sir Dorabji Tata Trust & Allied Trusts, RBS Foundation, NABARD-WDF, NABARD-ITDP, Grow-Trees, Various Departments of Government of Odisha, International Land Coalition, UNDP, The Energy and Resources Institute, Indian Institute of Technology-Bombay, Bharat Rural Livelihoods Foundation

1.4 million acres of common land were brought under community management

1.7 million lives were touched upon through community institutions

4,343 habitations have been assisted in restoring and managing their Commons

Lack of irrigation facilities meant 90% of the lands used to remain fallow after the Kharif season in Barakutuni, a tribal village in Semiliguda block, Koraput district. Ironically, a stream flowing by the village had untapped potential to augment the available sources of irrigation. However, there were many challenges, including protecting a 117.5-acre forested catchment to maintain perennial flow; constructing technically feasible low-cost diversion channels and dams on the stream; and water budgeting to ensure that a larger number of people could benefit. To overcome them, they framed rules to protect the upper forested catchment and used gravity dams, and diversion channels to help the water flow to the farm fields.

Constructed in 2013, the effort helped people cultivate an additional 21 acres of land, not only in Kharif and Rabi seasons but also in the summer. Diversifying by adding new crop varieties in alignment with water availability has helped increase incomes.

"The time our family used to spend desperately seeking daily wage labour is now being productively used to cultivate our four acres, even in Rabi and summer seasons."

Dera Jani
60-year-old Farmer

Rules and regulations developed by the village institution of Nabkishorepur village, Angul district, for managing their forests and other Commons like water has created a substantial resource base. The village now has a well-developed system for sharing forest and water resources, that takes into account both the availability and consumption of resources.

Subrat Singh

Swapnasri Sarangi

Dawa Pemba Sherpa

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

Situated between 22-12'N to 24-19'N and 75-8'E to 81-11'E

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

The annual average rainfall ranges from 1529.59 mm to 2134 mm and the number of rainy days from 60 to 77

Madhya Pradesh

In western Madhya Pradesh, we work in Agar, Ujjain, and Rajgarh districts of the Malwa region and towards the east, in Mandla district of the Mahakaushal region, which cuts across the biodiversity rich zone of Kanha National Park, nestled in the Satpura-Maikal range.

Located in the catchment areas of the Lakhundar, Kali Sindh, Gambhir, and Shipra rivers, the Malwa project area is characterised by undulating topography, narrow valleys, and shallow soils. In this region, we assist livestock and agriculture-dependent communities to restore common lands and improve farmland productivity through soil and water conservation measures. Collective action within and across village institutions has led to improved fodder and water availability and resulted in an increase in the area under double cropping. Village institutions and their local federations are engaged in developing robust mechanisms for management and governance of shared resources, such as common pastures and water bodies.

Mandla district has a predominantly tribal population, including primitive tribal groups. The region is characterised by high degradation of forests, heavy infestation of invasive species, low productivity of farmlands, and distress migration of local communities. We work with the local communities, Panchayats, and government officials towards improved governance of common land and water bodies, promotion of agriculture and livestock-based livelihoods, and access to various government programmes and social security schemes.

During the year, we trained 307 village leaders and community resource persons to support local communities in strengthening village institutions and their federations, and assisted about 4,000 farmers in improving agriculture production and expanding their livelihood portfolio to increase their overall household income. Measures were taken to restore common pastures and bring water bodies under collective management, improve soil health of farmlands, and improve water and nutrient regimes to bolster the resilience of their farming systems.

Aiming to build on the strong momentum created by village communities and the willingness of the Forest Department in fostering collaborative efforts to manage the buffer zones of Kanha National Park, we are expanding to the neighbouring district of Balaghat, a critical landscape of the Kanha-Pench wildlife corridor. We shall promote robust village-level institutions and Panchayats for effective governance of shared natural resources, which includes restoring the upland commons, improving soil health and agronomic practices, and facilitating access to economic opportunities.

FACT FILE

From intervention districts of **Mandla** and **Agar**

River Basin: Gaur, Balai, Banjar of Narmada; Lakhundar, Garhganga, Kalisindh

Forest Types: Tropical Moist Deciduous; Tropical Dry Deciduous, Scrub

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

Principal Crops: Paddy, minor millets, maize, wheat, red gram, lentil, niger, mustard; Wheat, jowar, bajra, gram, millet, maize, pulses, til, cotton, soybean

% of Common Lands other than Forestlands: 19.95; 28.45

% of Forest Cover: 48.88; 0.47

% of Population Living Below Poverty Line: 60; 26

% of Scheduled Castes/Scheduled Tribes: 62.46; 26.22

Year in which FES Initiated Work: 2006; 1996

Funding Agencies: Omidyar Network, Skoll Foundation, RBS Foundation, Sunehra Kal-ITC, Grow-Trees, GIZ-India, GIZ-Germany, Government of Madhya Pradesh, Hindustan Unilever Foundation, Sir Dorabji Tata Trust & Allied Trusts, New York University, International Union for Conservation of Nature, Bharat Rural Livelihoods Foundation, Defries Bajpai Foundation

76 thousand acres of common land were brought under community management

120 thousand lives were touched upon through community institutions

379 habitations have been assisted in restoring and managing their Commons

The people of Barkheda village, Bichiya block, Mandla district, used to face acute water scarcity every year. Though the agriculture-dependent community was endowed with fertile land and semi-perennial water sources, the power dynamics in the village operated in such a way that most water bodies were under the control of a few. Common wells were encroached upon by persons residing nearby, stream beds were taken over for paddy cultivation, diesel pumps were installed to pull water excessively, and even the village tank bund was encroached upon – all these adding to the misery of the poorest.

In 2003, the village Gram Sabha initiated the process of removing the encroachments. After initial resistance, the committee succeeded in pressurising the encroachers to vacate the common water bodies in the interest of the greater good. Rules and regulations, formed unanimously by the village, helped larger ownership and adherence to systems, and continues to ensure judicious use of water to this day.

"The Gram Sabha provided a much-needed platform for the poor to raise their voice, which helped create social pressure on those who encroached."

Santlal
Community Resource Person

Pran Ranjan

Nasir Ali

Dibyendu Mondal

Madhopur village in Agar district is protecting their common pastures and have, over the years, evolved collective rules and regulations to share fodder and water resources. While the village could secure tenure of 126 acres, it protects and manages the entire stretch of 274 acres of common lands, warding off encroachments as well as restoring the habitat.

Falls in Narmada-Tapi Freshwater Eco-region
Situated between 21-49'N to 23-27'N and 72-20'E to 74-28'E
Length of Growing Period (LGP) ranges from 120-150 days
The annual average rainfall ranges from 807.18 mm to 1474.15 mm and the number of rainy days from 18 to 37

Gujarat

Spread across six districts of central Gujarat, our work is characterised by a combination of issues ranging from the highly eroded ravines along the banks of river Mahi and the saline mudflats of the Gulf of Khambhat to the ecologically threatened wetlands of Anand and Kheda districts and the denuded highlands of Mahisagar district.

In the ravine-affected districts, we work in collaboration with Panchayats, watershed committees, and habitation-level institutions to assist communities leverage MGNREGS funds for arresting land degradation and restoring vegetation cover. Villages affected by the ravines have formed a multi-stakeholder platform to address land degradation along the 90-km stretch of the riverbanks. In the course of the year, more than 800 district- and block-level officials and Panchayat functionaries were trained in the Intensive Participatory Planning Exercise of MGNREGS. Recognising the efforts of village institutions in safeguarding and restoring their common lands over the past 15 years, the district administrations of Vadodara and Anand have renewed the lease for 760 acres of common land for another 15-year period.

Our efforts in the poverty-ridden and tribal-dominated districts of Dahod and Mahisagar are aimed at 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.

In a joint initiative with the district administration, trained rural cadre, who have been instrumental in assisting village people access various social security schemes, have also assisted tribal communities file claims for recognition of community forest rights under the Forest Rights Act. The cadre is also assisting tribal communities adopt improved farming practices as well as disseminating good practices to a wider group of farmers. During the year, the rural cadre supported about 6,200 farmers in improving their farming practices, while 35,000 households availed about 60 different social security schemes of the government and have leveraged an amount of INR 140 million in Mahisagar district.

With a strong base of robust habitation-level institutions and their federating bodies, well-trained rural cadre, and a supportive district administration, we are progressing towards building a multi-stakeholder platform that would facilitate a range of interventions from safeguarding forests and rejuvenating farming systems, influencing effective implementation of government schemes, improving incomes and options for rural livelihood, strengthening local stewardship, and most importantly, framing a development agenda for the region.

FACT FILE

From intervention districts of **Anand, Dahod, Vadodara, Panchamahal, Kheda,** and **Mahisagar**

River Basin: Mahi, Sabarmati; Valai, Bhe, Kali, Khan; Mahi, Namrada; Mahi; Sabarmati; Mahi

Forest Types: Tropical Dry Deciduous; Dry Teak, Mixed Dry Deciduous, Grasslands, Scrub; Tropical Dry Deciduous; Tropical Dry Deciduous; Tropical Dry Deciduous; Tropical Dry Deciduous

Threatened Species: Sarus Crane, Black-necked Stork, Greater Spotted Eagle, Hyena; Lesser Florican, Sloth Bear; Vultures *(Gyps indicus, Sarcoramphus papa)*, Sloth Bear, Saras Crane, Crocodile, Indian Spotted Eagle; Vultures *(Gyps indicus, Neophron percnopterus)*, Sloth Bear; Sarus Crane, Black-necked Stork, Greater Spotted Eagle; Sarus Crane, Black-necked Stork, *Dalbergia latifolia, Dolichandrone falcata*

Principal Crops: Banana, paddy, wheat, tobacco, jowar, maize, cotton; Maize, paddy, sorghum, pulses; Cotton, pigeon pea, paddy, maize; Maize, paddy, pigeon pea, wheat; Tobacco, bajra, rajgara; Paddy, cotton, tobacco, maize

% of Common Lands other than Forestlands: 18.66; 14.53; 17.67; 14.36; 14.45; 20.69

% of Forest Cover: 1.87; 15.94; 8.03; 12.80; 2.36; 8.21

% of Population Living Below Poverty Line: 18; 37; 12; 37; 18; 37

% of Scheduled Castes/Scheduled Tribes: 6.18; 76.27; 32.92; 26.85; 6.62; 40.32

Year in which FES Initiated Work: 1986; 1997; 1992; 1988; 1987; 2014

Funding Agencies: Omidyar Network, Skoll Foundation, NABARD-IGWDP, Government of Gujarat, Gujarat Green Revolution Company Limited, Collectives for Integrated Livelihood Initiatives (CInI), Bharat Rural Livelihoods Foundation

62 thousand acres of common land were brought under community management

516 thousand lives were touched upon through community institutions

752 habitations have been assisted in restoring and managing their Commons

The process of land lease renewal for 765 acres led by 10 Tree Growers' Co-operative Societies (TGCS) in Savli taluka, Vadodara district, has been a long collective endeavour. The Cooperatives initiated the renewal process in 2007, a year prior to the expiry date of the first 15-year lease period. The process entailed multi-level verifications, by the Block-level tehsildar, Sub-Divisional Magistrate, and the Collector on the membership details of the cooperatives, activities undertaken, number of saplings planted and survived, and the benefits accrued to the communities.

At the request of the cooperatives, the Collector visited one of the sites and realised how the efforts of the village communities checked further land degradation. He also gained an understanding of the ecological, social, and economic benefit accrued by members, which ranged from improved soil health to increased availability of fodder and fuelwood, apart from providing a habitat for fauna.

"Our collective efforts have reaped results and our land remains with us, which otherwise might have been allocated to some big industry."

Dahyabhai Dhulabhai Bhoi
Chairman, TGCS, Dungripura

Jaswant Dhameliya

Ramesh N Patel

Dinkar Panchal

The mixed-caste society of Khorwad village, Anand district, has overcome initial hurdles to restore100 acres of common land, which now has 72 floral species, an increase from the six species that existed prior. Recognising their efforts, the government not only renewed the lease for another 15 years but also granted tenure in favour of the village on an additional 40 acres.

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

Situated between 25-10'N to 27-03'N and 93-18'E to 95-15'E

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

The annual average rainfall ranges from 1634.2 mm to 2555.56 mm and the number of rainy days from 111 to 140

North-Eastern Region

Here, we work with diverse ethnic groups to preserve and conserve the region's rich floral and faunal biodiversity. Our approach focuses on supporting conservation action by assisting communities, undertaking studies that provide scientific rigour, and valuing traditional, indigenous wisdom and practices, while designing conservation strategies.

We focus on supporting communities and their village councils safeguard Community Conserved Areas (CCAs) and ensuring continuity in conservation across vast landscapes. Towards this, we build on the perspectives of village communities, and enable them to design conservation action plans through collective decision making.

In Nagaland, we have partnered with the Nagaland Empowerment of People through Economic Development (NEPED) for conserving CCAs by supporting village councils and local youth map their CCAs and prepare conservation and management plans. We have also facilitated periodical reviews of the conservation plans to improve governance of the CCAs. So far, we have directly reached out to 30 CCAs, comprising 81 villages and covering 73,000 acres, and we are now exploring opportunities to engage with village communities and governments in Tripura and West Karbi-Anglong district, Assam.

To create a larger constituency for 'Communities in Conservation' in the region, we will continue to support village councils and local youth in developing conservation action plans, understanding complexities, adding value to local efforts, and partnering with local agencies to promote conservation action and strengthen local governance.

Alakesh Malla Baruah

We support village and inter-village initiatives to conserve areas rich in biodiversity and critical to the ecology of the region by providing context-specific information and aiding collective decision-making that engenders convergence of traditional wisdom with science to design effective conservation strategies.

River
Project Districts
Project Tahsils
National Park
Wildlife Sanctuary
Central Deccan Plateau Dry Deciduous Forests
Eastern Highlands Moist Deciduous Forests
Narmada Valley Dry Deciduous Forests

Falls in Narmada-Tapi & Northern Deccan Plateau Freshwater Eco-region
Situated between 19-40' N to 21-75' N and 76-55'E to 79-20'E
Length of Growing Period (LGP) ranges from 120-150 days
The annual average rainfall ranges from 1469.21 mm to 1522.98 mm and the number of rainy days from 61 to 66

Maharashtra

In Maharashtra, we work in Ghatanji taluka of Yavatmal district and Chandur Railway taluka of Amravati district in the Vidarbha region, an area characterised by severe agrarian distress. Over the years, compact Deccan basalts, which permit very little water recharge, together with high-risk cultivation of cash crops, rising agricultural input costs, and the absence of formal credit avenues have added to the distress.

We assist village communities protect and restore their common lands, forests, and water bodies by leveraging NREGA funds. Recognising the criticality of water for agriculture and livestock, we are assisting Panchayats in Ghatanji block of Yavatmal in planning for conservation of land and water resources and streamlining the coordination and implementation of two national-level flagship programmes – National Rural Livelihoods Mission (NRLM) and MGNREGS.

Opportunities under the Jalyukt Shivar Abhiyaan (a state government initiative to alleviate drought conditions), Panchayat (Extension to Scheduled Areas) Act (PESA), NRLM, and Right to Employment Act are being leveraged to mobilise villages of an entire block undertake measures to restore the catchment of river Waghari.

In an area characterised by distress agriculture and insecure livelihoods, we are connecting the farm with the common pastures and forests as a viable larger farming system and are working towards strengthening local governance for improved management of natural resources as well as providing livelihood security.

Santosh Pawar

In the drought-prone Vidarbha region, our work in Yavatmal and Amravati districts focuses on understanding resource-use patterns, strengthening collective action at village level, and connecting farms to forests and pastures, which enables better management of natural resources and securing livelihoods.

Anjit 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 2015-16, the receipts totalled INR 428.90 million, as against the previous year's income of INR 310.80 million, an increase of 38% over the previous year.

- Of this, domestic sources accounted for INR 95.16 million (22%). The share of domestic contributions that came from government-supported agencies was INR 38.76 million (9%), while contributions of private donors were worth INR 38.28 million (9%). Interest on corpus and other receipts were INR 18.12 million (4%).
- The balance of INR 333.74 million (78%) were from foreign sources.
  - Covered by FCRA : INR 330.33 million (77%)
  - Not Covered by FCRA : INR 3.41 million (1%)

At the end of the year, the corpus fund was INR 220.27 million, and reserves and surplus amounted to INR 49.15 million.

Utilisation

During the year, the total utilisation of funds was INR 350.54 million as against the previous year's INR 266.74 million – an increase of 31.41%. The major heads of fund utilisation were:

Particulars	INR in million	Percentage
Strengthening Community-based Institutions for Conservation of Natural Resources	213.29	61
Informatics, Capacity Building, Studies, Commons Initiative	79.80	23
Administration and Recurring Expenses	43.70	12
Capital Expenditure	13.75	4
Total	**350.54**	**100**

Leverage of Funds

Besides utilising funds sourced from donors and government agencies, the organisation leveraged funds to the tune of INR 378.87 million from the following sources for implementing various activities aimed at improving natural resources.

Particulars	INR in million
NABARD	23.24
IWMP	46.45
MGNREGA	221.85
Departments such as Agriculture, Horticulture, Forest, etc.	48.28
Community Contribution	39.05
Total	**378.87**

Sharp & Tannan Associates were the Statutory Auditors for the year 2015-16.

Auditor's Report and Financial Statements for the year ended on 31st March, 2016 are available at *http://www.fes.org.in/balance-sheet-2015-16.pdf*

Acknowledgement

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The Staff

EXECUTIVE DIRECTOR
Jagdeesh Rao Puppala

PROJECT SUPPORT GROUP
Dinesh Reddy
Subrat Kumar Singh
Brajesh Kumar Dubey
Rahul Chaturvedi
Ranjit K Mohanty
Jashvant Dhameliya
Rajesh Verma
Vishnubhai Patel
Rajesh Kumar Mittal
Satish Macwan
K Sandeep
C S Sai Sudha
Anil Sarsavan
Himani Sharma
Smrity Ramavarapu
Sreyas Shobha Sai
Angha Wasnik
Rahul Mudliar
Sushant Agarwal
Rebecca Mark Rodrigues
Jayasree Sreenath
Vijayalakshmi A Kumar
Bipinbhai P Vankar

GIS CELL
Arpit Deomurari
Anandkumar Biswas
Himanshu V Rana
Jay Ashokbhai Kapatel
Maheshkumar Jadav
Sunilkumar J Parmar

PLANNING AND INFORMATION CELL
Ashok M Jani
Mayuri A Parekh
Alkesh Patel
Manish M Parsania
Anuradha Jitesh Jadav
Minity Skaria
Kunal Shah

ACCOUNTS
Sudhakar C
Thomas George
Kinjal S. Gandhi
Hemant Kumar K Patel
Vishalkumar Barot
Srinivasan S
Rajiv Nanavati
Yogeshkumar G Patel

ADMINISTRATION
Neeraj Tripathi
Apoorva C Bishwas
Rama Ramnathan
Amit S Sindhawa
Anita Khristi
Bharatbhai Patel
Rajaram Gupta
Dallubhai L Vasawa
Sanjay Parmar
Kalpesh P Bhoi

ARAVALI REGIONAL OFFICE
Brij Kishor Sharma
Shantanu Sinha Roy
Rajesh Ranjeet Tete
Kumar Rupam
Batsal Malla
Pratiti Priyadarshini
Veerendra Singh Rathore
Prakash Sharma
Sohan Lal

PRAKRITI KARYASHALA RAJASTHAN
Hasrat A Arjjumend
Ishwar Babu Bairwa
Dimpal Kumari
Virendra Singh Hada

REGIONAL CELL – NORTH-EAST
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Tapas Das
Yaranajit Deka

REGIONAL OFFICE – EAST
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Mihir Kumar Jena
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Barna Baibhaba Panda
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G. Sankar

PRAKRITI KARYASHALA – ANDHRA PRADESH & KARNATAKA
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S V Chalapathi
D R Suresh
Snehesh K D

BHILWARA TEAM
Alka Tirkey
Bandana Sambyal
Sanjeet Yadav
Rajeev Ranjan
Rupendra Singh
Amrit Pal Singh Kalra
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Prafulla Parashar
Ankita Kaul
Tejendra Kumar Meena
Rajendra Beniwal
Jitendra Kumar Rai
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Arjun Singh Charan
Kanha Ram Gujar
Parmeshwar Lal Regar
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Dileep Singh Solanki

UDAIPUR TEAM
Girdhari Lal Verma
Sushil Oraon
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Fateh Lal Bheel
Aman Jain
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Narayan S Chundawat
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Mahesh Chandra Lohar
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Heera Lal Seevna
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Ranjeet Lal Rebari
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UJJAIN TEAM
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Alok Vishnoi
Pankaj Pancholi
Ashok Chouhan
Dharmendra Singh Bhati
Dilip Kumar Hada

MANDLA TEAM
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Md. Arif
Manish Bhatt
Pradyumna K Acharya
Anoop Kumar Thakur
Qamar Fatima
Mithun Bisen
Samson David
Suryasing Soren
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Sachin Dubey
Amar Singh Kusare
Rajesh Kumar Yadav
Keertan Baghel
Ganesh Prasad Singroure
Dheeresh Kumar Namdeo
Ramkumar Yadav
Umesh Kartikey
Puneet Shukla
Mohammed Ayub Khan

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Swapnasri Sarangi
Pradeep Kumar Maharana
Dawa Pemba Sherpa
Dron Kumar Chandrakar
Mashkoor Alam Khan
Pratyush Mohanty
Mohon Kumar Naik
Pheiray Rinshang
Ashok Satpathy
Ashwini Pati
Niranjan Sahoo
Mayadhar Mishra
Laxmidhar Pradhan
Ranjan K D Samant
Prativa Mohapatra
Anand Chandra Pati
Bibhudendra Dehury
Bikash Das
Naresh Chandra Pradhan

KORAPUT TEAM
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Kartik Chandra Prusty
Pradip Kumar Mishra
Dushasana Mahanta
Dilip Kumar Khosla
Raghuram Muthai
K Murali Krishna
Trinath Guntha

MADANAPALLE TEAM
Shreerang K Hegde
Narasimharao S
Soumya Bhat
V Ranga Swamy
Umamaheshwara Rao
S Vijaya Sekhar
E Sahadevan
Ramanjaneyulu K
S Venugopal
C Ram Mohan
K P Sree Ramulu
Ameer Basha Shaik
P. Gangi Reddy
Manisudha. K
Subbireddy Gudla
Sreenivasulu Pulundala

CHINTAMANI TEAM
P Vijay Kumar
Shreekanth B Bhat
Shivaraja Shetty
Nikhatparveen M Khatib
S Sudheer Kumar
T Kiran
J Mahender Reddy
Shilpa S Nalavade
Vinay Sankar
Seema V Shastri
Avinash Chowdhary
Nayan Tej Reddy N
Adithi N Rao
M Uthanna
Chandrasekhar Kannan
C Sowbhagya
C Narayanaswamy
S Venugopal
C Krishnappa
G B Leelavathi
G A Nirmala
S G Gopi
Y N Narashimappa
K Narasimhappa
Muniraja M

DAHOD TEAM
Chetana Nand Jha
Vikramsinh Solanki
Swapnil Yadav
Sanjay Khandhar
Jagdish D Chad
Rahul Bhadoria
Biplab Shankar Dey
Subhash J Purohit
Karansingh Bhuria
Manabhai Damor
Baghabhai R Khant
Devabhai Gambhalya
Vipulbhai Donda
Ashok Kumar Dangar
Naresh Kumar Chadar
Sureshkumar Mahavar
Dinkarbhai B Panchal
Shamji K Dama
Ishwar T Sargara
Pratap Singh

YAVATMAL TEAM
Satyajit Jena
P Sreehari
Dinesh Baliram Hundekar
Santosh Nathu Pawar
Govind Aanat Pednekar
Vishal Tulsiram Chavhan

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International Society for Ecological Economics

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Arpit Deomurari

Contacts

FES

FOUNDATION FOR ECOLOGICAL SECURITY

PB No. 29, Anand 388 001, Gujarat, India
Tel: +91 (2692) - 261402, 261238, 261239
Fax: +91 (2692) - 262087
email: *ed@fes.org.in*
Website: 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: Dinesh Reddy / Subrat Singh
Tel: +91 (2692) - 261402, 261238
Fax: +91 (2692) - 262087
email: *dinesh@fes.org.in / subrat@fes.org.in*

COURIER ADDRESS
A-1, Madhuram Park, Near Shrinathji Park,
Ganesh Crossing, Mangalpura Road,
Anand - 388 001, GUJARAT

NEW DELHI OFFICE

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

REGIONAL OFFICES

ARAVALI REGIONAL OFFICE (WEST)
Contact: B K Sharma
Tel: 01482 - 264470 (O), (M) 09413316130
A-160, Near Subhas Nagar Government
School, Subhas Nagar, Bhilwara - 311 001,
RAJASTHAN
email: *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
email: *papagnicell.fes@ecologicalsecurity.org*

REGIONAL CELL – EAST
Contact: Meena Das Mohapatra
Tel: 0674 - 2554498 (O), (M) 09437232123 /
09437576223
VIP-130, Ekamra Vihar, IRC Village,
Bhubaneswar - 751 015, ODISHA
email: *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
email: *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
email: *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
email: *dahod.fes@ecologicalsecurity.org*

KARNATAKA

CHINTAMANI
Contact: P Vijay Kumar
Tel: 08154 - 290690 (O), (M) 09449856526
Lakshmi Narasimhaswamy Nilaya, House No
535, 1st Main, Kanampali Road, Near Sudhakar
Layout, Chintamani - 563 125,
Dist. Chikkaballapur
email: *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
email: *yavatmal.fes@ecologicalsecurity.org*

MADHYA PRADESH

UJJAIN
Contact: D. Mondal
Tel: 0734 - 2527775 (O), (M) 09425195541
459, 1st Floor, Sethi Nagar,
Ujjain - 456 010
email: *agar.fes@ecologicalsecurity.org*

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

ODISHA

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

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

RAJASTHAN

BHILWARA
Contact: Alka Tirkey
Tel: 01482 - 264470 (O), (M) 09829778705
A-160, Near Subhas Nagar Government
School, Subhas Nagar,
Bhilwara - 311 001
email: *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
email: *udaipur.fes@ecologicalsecurity.org*

PRATAPGARH
Contact: R N Patel
Tel: 01478 - 221570 (O), (M) 09414651080
C-15, Jawaharnagar, Opp. District Hospital,
Pratapgarh - 312 605
email: *pratapgarh.fes@ecologicalsecurity.org*