



FES

FOUNDATION FOR ECOLOGICAL SECURITY

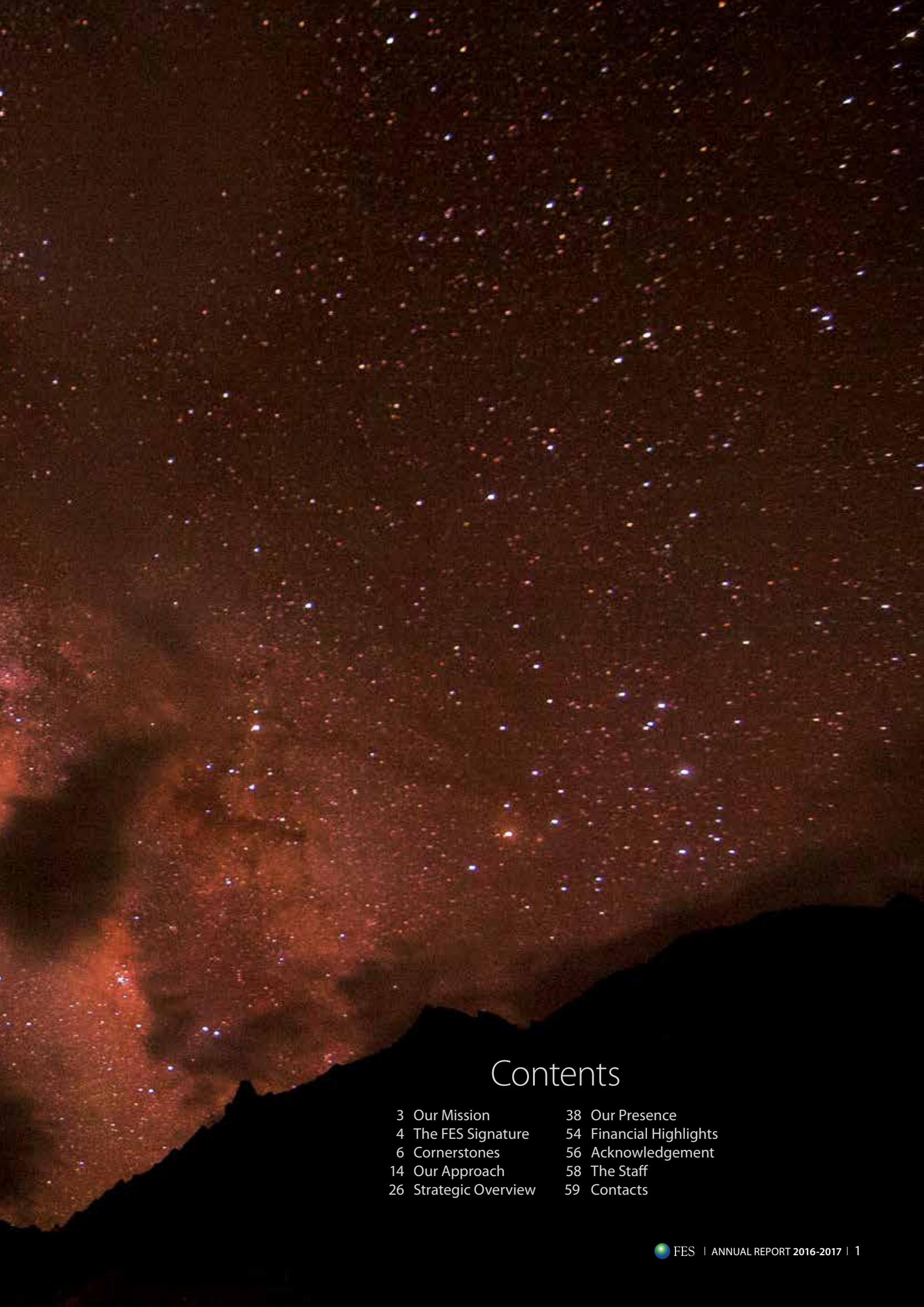
ANNUAL REPORT
2016-2017





COVER: Lichens are a complex life form of symbiotic partnership of two separate organisms, a fungus and an alga. While the abundance of foliose and fruticose forms of lichens indicates a pollution-free environment, they also provide a congenial substratum for flowering plants to survive.

Cover Photo: Arpit Deomurari



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(Ex-officio Member Secretary)

* Usha Thorat is the Chairman from June 2017.



Our Mission

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

To this end FES:

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

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

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

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

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

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

The FES Signature

The Foundation for Ecological Security (FES) works towards centre-staging ecological agenda alongside priorities of economic growth, reorienting progress with a perspective of conservation and social justice.

FES translates such a world view into action by working on three fundamental dimensions of rural life:

- > Bringing an ecological leaning to the dominant views of 'natural resource management' and 'rural development' where 'nature and natural processes' are often disregarded or unappreciated.
- > Advancing the 'Commons paradigm' in the governance of natural resources, as most bio-physical resources are common pool resources managed well under Common Property Regimes.
- > An interdisciplinary approach with equal emphasis on ecological well-being, social justice, and access to economic opportunity, and the unique spaces that such an interconnected world view offers.

On the ground, FES arranges for secure tenure on common pool resources; assists village communities in building on their existing norms (and wisdom) of village

life and surfacing attendant duties and responsibilities; and lastly, restoring the degraded ecosystems by channelling public funds. Working with local governments (Panchayats) as partners, FES helps decentralise the top-heavy approach to environmental management and demonstrates the strength of local communities to collaborate and deploy local knowledge to cost-effectively manage complex problems involved in managing common lands and water bodies.

FES' strategic action areas include

- > Engaging in informed and collaborative action directly, and with government and other partners, to restore and manage forests, pastures, water bodies, and contribute to better economic returns.
- > Highlighting the capacities of local communities in managing shared natural resources to build evidence and influence public policy.
- > Harnessing the potential of information systems and technology for improving civic engagement, scaling up, and sound use of public funds.
- > Advancing understanding on ecological health

Awards

monitoring, socio-ecological thinking, property rights, polycentric governance, mapping and information technologies, and economic valuation, to elevate the debate and influence decision making.

- > Convening and connecting the experiences and expertise within and across sectors, such as forests, pastures, and water bodies, to advance work on systemic drivers and add momentum to large-scale change.
- > Building a groundswell of public opinion to debunk the notion of 'wastelands', celebrate Commons, and highlight the significance of nature conservation for rural economies and decentralisation as a cost-effective proposition for governance.

Assisting restoration of **5 million acres** of degraded common land, touching **7.7 million lives**, and strengthening **13,678 institutions** at village and habitation level

HCL Grant 2017 (Environment Category)



Awarded the HCL Grant 2017 in the Environment category for leveraging the use of information and technology to strengthen decentralised institutional arrangements for conservation of natural resources.

Vodafone Mobile for Good Awards 2016



Awarded the Vodafone Foundation's Mobile for Good Award for developing Composite Landscape Assessment and Restoration Tool (CLART), which guides planning conservation measures for surface and groundwater.





Cornerstones

As in other parts of the world, degradation of natural resources, extreme poverty, and erosion of customary arrangements of local governance are some of the key challenges facing rural communities in India.

In such a scenario, FES brings in three fundamental dimensions to the discourse on nature and people,

- > A world view that locates human society as a part of the larger ecological whole.
- > Commons as a property regime for managing shared resource systems such as forests, pastures, and water.
- > A systems approach that builds on interrelationships between human and natural systems, and the social, economic, and ecological domains.

In translating such a world view at ground level, FES,

- > Restores and conserves forests, pastures, and water bodies that are under degradation.
- > Revives village institutions by building on the customary norms of rural life and their practices of managing and governing natural resources, and enables secure tenure over community lands in favour of village communities.
- > Revitalises the economic opportunities of communities directly dependent on natural resources, the poor in particular, and assists communities tailor their resource use to suit the ecological capacity of an area.



Ecological Restoration

FES works towards conservation of nature and natural resources, Commons in particular, through collective action of local communities. Working at a landscape level, defined by ecological and social boundaries and by emulating natural processes, the efforts are aimed at restoring degraded lands and stressed ecosystems. In doing so, the traditional wisdom, the rationale if not the content, of rural communities forms the bedrock on which restoration and managerial plans are crafted.

Modern knowledge on, say, recharge of groundwater, assessments of harvesting patterns, or usage of spatial technology are weaved in to complement the traditional know-how and draw up conservation plans to improve ecological health, biodiversity, and habitats. FES also works with communities to promote dialogue on ecological thresholds and trigger self-regulatory action on imprudent practices such as growing water-intensive crops in dryland areas and extracting forest produce beyond regenerative capacity.



Dawa Pemba Sherpa



We bring an ecological slant to the practice of 'Natural Resource Management' and 'Rural Development' in India – where nature and natural processes are often disregarded or unappreciated.

Mrudul Tripathi



We help estimate both the availability and use of biomass, water, and biodiversity so as to determine ecological thresholds and bring to the fore discussions on judicious use of resources.

Arpit Deomurari



We highlight the value of birds, insects, amphibians, and reptiles for robust farming systems vis-a-vis pollination and pest control, and build information systems on flora and fauna to promote conservation.

Paul Nordmann



Local Governance

FES builds on the existing social fabric of rural life and traditional forms of local self-governance institutions and nests them within the Panchayats. The engagement manifests in inclusion of all residents, marginalised groups of women and the poor, in particular; collective action and decision making; and crafting self-regulating roles and responsibilities at a village level.

FES assists rural communities engage with local government officials to secure legal rights to access and manage their common lands and water bodies, which enables village communities to invest in restoring the resources and evolving rules and regulations to manage and govern forests, pastures, and water bodies.

An enabling environment in terms of a supportive district and state administration builds trust and momentum, unlocks the latent potential of village communities to take initiative, and helps hone mainstream programmes to suit local contexts.



Gabriel Diamond



We bring a Commons paradigm to the governance of shared natural resources to highlight collective ownership as a promising property regime, alongside centralised or privatised ownership.

S S Singh



We work on strengthening Panchayats and nesting village-level institutions under them, so smaller institutions benefit from the constitutional recognition of Panchayats for natural resource governance.

S S Singh



We support village institutions play a critical role in mediating between Nature and People, by bringing in forms of collective governance for resource management, and keeping individual greed in check.

Mark Katzman



Enhanced Livelihoods

FES' efforts lie in locating natural resources within the prevailing economic and social dynamics in rural landscapes and drawing strategies aimed at improving economic opportunities that are both within the ecological thresholds and benefitting the most needy.

FES revitalises two fundamental components of rural economy for both present and future generations – soil, water, nutrients, biomass, and biodiversity as critical biophysical ‘infrastructure’, and rural social fabric and collective action as the social ‘infrastructure’. Improved collective action leads to cost-effective use of public investments, improved leadership, and reduced conflicts. Resilient ecosystems perform critical functions and provide services, most importantly, water. Together they translate into significant economic benefits at local to national levels.

In order to trigger debates on regulating consumption, FES engages with local communities to identify pathways that could offer scope for sustained ecological, social, and economic outcomes.



Bijay Kumar Toppo



We address 'right to employment' (as under MGNREGA) alongside 'rights over resources' to support the creation of durable community assets (forests, pastures, and water bodies) and democratise Panchayats.

Kumar Rupam



We engage with local communities to understand the social-ecological underpinnings of rural production systems, and how they can better contribute to rural livelihoods of households.

Jagdeesh Rao



We work with communities to strengthen perspectives on demand and supply side management as well as long-term ecological and economic effects of exploitative resource use.

Nico Therin

Our Approach

Rapid loss of biodiversity, acute water scarcity, failing soil health, and receding natural forests are some of the most critical problems facing the world today. The consequences of such degradation are also a matter of grave deprivation for more than 300 million rural poor in India.

In such a scenario, in its work with rural communities and their natural surroundings, FES

- > Strengthens and celebrates the relationship that exists between people and their natural habitat, by rebuilding on customary norms and practices of resource management and reviving village institutions that are eroded or are in the process of erosion, while also challenging such institutions to be more democratic and inclusive, of women and the poor in particular.



- > Enables the transfer of title over forest lands and pastures. Modern views of property rights are challenged to include the local views of access, management, and harvest so as to enrich the notion of 'rights' and enable rural communities to match modern notions on property with the traditional concepts of custodianship and use.
- > Restores and conserves natural habitats, biodiversity, and ecological functions in areas where the forests, pastures, and water bodies are under degradation by channelling public funds. Modern knowledge on recharge of groundwater, assessments of forest cover, or usage of spatial technology are weaved in to complement traditional wisdom.





Forests in a Landscape

One of the major drawbacks in the management and governance of forests has been to view forests in isolation, from both, external demands and forces, and the influences that forests wield in turn. Such a sectoral approach results in arguments and mindsets that pitch conservation and development as well as forests and people against each other.

However, locating forests within the larger ecological, social, and economic landscape, on one hand, helps management of forest resources, considering the larger context in which forests are situated, and on the other, highlights the positive contribution that forests make through key ecological functions such as improved transfer of nutrients, longer periods of water flows, retention of moisture, and better pollination and pest control.

Although the critical role that forest ecosystems perform and the range of services they provide to human consumptive requirements have gained increasing recognition in research, its translation to policy and practice requires considerable attention. The challenge is to move beyond the dominant conservation and protectionist framework, and to include socio-economic outcomes in policy articulation and decision making in the domains of forest conservation, agriculture, and rural development.

FES works with forest-dependent communities to improve ecological functions and services, which are the backbone of agriculture- and livestock-dependent communities. By working with all communities inhabiting contiguous stretches along a watercourse or hill-range, FES highlights the importance of organic links (such as soil, moisture, nutrients, biomass, and biodiversity) between forests/other common lands and associated production systems in the landscape (such as agriculture, livestock-keeping, and fisheries). By connecting forest ecosystems with the larger land use in a given area, FES helps build a larger farmer constituency for forest conservation, where the continuum of forests, agriculture, and economic opportunities are appreciated together.



We work towards influencing the mind-set of rural communities as well as decision makers on centre-staging the provision of water as the fundamental conservation objective of governance and management of forests.

Centre-staging community stewardship in the management of forests, we also facilitate inter-village multi-actor platforms for preparing conservation action plans across villages at a landscape level, as natural boundaries of forests or water courses go beyond human settlements and it is imperative that local communities arrive at inter-village agreements to safeguard resources.

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

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

To highlight the significance of forests in terms of hydrology, nutrients, pollination, and pest control, and thereby highlight the value of forests within the discussion on improvement in agricultural productivity, we build platforms to bring together rural communities, academia, government officials, and development practitioners.



Farming and Farming Systems

Dominant trends of increasing income from agriculture are often aimed at intensification of production through mono-crop cultivation, irrigation, application of fertilisers, and pest control. Often, such approaches disconnect farming from its larger farming system. 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.

FES' work is primarily situated in the dryland, rainfed areas across the country where water scarcity, failing soil health, and distress agriculture are common. Our effort is to secure livelihoods of rural communities by meeting their subsistence needs, increasing farm incomes, and reducing farm expenses. We help in building on the critical linkages between forests, common lands, and water bodies with agriculture and livestock so that farmers position their farms within the entire landscape and work towards managing all the components together.

The focus of FES is to position farmers' decision making at a 'system level' by integrating different components such as – forests, common lands, and water bodies to the farm; and by challenging decision making on the interface of crop choices and livestock needs; crop choices and water availability; and crop choices and diversification. This helps capture the benefits at a system level – of biodiversity and flow of nutrients and water from beyond the farm; matching consumption patterns within the ecological thresholds; reciprocity of livestock and agriculture production; and conserving hedge and forest habitats to improve pollination and control of pests in farm production. Such approaches include promoting diversified cropping strategies and less water-demanding crops so as to improve incomes, assure farm produce and fodder availability, and reduce cost of cultivation.



We highlight the high dependence of farm-level viability on the stability of the larger farming system as water and nutrients flow from beyond the parcels, and so do pollinators and pest predators.

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

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

Challenging dominant perceptions of groundwater as private property, we trigger discussions on seeing groundwater as a common property by preparing village communities in estimating and comparing the overall water availability and their consumptive needs. Along with promoting initiatives like sharing of water from wells and a range of less water-intensive agriculture crops and practices, we trigger discussions around alternate ways of reducing water consumption.

To influence better utilisation of public funds for improved natural resource management, water conservation, in particular, we have developed a technology product that could be handled on a mobile device even on offline mode. Complex algorithms were eventually presented in a simplified colour code to guide the less literate local residents on deciding where to plan measures to recharge groundwater and places where it is advisable to store as surface water.



Working with Panchayats

The decision of the XIV Finance Commission to allocate resources directly to Panchayats, the substantial funds that can be accessed by local communities under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), and the mandate to evolve Gram Panchayat Development Plans (GPDP), together, have added impetus to the larger trend of decentralised governance as reflected through 73rd Amendment to the Constitution. Besides helping build the democratic character of the Panchayats, the bedrock of our governance architecture, such provisos enable Gram Panchayats to engage in determining local development, improving planning and implementation, and enhancing local stewardship, knowledge, and skills.

For improved governance of natural resources and other dimensions of rural life, in addition to the much-needed financial investments, measures aimed at improving collective action, leveraging the latent strength of local communities, reviving civic engagement, and bridging knowledge systems are needed at sub-Panchayat, Panchayat, and block level to build vibrant democracies.

FES assists rural communities committed to restoring ecosystems, in enhancing collective action, democratising the functioning of local institutions, and crafting institutional spaces to safeguard the interests of the poor. Adding impetus to the government's vision of 'Minimum Government, Maximum Governance', we work towards strengthening local self-governance where rural citizens are placed as active stewards of their area. Our work also includes strengthening collaborative platforms of community institutions, government functionaries, academia, and NGOs to jointly deliberate on issues of conservation and use of natural surroundings. With recent advances in information and technology systems, we are also bringing together location-specific information to help Panchayats determine local priorities and access their entitlements.



We strengthen interaction between Panchayats and village institutions so as to draw up long-term plans for development of natural resources, recognise customary practices of land use, and ensure security of tenure.

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

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

To enable Gram Panchayats respond better in identifying citizens eligible under various government programmes, schemes, and entitlements, we have developed a versatile 'GIS-Enabled Entitlement Tracking (GEET) system' – which could take data from multiple sources, both manual and electronic, map the eligible persons against the available programmes, and inform the decision makers to respond and track whether the person has received the benefits. Importantly, it can help development practitioners reach the most needy.

Aiming to increase reach to all villages and Panchayats in a block, we have mobilised about a third of the villages and Panchayats at block level in restoring natural resources. We are also exploring if we could influence Panchayats to improve their performance in other sectors, such as education and health, by training and linking local cadre, government extension workers, and Panchayat representatives in planning and responding to local needs and aspirations.



Tenure over Common Lands

Over the last 50 years, common lands in India have reduced by 31-55%. Stemming from a widely held view that local communities cannot manage common lands effectively and equitably, and combined with factors such as lack of recognition of customary tenure and the erosion of local institutions, such lands were either neglected, legislated out of local governance, diverted to other use, or converted to individual property. The challenge, then, is to strengthen community institutions and their ability to self-govern, as much as enabling the transfer of tenure rights to them.

In its work, FES recognises the customary governance of forest, land, and water as shared resources by local communities and strengthens capacities of local institutions in evolving rules and regulations. To assist local communities gain access to common lands, FES works with the available administrative arrangements and legal provisions, such as natural resource management committees and grazing land development committees as sub-committees of Panchayats, the Gram Sabhas under Panchayats, and Forest Rights Act.

FES also works with governments to enable the transfer of 'wastelands' to village bodies to institute better local governance. Considering the increase in livestock population over the last decades, FES also helps village communities claim for an increase in the area designated as pastures. It also assists local communities and Panchayats map boundaries of their common lands and have them registered in 'Prohibitory Order Books' or the 'Immovable Assets Register' at Panchayat level, to prevent diversion of common lands to other uses.

In the case of forest lands where the Forest Rights Act is applicable, we have assisted local tribal communities engage with the administration and file for collective rights over the lands, and prepare plans to manage the forest land and their resource use.



We assist state governments evolve policies and programmes for improved governance of Commons where land tenure in favour of local communities, institutional design at village and Panchayat level, and programme architecture for ecological restoration form key tenets.

To strengthen customary use regimes on common lands, we assist with securing their recognition under modern formal laws through provisions, such as Forest Rights Act for forest lands, lease arrangements and entry into Prohibitory Order Book for revenue 'wastelands', and entry into Panchayats assets register for grazing lands. While securing tenure on resources provides security to make long-term investments, working in parallel on strengthening the institutions and restoring the degraded land leads to value creation.

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

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

To position property rights on Commons, we played an active role in its inclusion as an important indicator for achieving Sustainable Development Goals and as a critical part of addressing climate action at national level. As 25% of the landmass in India are Commons, assigning property rights and devolving management to local Panchayats and Gram Sabhas and restoring such lands could contribute significantly to India's Nationally Determined Contributions.



Rights to Employment and Resources

Developments such as the emphasis on decentralised governance in the 73rd Constitutional Amendment, legislations such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), programmes like the National Rural Livelihoods Mission (NRLM), indicate a shift in preoccupation from centralised and overarching solutions to more decentralised community-based engagement for addressing issues of environmental degradation, livelihood security, and community engagement.

These Acts and programmes offer scope to dovetail available resources, revive the democratic functioning of local institutions, alleviate poverty, address issues of social justice, and restore degraded ecosystems. Also, such financial investments in ecological restoration are much needed to address the challenges of failing soil health, depleting groundwater levels, and loss of biodiversity in the country.

However, the vast allocations under MGNREGA are widely criticised as wasteful expenditure for not creating durable community assets and being fraught with gaps in implementation. Besides addressing the gaps in design, information, and skills to help judicious planning and use of resources, a key priority of FES is to address ‘institutional deficiency’ by making Panchayats central in assuming leadership in the sound implementation of the programme.

Specifically, FES aims to leverage the provisions under the 73rd Amendment, Forest Rights Act, and MGNREGA, to create productive assets such as forests, pastures, and water bodies critical for sustenance of agriculture, biodiversity conservation, and carbon sequestration, such that we achieve larger outcomes of meeting Nationally Determined Contributions on addressing climate change and Sustainable Development Goals. FES focuses on addressing the alignment of ‘right to employment’ with ‘right to resources’ (of access and benefits) and helps create durable community assets, such as forests and pastures, for the common good and for the present and the future.



We enhance capacities of Panchayats and villages in preparing long-term conservation plans, provide technical support for participatory and transparent implementation, and introduce monitoring systems for purposeful use of public funds.

For effective use of funds under MGNREGS to restore collective assets such as forests, pastures, and water bodies, we enter into agreements with governments where they pass the funds to Panchayats and wage seekers and we assist Panchayats improve the enrollment, plan for restoring natural resources, and train ‘mates’ on measurements and record-keeping. Such agreements help leverage the strengths of villages, NGOs, and governments to apply funds to context-specific needs, address gaps in capacities, and reach a large scale of villages.

To improve democratic functioning of Panchayats, we make ‘natural resource management’ a platform for improving the effectiveness of collective decision making in the implementation of MGNREGS by assisting village institutions and Panchayats prepare long-term plans and assume roles and responsibilities for overseeing the activities – the critical steps necessary for improving organisational effectiveness.

For effective planning of surface and groundwater conservation under MGNREGS, the Composite Landscape Assessment and Restoration Tool (CLART) was developed. Besides recommending location-specific measures that can be deciphered easily by rural communities, CLART helps prepare the design and cost estimates of water harvesting measures, enabling local communities to submit annual plans to the government with little external help.

To maximise the long-term impact potential of MGNREGS, we highlight the need for viewing forests, pastures, and water bodies as durable community assets and assigning the funds under MGNREGS to create such assets in a purposeful programmatic manner in villages across the country. Working with the state governments of Rajasthan and Andhra Pradesh, we helped design guidelines and programmatic initiatives on restoring Commons under MGNREGS.

Strategic Overview

The strategic action of FES is designed to influence informed and widespread action on nature conservation, natural resource management, local self-governance, and sustainable livelihoods.

The strategic areas are:

- > Informed and collaborative action with government, community-based organisations, and NGOs to restore and manage forests, pastures, water bodies, and contribute to better economic returns.
- > Highlight the strength of local communities and their institutions in managing shared natural resources to build evidence and influence widespread action.
- > Harness the potential of information technology and decision support systems for improving civic engagement, scaling up, and sound use of public funds.
- > Advance collaborative action on ecological health monitoring, socio-ecological thinking, property rights, polycentric governance, mapping and information technologies, and economic analyses to elevate the debate and aid decision making.
- > Convene and connect the experiences and expertise to promote interdisciplinary decision making and add momentum to large-scale change.
- > Build a groundswell of public opinion through media and communication to debunk the notion of 'wastelands' and celebrate Commons as a part of the solution to address climate action and Sustainable Development Goals.



Enhancing Capacities

To strengthen local stewardship of natural resources, *Prakriti Karyashala* (Rural College) was set up to address the gaps in learning opportunities for rural communities, village institutions, Panchayats, non-governmental organisations, and local government officials. The aim is to offer large-scale, cost-effective, and quality programmes to enhance local capacities for leading and implementing initiatives for the effective management and governance of shared natural resources.

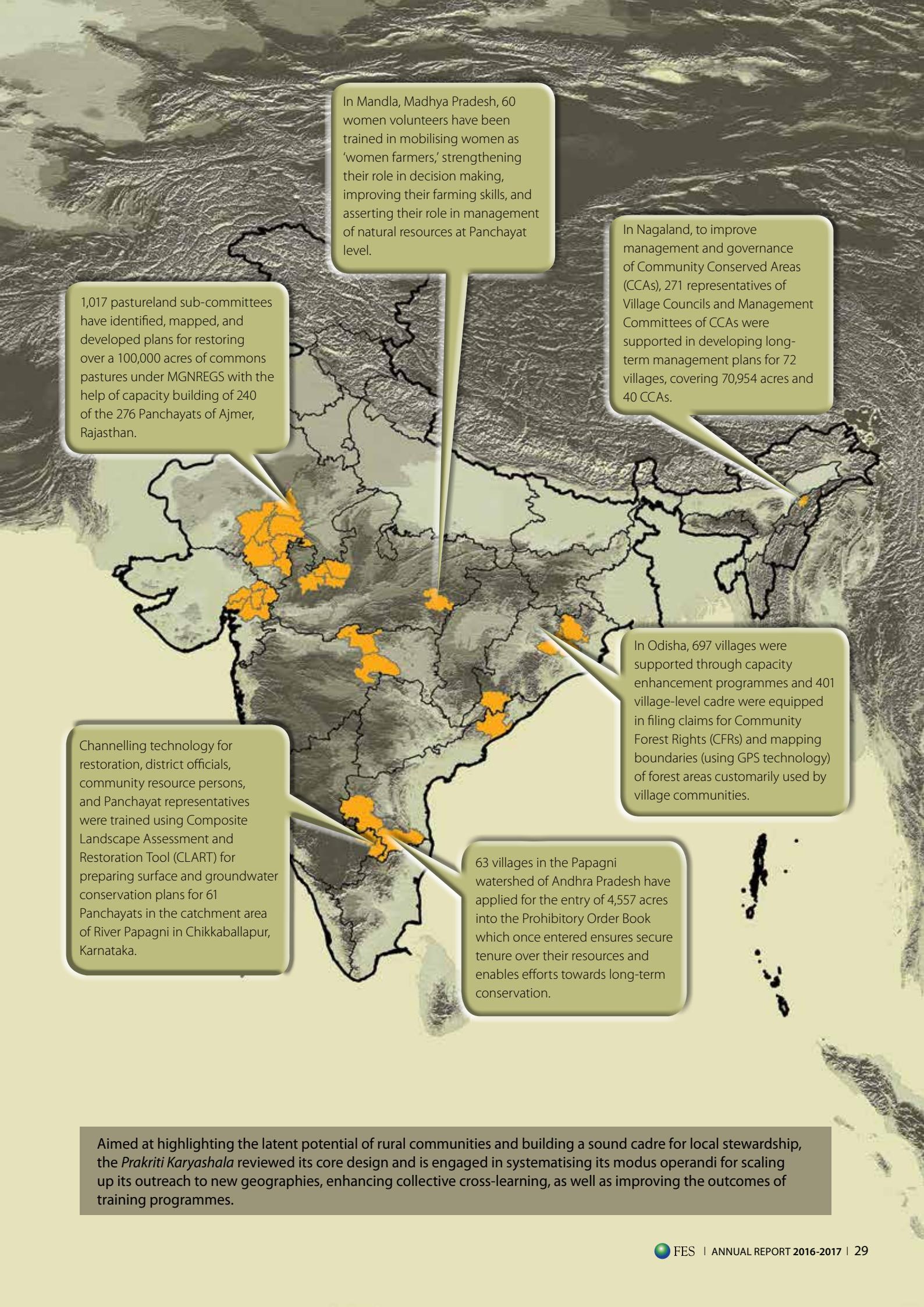
The Colleges apply experiential and experimental learning methods, while also being tailored to align with government programmes. Held sequentially, training modules are designed to help field-level application and reinforce learning outcomes. The modules cover a range of topics including filing claims on community lands, better planning and implementation of natural resource management through MGNREGS, and linking eligible people with government departments to avail social security benefits.

The *Karyashala* has found recognition for the quality of programme content, its delivery, and the exchange and learning environment created for village representatives. To complement these efforts, which are translating into building a rural cadre capable of sound ground-level action and aiding expansion to neighbouring areas, FES has tied up with NGOs and milk unions to enhance capacity building efforts by the administrative architecture of the organisations to guide field-level action. The *Karyashala*'s design and modus operandi enable it to function as a core strategy for collaborating with partner agencies and expanding community action.

In the coming years, the *Karyashalas* have a key role to play in the form of a guided process of repeated capacity building inputs, strongly embedded in community action, and supporting FES' mobilisation efforts through a combination of campaign, collaboration, and capacity building.

Kumar Rupam

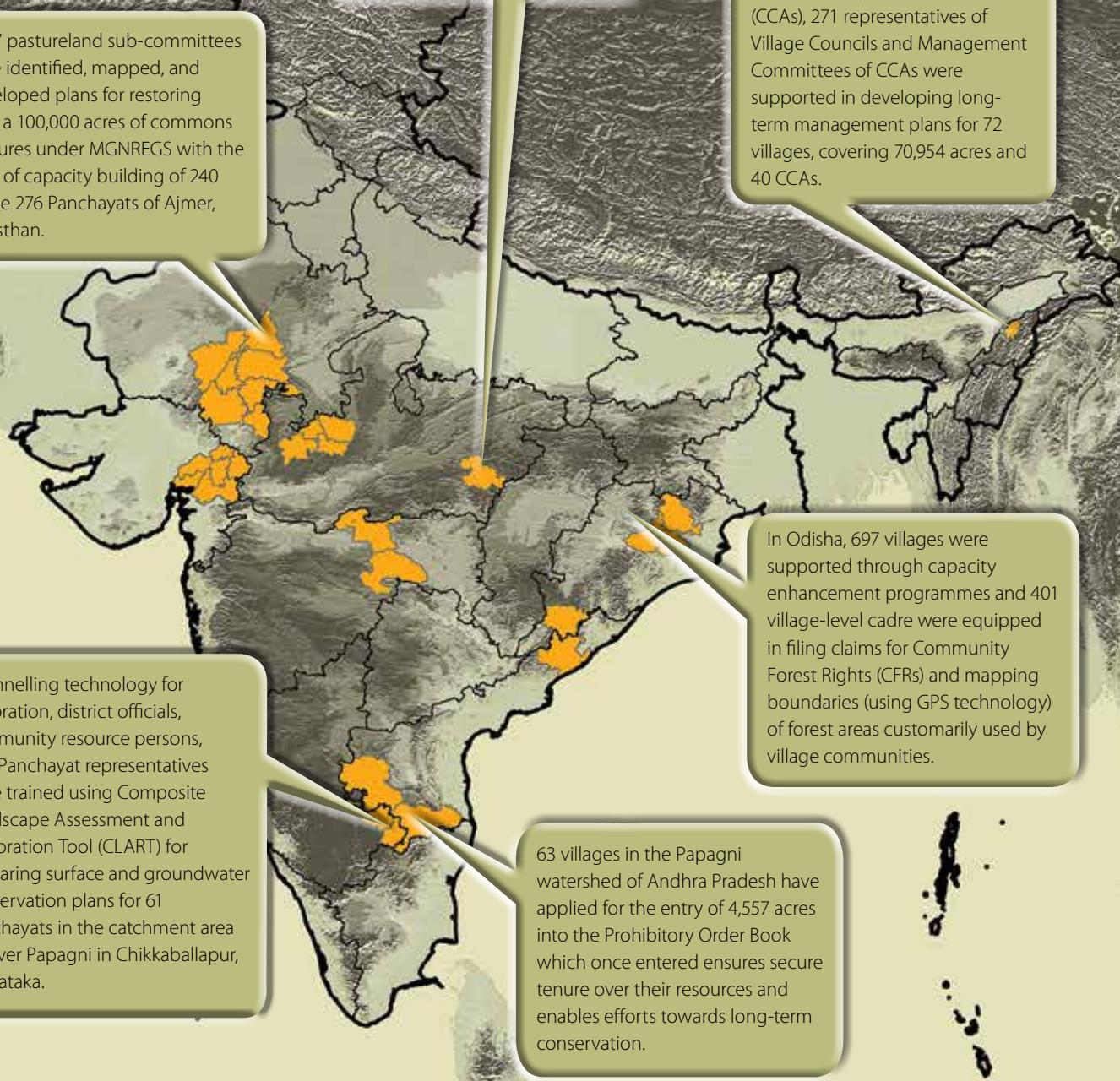




1,017 pastureland sub-committees have identified, mapped, and developed plans for restoring over a 100,000 acres of commons pastures under MGNREGS with the help of capacity building of 240 of the 276 Panchayats of Ajmer, Rajasthan.

In Mandla, Madhya Pradesh, 60 women volunteers have been trained in mobilising women as 'women farmers,' strengthening their role in decision making, improving their farming skills, and asserting their role in management of natural resources at Panchayat level.

In Nagaland, to improve management and governance of Community Conserved Areas (CCAs), 271 representatives of Village Councils and Management Committees of CCAs were supported in developing long-term management plans for 72 villages, covering 70,954 acres and 40 CCAs.



Channelling technology for restoration, district officials, community resource persons, and Panchayat representatives were trained using Composite Landscape Assessment and Restoration Tool (CLART) for preparing surface and groundwater conservation plans for 61 Panchayats in the catchment area of River Papagni in Chikkaballapur, Karnataka.

63 villages in the Papagni watershed of Andhra Pradesh have applied for the entry of 4,557 acres into the Prohibitory Order Book which once entered ensures secure tenure over their resources and enables efforts towards long-term conservation.

In Odisha, 697 villages were supported through capacity enhancement programmes and 401 village-level cadre were equipped in filing claims for Community Forest Rights (CFRs) and mapping boundaries (using GPS technology) of forest areas customarily used by village communities.

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

Studies and Documentation

In order to improve rigour in field action, build evidence on outcomes, and provide knowledge insights for good decision making, FES undertakes studies to enhance the understanding of nature, interactions between natural and human systems, improved governance of shared natural resources, and their contribution to human well-being. Building on local wisdom, the studies are designed as an exchange of knowledge systems to collectively search for appropriate solutions and inform community-level action. Besides ground-level action, such an exchange helps provide valuable feedback to pose questions for further exploration as well as help communicate the emerging issues and engage on policy imperatives.

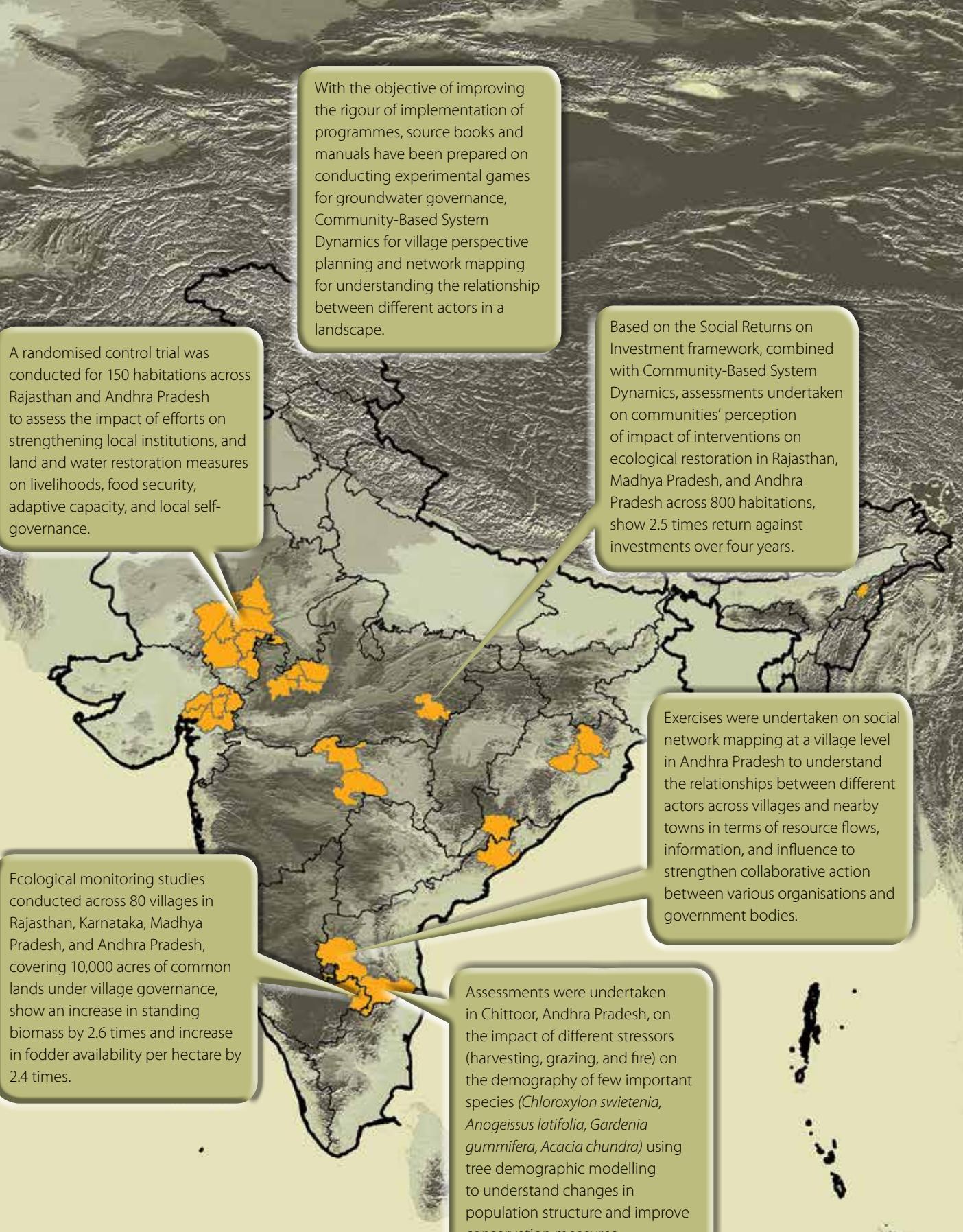
Conducted both internally and in collaboration with reputed research institutions, the studies apply innovative approaches such as socio-ecological thinking, system dynamics, experimental games, polycentric governance, and quantification and valuation techniques. Besides advancing conceptual understanding, it also involves

developing frameworks and tools to promote collective action, influencing behavioural changes and decision making for landscape-level conservation action. At another level, advances in regulatory and policy environment are analysed to help better translation on the ground, bring to surface the gaps, and promote synergy between complementary initiatives.

Over the years, FES has developed good evidence across geographies on changes in ecological health (including their quantification and valuation) and linkages between forest resources, institutions, and economic opportunities. While new initiatives are also documented to aid reflection and guide further improvement, evidence-based results are shared for wider dissemination.

In the coming years, the efforts would be aimed at elevating the profile of Commons as sound propositions critical for addressing climate change, improving local democracies, and improving access to economic opportunities.





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

Collaborations

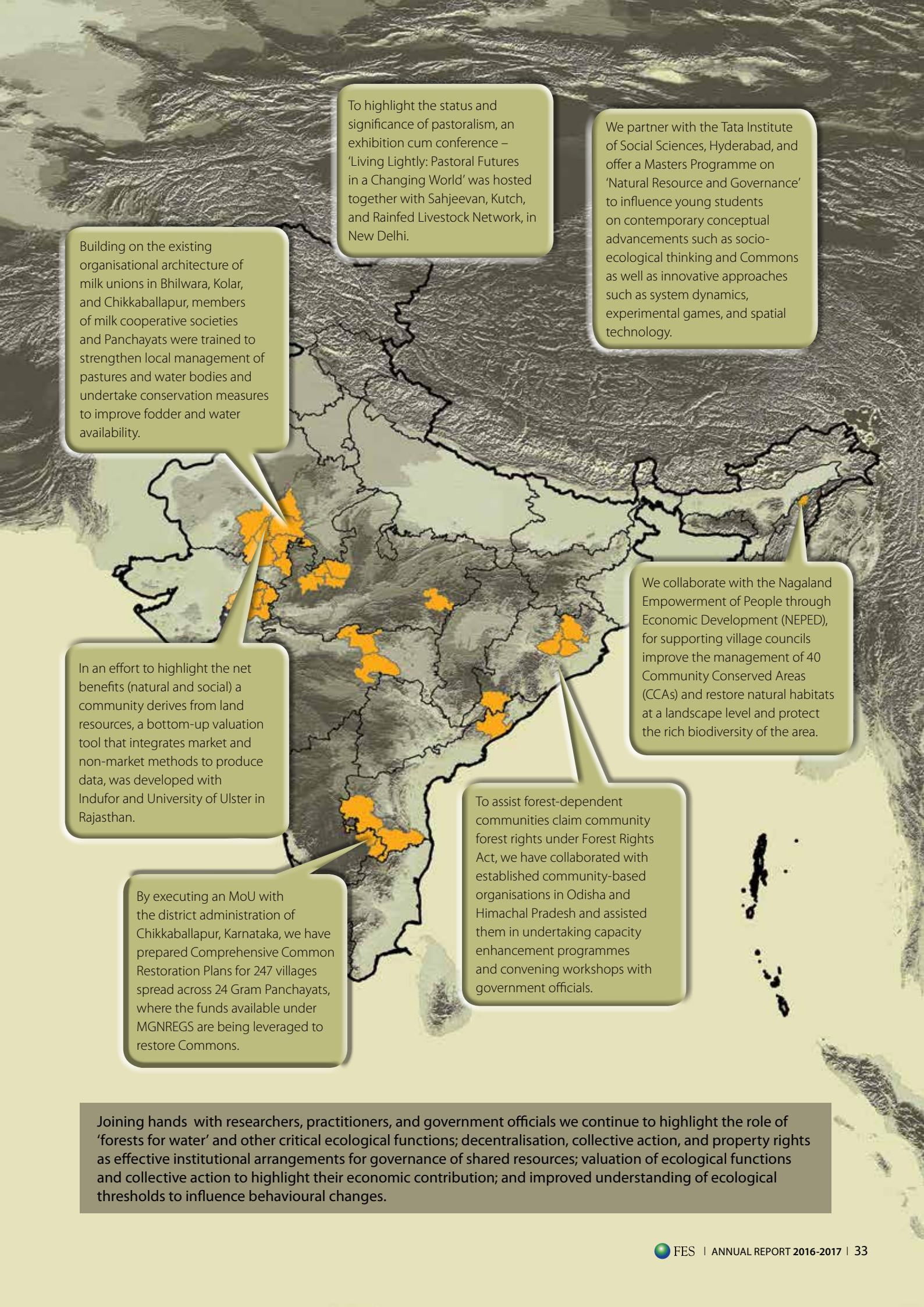
In informing its conceptual design, extending the practice, or elevating the debate on nature conservation and Commons, FES views collaborations as an integral part of its work. Collaborative action with researchers, practitioners, and government officials helps us elevate the role of forests as sources of water (and other critical ecological functions); decentralisation, collective action, and property rights as effective institutional arrangements for governance of shared resources; valuation of ecological functions and collective action to highlight their economic contribution; and improved understanding of ecological thresholds to influence behavioural changes.

Our partnerships with NGOs (and networks) and milk unions have helped expand work on the ground where the reach of the respective bodies provides backbone support for extending work on Commons to village communities. We partner with groups of organisations to help implementation of policy developments, such as Right to Employment Act and Forest Rights Act.

We work with thematic groups to advance thinking on neglected domains, such as pastoralists and small ruminant livestock keepers, community property rights, and groundwater management. Our partnerships with national and international academic and research bodies are centred around conceptual issues such as socio-ecological thinking, common property regime, natural habitat conservation, and polycentric governance and on operationalising approaches (at local level), such as system dynamics, experimental games, and collaborative action. We highlight our experiences and influence thought leadership at national- and international-level consortiums to promote nature conservation through a Commons paradigm.

In order to address widespread degradation of natural resources and erosion of institutions of collective action, we aim to devote considerable attention in bringing together like-minded organisations and support concerted and purposeful action.





Building on the existing organisational architecture of milk unions in Bhilwara, Kolar, and Chikkaballapur, members of milk cooperative societies and Panchayats were trained to strengthen local management of pastures and water bodies and undertake conservation measures to improve fodder and water availability.

To highlight the status and significance of pastoralism, an exhibition cum conference – ‘Living Lightly: Pastoral Futures in a Changing World’ was hosted together with Sahjeevan, Kutch, and Rainfed Livestock Network, in New Delhi.

We partner with the Tata Institute of Social Sciences, Hyderabad, and offer a Masters Programme on ‘Natural Resource and Governance’ to influence young students on contemporary conceptual advancements such as socio-ecological thinking and Commons as well as innovative approaches such as system dynamics, experimental games, and spatial technology.

In an effort to highlight the net benefits (natural and social) a community derives from land resources, a bottom-up valuation tool that integrates market and non-market methods to produce data, was developed with Indufor and University of Ulster in Rajasthan.

By executing an MoU with the district administration of Chikkaballapur, Karnataka, we have prepared Comprehensive Common Restoration Plans for 247 villages spread across 24 Gram Panchayats, where the funds available under MGNREGS are being leveraged to restore Commons.

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

We collaborate with the Nagaland Empowerment of People through Economic Development (NEPED), for supporting village councils improve the management of 40 Community Conserved Areas (CCAs) and restore natural habitats at a landscape level and protect the rich biodiversity of the area.

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

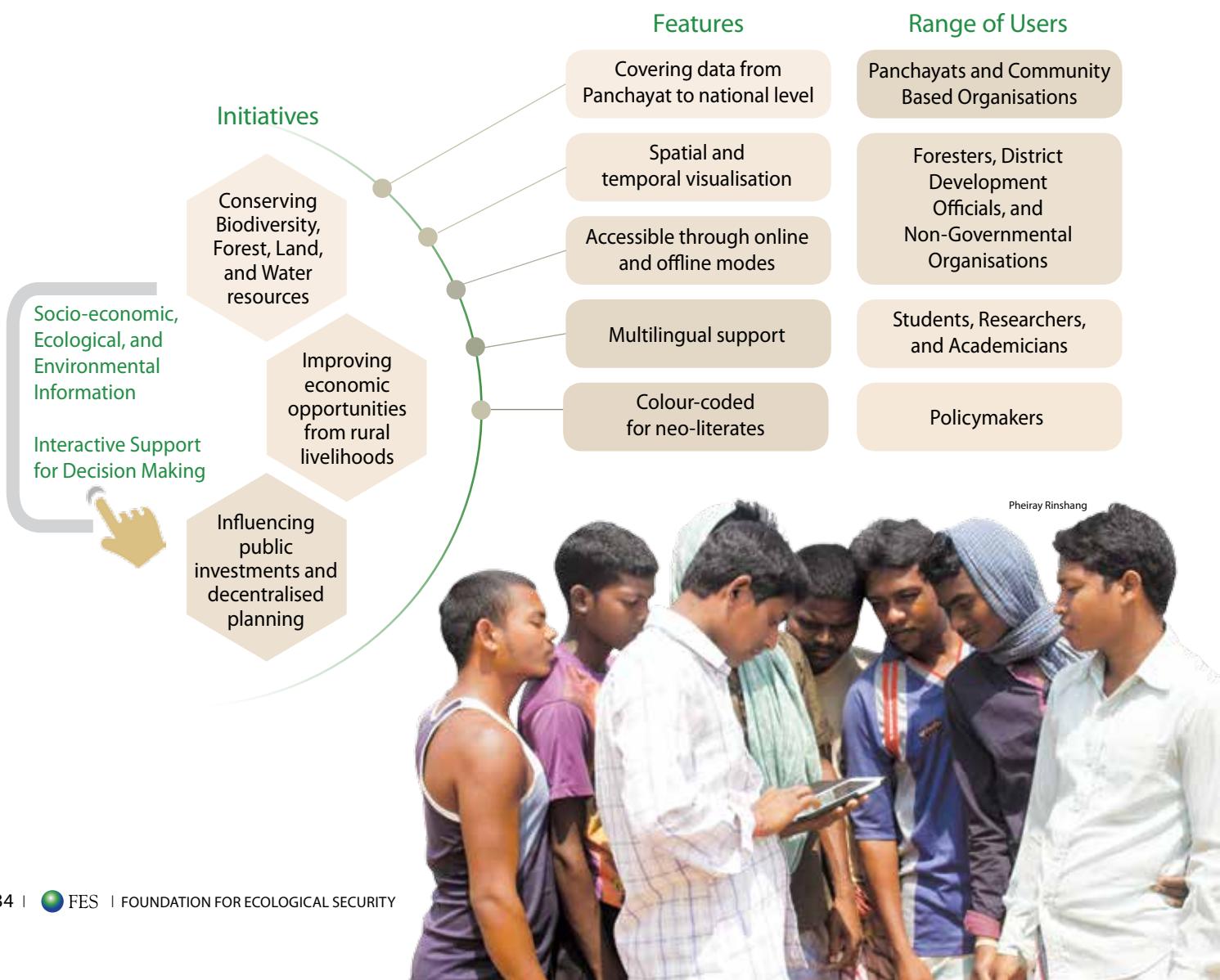
India Observatory

Recognising that developmental expenditure often falls short of addressing location-specific needs, the 'India Observatory' (IO) was initiated to make accessible context-specific, ecological, economic, and social data, to rural communities and local decision-makers for better stewardship of natural resources and use of public funds. Anchored on a visualisation platform that allows easy navigation, spatial presentation from village to national levels, and comparison of temporal and spatial changes, the data covers all districts of India, spanning more than 600 data layers. In addition, the Indian Biodiversity Information System (IBIS) was set up as a web-based biodiversity database with resource-rich, species-level information, to serve as a conservation tool.

Further, IO is taking its rich repository of data to village communities, Panchayat representatives, and local government officials in a locally decipherable manner.

This includes assisting forest managers in a division each in Rajasthan, Himachal Pradesh, and Telangana develop a forest management tool to create 'Working Plans' in line with the National Working Plan Code (2014). To improve the judicious use of funds under MGNREGS, a 'Composite Landscape Assessment and Restoration Tool' (CLART) has been developed, which helps undertake suitable measures of water conservation, and make first-order design features and cost estimates of the proposed interventions. Also currently under development is a 'GIS-Enabled Entitlement Tracking' (GEET) system to help improve the response of government functionaries towards claims to entitlements by residents in remote rural areas.

Building on the recognition gained of its web-based tools, FES plans to strengthen its collaborations with various levels of government on expanding the use of these tools to drive informed developmental activities.





Using the Composite Landscape Assessment and Restoration Tool (CLART) on a handheld device for identifying areas for recharge of groundwater and storage of water and suggesting appropriate water-harvesting and recharging structures, Detailed Project Reports were prepared for 7 blocks of 5 districts of Rajasthan, and subsequently approved by the respective district administrations.

To assist decision makers from governments, elected bodies, funding agencies, and NGOs improve context-specific planning, a pan-India data platform, comprising a large volume of spatial and temporal data on social, economic, ecological, and biodiversity parameters, has been developed.

To improve the planning of activities aimed at water conservation under MGNREGS, an MOU has been executed with the state government to deploy the Composite Landscape Assessment and Restoration Tool (CLART) in all districts of Chhattisgarh.



In an initiative aimed at strengthening forest management, a set of tools were developed to assist preparation of data-driven working plans (based on the National Working Plan Code 2014), and are being piloted in a division each of Rajasthan, Telangana, and Himachal Pradesh.



To enhance the 'last mile' reach and support the planning, implementation, and monitoring of key entitlement programmes, a versatile 'GIS-Enabled Entitlement Tracking (GEET)' system is being developed for implementation with governments across 12 districts of Odisha, Chhattisgarh, and Jharkhand.



In an area prone to severe water stress and recurrent droughts, we are assisting the district administration of Chikkaballapur, Karnataka, in deploying the Composite Landscape Assessment and Restoration Tool (CLART) in preparing plans that guide specific measures for surface and groundwater conservation.

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

The Commons Initiative

With its strong foothold in rural areas, partnerships with a range of organisations, collaborations that promote an exchange between innovative decision support systems and on-ground application, and engagements with governments at district, state, and national levels, FES connects practice with research and policy as well as shares its body of work with partners.

Initiated in 2009, the Commons Initiative is aimed at influencing better management and governance of Common Pool Resources, such as forests, pastures, and water bodies, and the concomitant collective action through self-governing institutions. Over the years, FES has partnered with the state governments of Rajasthan, Karnataka, and Andhra Pradesh for drafting policies, designing programmes, and influencing public investments, that integrate Commons in the implementation of flagship programmes in the respective states. FES also executes agreements with governments to develop ecological restoration plans, help spread awareness, build local

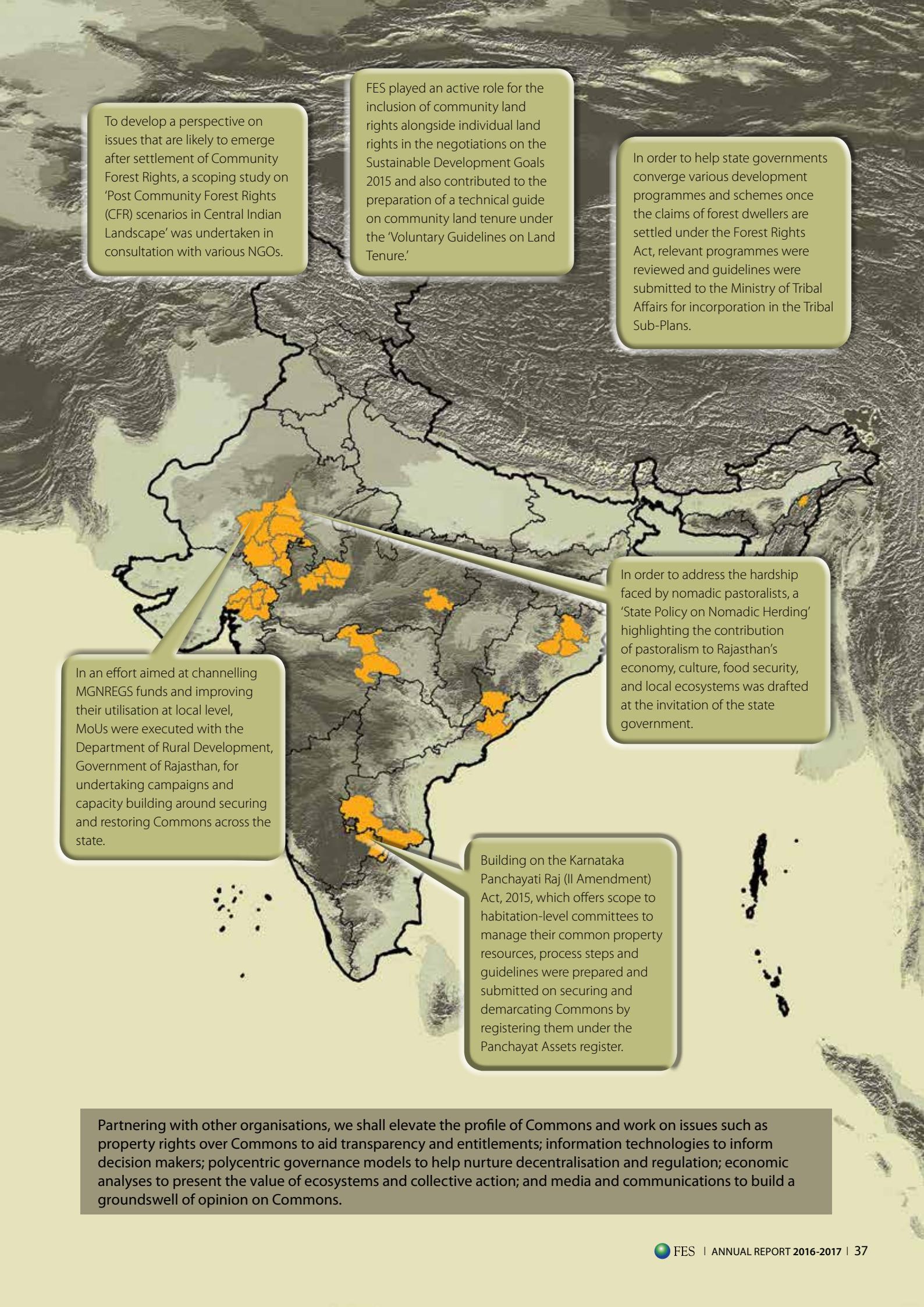
capacities of representatives of Panchayats and local governmental and non-governmental organisations, and facilitate execution of programmes.

FES engages with a range of organisations representing various interest groups such as forests, pastures, and water to build a larger constituency for Commons. It promotes exchange programmes, holds convenings, and offers training programmes on nature conservation and Commons. The experience gained by engaging with local communities and partner organisations finds expression in influencing favourable decisions at national and international levels.

Aimed at influencing the larger ecosystem in which Commons are embedded, in the coming years, FES would work with a number of state governments and a range of partner organisations to develop policies and programmes to enable rural communities secure and restore their shared natural resources, forests, pastures, and water bodies, in particular.

Dawa Pemba Sherpa





To develop a perspective on issues that are likely to emerge after settlement of Community Forest Rights, a scoping study on 'Post Community Forest Rights (CFR) scenarios in Central Indian Landscape' was undertaken in consultation with various NGOs.

FES played an active role for the inclusion of community land rights alongside individual land rights in the negotiations on the Sustainable Development Goals 2015 and also contributed to the preparation of a technical guide on community land tenure under the 'Voluntary Guidelines on Land Tenure.'

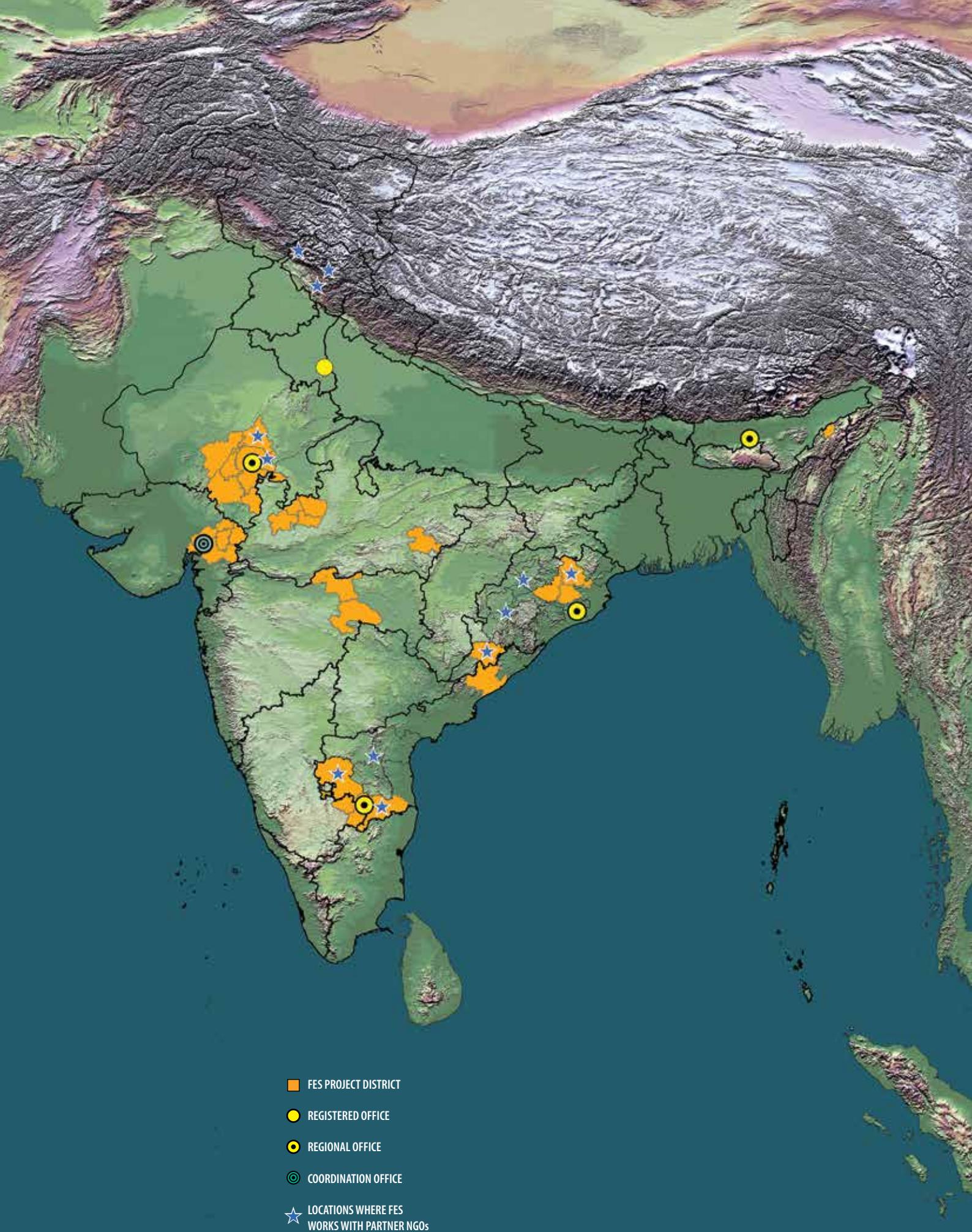
In order to help state governments converge various development programmes and schemes once the claims of forest dwellers are settled under the Forest Rights Act, relevant programmes were reviewed and guidelines were submitted to the Ministry of Tribal Affairs for incorporation in the Tribal Sub-Plans.

In an effort aimed at channelling MGNREGS funds and improving their utilisation at local level, MoUs were executed with the Department of Rural Development, Government of Rajasthan, for undertaking campaigns and capacity building around securing and restoring Commons across the state.

In order to address the hardship faced by nomadic pastoralists, a 'State Policy on Nomadic Herding' highlighting the contribution of pastoralism to Rajasthan's economy, culture, food security, and local ecosystems was drafted at the invitation of the state government.

Building on the Karnataka Panchayati Raj (II Amendment) Act, 2015, which offers scope to habitation-level committees to manage their common property resources, process steps and guidelines were prepared and submitted on securing and demarcating Commons by registering them under the Panchayat Assets register.

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



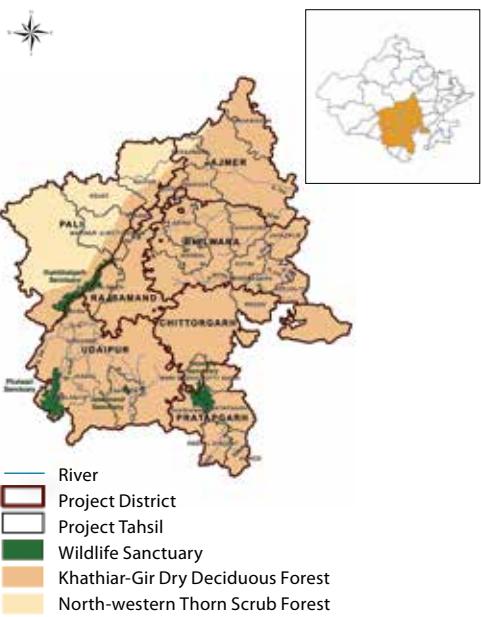
Our Presence

Over the years, FES has developed and implemented multitudinous strategies to build a robust constituency of village (and local) communities committed to restoring ecosystems and landscapes, in the process spreading across 13,678 habitations. As of March 2017, we assisted in improving governance and management of 5 million acres of common lands, reaching out to over 7.7 million people in 32 districts across 8 states.

During the year, we initiated direct engagements with new village institutions, and through partnerships with additional institutions, for community-based natural resource management and governance. Efforts towards integrating System Dynamics and Experimental Games into our core work are enriching our engagements with communities and other stakeholders. We also continue to expand our reach by enhancing capacities of rural communities through *Prakriti Karyashala* (Rural College) that was set up five years ago.

The broad organisational strategies are:

- > Facilitating the strengthening of the democratic character of local institutions for village communities to be able to collectively access, share, and conserve common lands and water bodies.
- > Building a strong knowledge base for informed decision-making by strengthening platforms for discussion at inter-village level between village representatives, government functionaries, academia, and the larger civil society.
- > Aiding village-level institutions to draw on the Constitutional recognition of Panchayats, by nesting under them, and integrate natural resource management into their developmental efforts.
- > Assisting Panchayats to use provisions of Right to Employment Act and leverage funds available under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) to restore degraded ecosystems and create rules to govern them.
- > Promoting the inter-linkages of forests and other common lands with agriculture and livestock production systems, thereby connecting the farmer constituency with the conservation of forests and common lands.
- > Assessing the impact of climate change on various natural and production systems, and integrating traditional coping mechanisms of village communities into the planned adaptation measures.



Rajasthan

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

In the drought-prone central districts, we support communities to secure tenure over common lands and improve local governance of shared natural resources, to benefit their agriculture and animal husbandry-based livelihoods. In the southern districts, suffering widespread deforestation and biodiversity loss, we work with communities to restore and manage forest lands and common pastures by building on existing customs. In both regions, we aid village institutions and their local federations channelise public investments, such as MGNREGS, to restore forests, common pastures, and water bodies.

To foster local stewardship, *Prakriti Karyashala* (Rural College) continued to build on collaborations with local district administrations and milk unions, enhancing capacities of Panchayat representatives, government functionaries, and local youth for organising institutions, securing community rights over shared resources, and channelling MGNREGS funds for restoration. Through *Shamlat Abhiyan* (Commons Campaign), we continued to support 9,894 Panchayats of the state by providing information on various enabling government orders and provisions for the restoration of common lands.

To aid the leveraging of MGNREGS funds by Panchayats for restoration, we have signed MoUs with eight districts, and have developed conservation plans using GIS-based tools that facilitate identification of suitable sites for soil and water conservation measures.

Having established effective working relationships with state and district governments and milk unions, and demonstrated the reach of *Karyashala* in promoting democratic village-level institutions for restoring Commons, we are well-poised to scale up our reach for promoting conservation of shared natural resources in Rajasthan.

901 thousand acres of common land were brought under community management

2.6 million lives were touched upon through community institutions

3,055 habitations have been assisted in restoring and managing their Commons

FACT FILE

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

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

% 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**

FOREST TYPES: Tropical Dry Deciduous and Dry Thorn

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

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

FUNDING AGENCIES: Omidyar Network, Sir Dorabji Tata Trust & Allied Trusts, Axis Bank Foundation, NABARD-IGWDP, NABARD-WDF, NABARD-ITDP, NABARD-CPWDP, ITC Limited, Various Programmes of Rajasthan Government, Rajasthan Forestry and Biodiversity Project, Grow-Trees.com, Hindustan Unilever Foundation, Indian Institute of Technology-Bombay, Bharat Rural Livelihoods Foundation, Sunehra Kal Mission-ITC, Centre for microFinance, The University of IOWA, National Remote Sensing Centre, HCL Foundation

Paryavaran Premi Samaj, a federation of over 150 habitations in Mandalgarh, Bhilwara district, has been working on conservation of land and water Commons for over two decades. They have conducted awareness programmes on the need to conserve natural resources, especially preventing groundwater exploitation. After deliberations on over-exploitation of groundwater, a dozen villages of the region have passed a resolution to ban new borewells in their villages and resolved the same in the Panchayat Gram Sabhas.

“Our collective action has had an impact on water governance. Today I am convinced that we can fight droughts in Mandalgarh without depending on water tankers.”



P.K. Singh
Chairman, Paryavaran Premi Samaj

Update 2016-2017

- > Local communities across 864 habitations in 7 districts assisted with bringing 411,971 acres of common land under community governance.
- > Restoration activities for 13,636 acres included soil moisture conservation measures and planting of 84,248 saplings of indigenous species.
- > Media campaign resulted in more than 750 Gram Panchayats passing resolutions for claiming and restoring Commons.
- > MoUs signed with 7 District Administrations for undertaking Commons restoration under MGNREGS.
- > Using Social Returns on Investment framework and Community-Based System Dynamics, impact assessments interventions for land and water conservation were prepared.
- > Prakriti Karyashala organised 948 training programmes for 28,598 members on claiming and restoring Commons.



May 2006



May 2005

Google Earth Imagery



September
2017



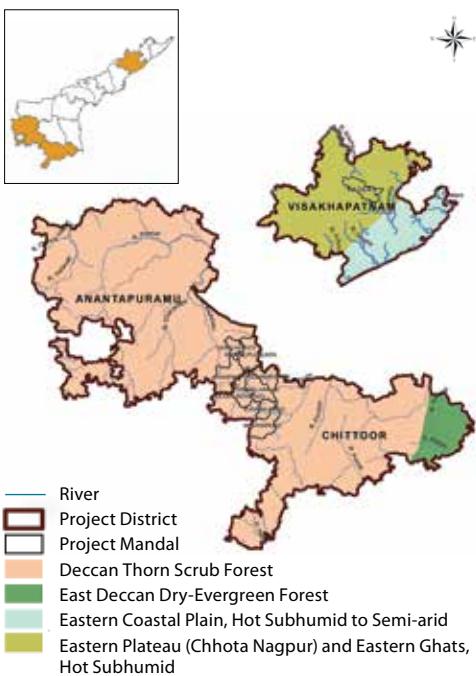
October
2017

Google Earth Imagery

Dindorkheda: What started as a collective effort to restore their village tank in 2006 was extended by the tribal village to protect and restore 75 acres of degraded forestland. Influenced by their efforts towards evolving collective arrangements to manage common water bodies and forestlands, two neighbouring villages have restored another 527 acres of forestland.

Shambhu Karya Shama

Babuji Patel



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 1256 mm to 2234 mm and the number of rainy days from 84 to 118

850 thousand acres of common land were brought under community management

1.9 million lives were touched upon through community institutions

2,300 habitations have been assisted in restoring and managing their Commons

Andhra Pradesh

Our work in Andhra Pradesh is located in the rainfed catchment areas of River Papagni in Chittoor and Anantapuramu districts. Lying at the trijunction of the Deccan Plateau, Eastern Ghats, and Western Ghats, the region once known for its cascading irrigation tanks, is now prone to severe droughts and depleting water tables. Increasing area under cultivation, prevalence of water-intensive crops, escalating cultivation costs, and fluctuating market prices are leading to distress migration. Our efforts here are directed at strengthening local habitation-level institutions and their conglomerates in conserving Commons, securing tenure over them, and restoring the entire landscape.

To generate momentum on management and restoration of shared natural resources, training is imparted to village communities on developing long-term village-level plans and channelising public funds for restoring forests, scrub lands, and water bodies. Besides supporting measures for the restoration of common lands and water bodies, and sustainable agriculture practices, we are supporting village communities claim tenure over common lands and register them in the 'Prohibitory Order Book' which restrains change in land use.

Building on the encouraging results from our pilots on integrating the concepts of System Dynamics and Experimental Games, which are designed to map the mental models of communities around water usage and build debates on water consumption patterns respectively, we support communities in adopting sustainable agricultural practices and building consensus on judicious use of shared natural resources.

Through a combination of strategies involving collaborations with the state and district governments and civil society organisations, promotion of democratic village-level institutions and trained rural cadre, outreach of *Karyashala*, and effective utilisation of public investments, we work towards wider replication of conservation of shared natural resources and for a policy on Commons.

FACT FILE

From intervention districts of Chittoor, Anantapuramu, and Paderu

River Basin: Papagni; Papagni; Machkund

% 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

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

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

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

FUNDING AGENCIES: Omidyar Network, Sir Dorabji Tata Trust & Allied Trusts, RBS Foundation, NABARD-ITDP, NABARD-KFW, NABARD-WDP, NABARD (Distress Districts Programme), NABARD RSO Programme, Various Programmes of Andhra Pradesh Government, Grow-Trees.com, Hindustan Unilever Foundation, International Food Policy Research Institute, Washington University in St. Louis, National Remote Sensing Centre, HCL Foundation

In a remarkable show of unity, eight village institutions came together as a federation to protect 2,653 acres, a part Sadhukonda Reserve Forest, from forest fires, for which they conducted awareness campaigns and delineated responsibilities to prevent fire outbreaks. Persistent efforts have prevented forest fires for the last four years in Ramanaik Tanda and neighbouring villages. Encouraging results reinforced the collective will for regenerating forest Commons, which is bearing results in the form of improved biomass, biodiversity, and water availability.

“We took a collective decision to make sure that our forest will never catch fire, and our efforts shall ensure that we handover a good forest to our children.”



Venkatesh Naik

Chairman, Gurrallagutta Vana Samrakshana Samiti

Update 2016-2017

- > Initiated engagement with 92 habitations for protecting and conserving 15,007 acres of common pastures and forestlands.
- > Restoration measures were undertaken on 3,578 acres of common land, including planting of 31,078 saplings and construction of 528 water harvesting structures.
- > 3,652 farmers supported in undertaking conservation agriculture practices.
- > Supported by Arizona State University, Experimental Games on groundwater were conducted with villages to generate dialogue on judicious use of groundwater.
- > ‘Network mapping’ exercises were conducted to understand influence of various actors on regional priorities and build a multi-actor platform for collaborative action on conservation.
- > A total of 6,961 members were trained by Prakriti Karyashala through 266 training programmes.

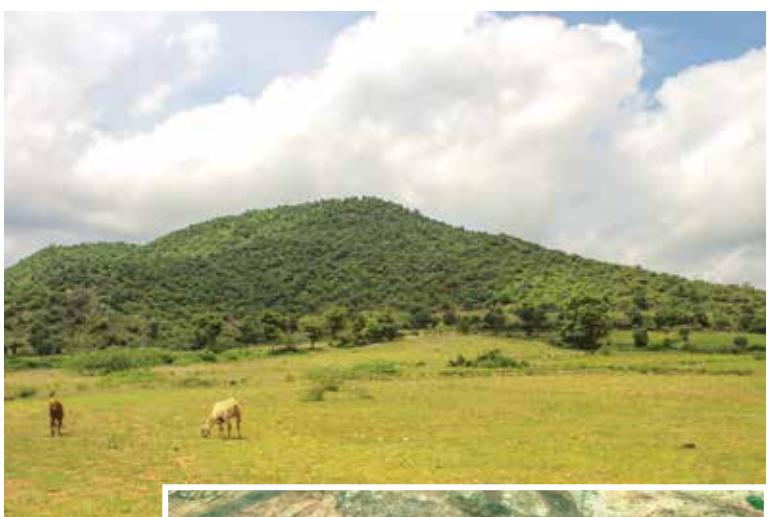


August
2008



January
2010

Google Earth Imagery



August
2017



February
2017

Google Earth Imagery

Turakapalle: When Turakapalle village obtained lease for protecting and restoring 100 acres of common land, they prevented the land from being taken over by mining groups. Their collective efforts in restoring their land, inspired neighbouring villages to protect an additional 700 acres of the same hill range, a grazing ground for livestock of 10 habitations.

Sneebekh K D

Sneebekh C S



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 989 mm to 1348 mm and the number of rainy days from 81 to 86

Karnataka

Here, we work in the upper catchment regions of River Papagni in the districts of Kolar and Chikkaballapur. The landscape is hilly with rocky boulders and dotted with degraded common lands, which are a mix of dry-deciduous, tropical thorn, and scrub forests. In recent years, unbridled groundwater extraction, at double the recharge rate to cultivate water-intensive crops, has depleted the water table to alarmingly low levels.

Recent amendments in the Panchayati Raj Act, enabling Panchayats to map and conserve community assets, including common pastures and water bodies, strengthened our efforts in supporting Panchayats by capacitating its functionaries and increasing their role in programme implementation. Building on this, we facilitate the formation of habitation-level Panchayat sub-committees and undertake measures to enhance capacities of rural youth to support Panchayats in planning activities under MGNREGS aimed at restoration of forests, common lands, and water bodies. We also assist farmers improve their ability to adapt to changing conditions and mitigate risks by promoting sustainable agriculture practices.

As part of executing the MoUs signed with the Zila Panchayats of Kolar and Chikkaballapur districts, we facilitated the preparation of village development plans under the Gram Panchayat Development Plan, for all blocks of Chikkaballapur and three blocks of Kolar. We also trained government officials and village representatives on using hand-held GIS-based tools that aid in identifying suitable locations for water recharge and surface storage potential, enabling context-specific planning for water conservation.

We are looking to continue our work on fostering a robust stewardship of natural resources by building on collaborations with the district governments and milk unions, engagements with Panchayats, and their habitation-level sub-committees; the deployment of a trained rural cadre; and the leveraging of public funds for building public assets.

95 thousand acres of common land were brought under community management

237 thousand lives were touched upon through community institutions

504 habitations have been assisted in restoring and managing their Commons

FACT FILE

From intervention districts of Kolar and Chikkaballapur

River Basin: Papagni; Papagni

% 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

FOREST TYPES: Tropical Dry Deciduous, Tropical Thorn, Scrub

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

PRINCIPAL CROPS: Ragi, groundnut, pulses, paddy, maize, redgram, oilseeds

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

Eight acres of tank area and 10.5 acres of pastureland were encroached by a few in Kakinatha village, depriving the rest of the village from taking water and fodder from these common resources. When individual efforts failed, the village came together, demarcated the area with the help of the district administration, and exerted peer pressure, compelling the encroachers to vacate the land. The restored tank and common pasture meet the water and fodder requirements of around 2,000 small ruminants, besides providing water for critical irrigation.

“The Supreme Court judgment on Commons inspired us to act on vacating the encroachment of Commons, which provide benefits to 275 households.”



Sri Nagaraj
Member, Kakinatha Village Development Committee

Update 2016-2017

- > Assisted local communities across 158 villages bring 25,097 acres under community governance.
- > 2,113 acres of common lands and water bodies were covered under restoration measures.
- > Long-term Gram Panchayat Development Plans were facilitated in 78 Gram Panchayats in 2 districts.
- > Identifying recharge potential zones using Composite Landscape Assessment and Restoration Tool (CLART), plans for restoring catchment of River Papagni are being prepared for 61 Panchayats on request of District Administration, Chikkaballapur.
- > Around 4,200 dryland farmers were assisted with sustainable agricultural practices to increase adaptive capacity and mitigate risks.
- > Through 1,649 training programmes, a total of 47,209 participants from community and government were trained through *Prakriti Karyashala*.

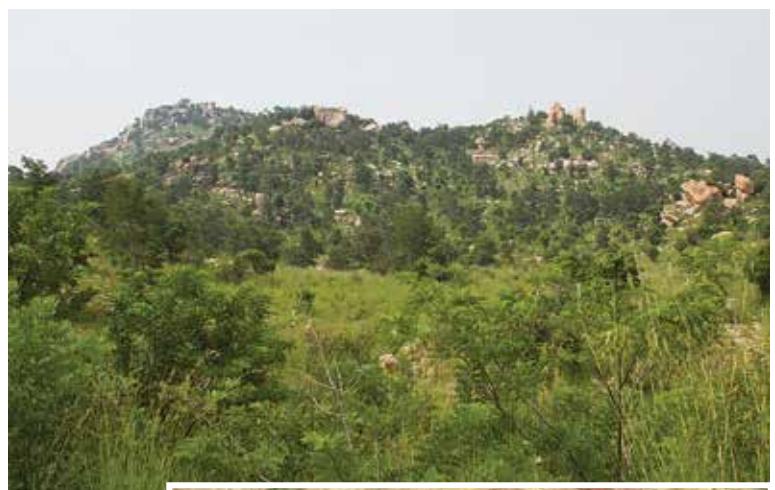


August
2004



December
2007

Google Earth Imagery



October
2017



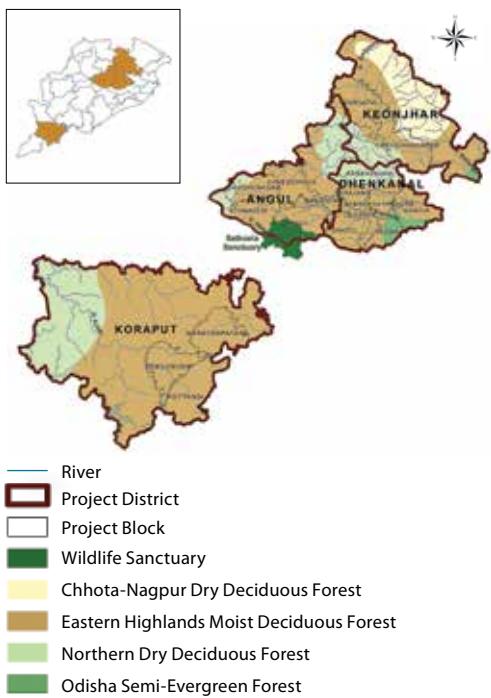
November
2016

Google Earth Imagery

Sajjupalli: By framing collective rules and regulations for provisioning and appropriating from common resources, Sajjupalli and three adjoining villages have gradually restored 1,380 acres of boulder-strewn common land. The area now supports the livestock needs of 12 villages, and is home to rich wildlife and flora, including threatened floral species such as Eastern Satin Wood.

Dr. Subba Rao

Sandeep C S



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 1386 mm to 1602 mm and the number of rainy days from 95 to 98

1.6 million acres of common land were brought under community management

2 million lives were touched upon through community institutions

5,073 habitations have been assisted in restoring and managing their Commons

Odisha

Here, we work across the undulating landscapes of Angul, Dhenkanal, and Keonjhar in central Odisha, and in the tribal-dominated district of Koraput in the Eastern Ghats. In Angul and Dhenkanal, we work with rainfed-agriculture dependent small and marginal farmers, whereas in Koraput and Keonjhar, we work with tribal communities inhabiting the upper catchments of Kolab and Baitarni river basins respectively. Although rich in green cover, both regions have witnessed growing urban-rural economic disparity over the past few decades owing to rapid industrialisation.

Our work in the central districts includes assisting local communities and habitation-level institutions and their federations on strengthening inter-linkages between forests and farming systems, which has brought improvements in vegetation cover and restoration of Commons, formalising of customary-use patterns, and asserting of community rights over resources.

In Koraput, we support communities manage their forests, which involves assisting families cultivate lands along forested patches to strengthen their livelihoods through water conservation measures and avail government programmes and schemes.

Over the past few years, we have gained momentum on the securing of Community Forest Rights (CFR) under the Forest Rights Act (FRA) with the support of partner NGOs. Tribal villages have been conferred legal rights entitling them to use, access, protect, and conserve forest resources.

Hereon, we will continue to strengthen our work covering more villages for CFR and assist local communities in developing management plans where forest rights have been conferred. Further, we are looking to set up *Prakriti Karyashala* (Rural College) in Odisha, to cater to the capacity-building needs of local communities, NGOs, and government functionaries on the process of claiming CFR, as well as on developing management and restoration plans.

FACT FILE

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

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

% 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

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

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

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

FUNDING AGENCIES: Omidyar Network, Sir Dorabji Tata Trust & Allied Trusts, RBS Foundation, NABARD-WDF, NABARD-ITDP, NABARD-WDP, Grow-Trees.com, Various Departments of Government of Odisha, International Land Coalition, UNDP, The Energy and Resources Institute, Bharat Rural Livelihoods Foundation, National Remote Sensing Centre, HCL Foundation

Having secured Community Forest Rights over 70 acres under the Forest Rights Act, the Gram Sabha of Tarkabahali village, Kalahandi district, assessed resource conditions, planned conservation measures for the forest, and following all technical and legal procedures prepared the Management Plan. Gaining the Gram Sabha's approval for the plan made the otherwise difficult process of obtaining transit pass for harvested bamboo from the Forest Department, much easier. The Gram Sabha plans to invest the fund generated from selling bamboo for further restoration activities.

“All 66 families are encouraged by the direct benefits and we are now guarding the forest we own with even more zeal.”



Santap Majhi
President, Tarkabahali Gram Sabha

Update 2016-2017

- > With support of partner NGOs, we reached out to 730 villages to bring 219,351 acres under community governance.
- > 261 villages were assisted with obtaining Community Forest Rights (CFR) over 46,860 acres of forest land in 3 districts.
- > Low-cost micro-irrigation systems constructed to draw water from a forested patch enabled tribal farmers of 9 villages to irrigate 366 acres of farmland downstream.
- > With information and training material prepared on post-CFR management plans, we are assisting 44 villages in 4 districts prepare their forest management and conservation plans, of which 10 villages have completed preparing the plans.
- > Trained 680 Panchayat and government representatives for preparing participatory long-term plans of 50 Panchayats.



November
1999



Google Earth Imagery



March
2010



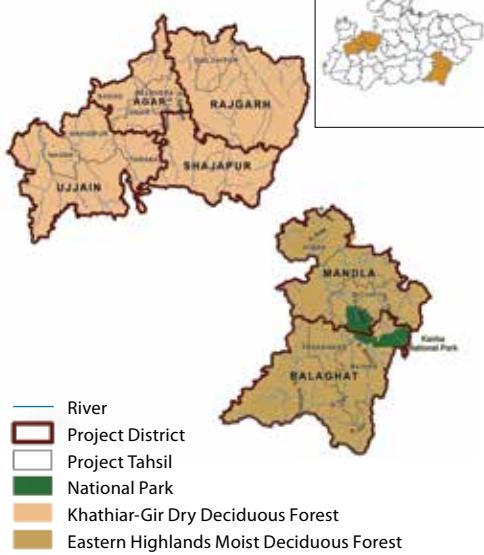
September
2017

Google Earth Imagery

Paik Purunakote: Overcoming initial internal conflicts, two habitations of Paik Purunakote started protecting 240 acres of revenue forestland. Benefits, of increased fuelwood and fodder, accrued over the years inspired them to collectively manage common water bodies and pasture lands, which improved water availability for 250 acres of farmland downstream.

Gram Sabha

Dewadoba Sheppa



Falls in Northern Deccan Plateau, Ganga Delta & Plain Freshwater Eco-region
Situated between 21-03'N to 24-32'N and 75-8'E to 81-17'E
Length of Growing Period (LGP) ranges from 120-210 days
The annual average rainfall ranges from 967 mm to 1259 mm and the number of rainy days from 66 to 74

Madhya Pradesh

In Madhya Pradesh, we work in the districts of Mandla and Balaghat of the Mahakaushal region, which cuts across the biodiversity rich zone of Kanha National Park, and in the districts of Agar, Ujjain, and Rajgarh of the Malwa region.

Mandla and parts of Balaghat district have a predominantly tribal population and overall, the region is characterised by highly degraded forests, heavy infestation of invasive species, low productivity of farmlands, and distress migration of local communities. To help improve vegetation cover and livelihood opportunities of the local communities, we work with the communities, Panchayats, and government officials towards improved governance of common land and water bodies, promotion of agriculture and livestock-based livelihoods, and better access to various government programmes.

The process of building local capacities for decentralised planning and implementation is resulting in landscape-level dialogue on restoring river catchments, improving soil health, and adopting agronomic practices, which informed the measures undertaken by local communities to restore common pastures and bring water bodies under collective management, improve soil health of farmlands, and improve water and nutrient regimes for more resilient farming systems.

In Malwa, the assistance provided to livestock- and agriculture-dependent communities have led to restored Commons and water bodies, improved fodder and water availability, and increased area under double cropping.

Aiming to build on the strong momentum generated by village communities and the willingness of the Forest Department in fostering collaborative efforts to manage the buffer zones of Kanha National Park, we shall continue to promote collaborations with various stakeholders and agencies, support robust village-level institutions and Panchayats, as well as meso-level governance structures for effective governance of shared natural resources.

80 thousand acres of common land were brought under community management

126 thousand lives were touched upon through community institutions

393 habitations have been assisted in restoring and managing their Commons

FACT FILE

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

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

% of Common Lands other than Forestlands: **19.95**; **25.95**; **28.45**

% of Forest Cover: **48.88**; **53.94**; **0.47**

% of Population Living Below Poverty Line: **60**; **60**; **26**

% of Scheduled Castes/Scheduled Tribes: **62.46**; **29.87**; **26.22**

Year in which FES Initiated Work: **2006**; **2016**; **1996**

FOREST TYPES: Tropical Dry and Moist Deciduous

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

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

FUNDING AGENCIES: Omidyar Network, RBS Foundation, ITC Limited, GIZ-Germany, GIZ-India, Grow-Trees.com, Hindustan Unilever Foundation, Sir Dorabji Tata Trust & Allied Trusts, Transform Rural India, New York University, Bharat Rural Livelihoods Foundation, Defries Bajpai Foundation, Columbia University, NABARD-WDF, Institute for Advanced Sustainability Studies, National Remote Sensing Centre

Faced with encroachment and illegal quarrying on common pastures, Singhpur village, Mandla district, formed a village institution that facilitated collective decision making for the use of common resources. Empowered by the institution's byelaws that codified prevailing norms for managing Commons, the villagers raised a collective voice against quarrying and encroachment on pasture land, and invested MGNREGS funds for restoration activities, which resulted in increased fodder availability and tree cover.

“The mines benefitted only a few individuals. The collective force put a stop to illegal mining, and now the fodder generated is shared by the entire village.”



Manish Maravi
President, Prakruti Sansadhan Prabandhan Samiti

Update 2016-2017

- > More than 160 habitation-level women's sabhas were conducted in Bichiya block, where the farmers are predominantly women.
- > Regeneration activities supported for 1,430 acres of land include soil and water conservation measures, eradication of *lantana* weed, and planting of 56,714 saplings.
- > A total of 5,329 farmers of 140 habitations were supported with information on soil health of their farmlands and possible remedial measures.
- > Ecological Assessment studies were undertaken in 9 forest compartments in Mandla District for creating ecological baseline and identifying conservation priority areas.
- > Multi-stakeholder workshops were organised in collaboration with Institute of Advanced Sustainability Studies, Potsdam, on improving understanding of post-project sustainability.

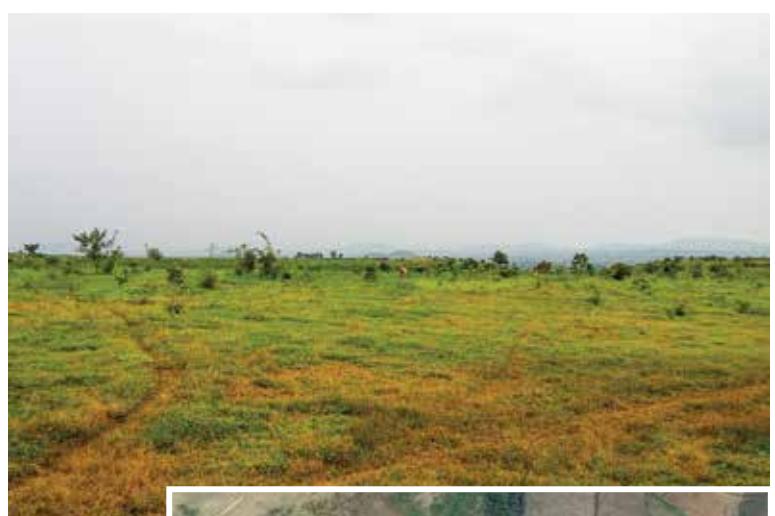


April
2013



January
2013

Google Earth Imagery



September
2016



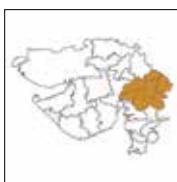
December
2016

Google Earth Imagery

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

India Agricul

India Agricul



Gujarat



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 1027 mm to 1413 mm and the number of rainy days from 41 to 51

67 thousand acres of common land were brought under community management

518 thousand lives were touched upon through community institutions

754 habitations have been assisted in restoring and managing their Commons

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

Along the highly eroded banks of River Mahi, we work with habitation institutions and Panchayats to undertake measures aimed at restoring the ravine through the leveraging of government programmes such as MGNREGS and Integrated Watershed Management Programme (IWMP). Ravine-affected villages along the 90-km stretch of the riverbank have formed multi-stakeholder forums to improve co-ordination between them in addressing the issue of land degradation.

In the poverty-ridden and tribal-dominated Mahisagar district, we work through a skilled local cadre towards ensuring rights and entitlements of the community, developing institutional arrangements for safeguarding upland forests, claiming recognition of community forest rights, and in supporting measures to improve resilience of their dryland farming systems. We are promoting agricultural practices that are suited to local ecological conditions by exposing farmers to alternative options through demonstration, training, exposure visits, and biannual events to serve as platforms for farmers to interact and exchange ideas.

With a strong base of robust habitation-level institutions and their federating bodies, a 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 natural resources, diversifying 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**, **Panchmahal**, **Kheda**, and **Mahisagar**

River Basin: **Mahi**, **Sabarmati**; **Valai**, **Bhe**, **Kali**, **Khan**; **Mahi**, **Narmada**; **Mahi**, **Sabarmati**; **Mahi**

% 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**

FOREST TYPES: Tropical Dry Deciduous, Dry Teak, Grasslands, Scrub

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

PRINCIPAL CROPS: Banana, paddy, wheat, tobacco, jowar, maize, pulses, redgram, bajra, cotton

FUNDING AGENCIES: Omidyar Network, Government of Gujarat, Gujarat Green Revolution Company Limited, Collectives for Integrated Livelihood Initiatives (CnI), Bharat Rural Livelihoods Foundation, Grow-Trees.com, National Remote Sensing Centre, HCL Foundation

Robust institutional processes of Dungripura village ensured that the resources developed over 123 acres of once highly degraded ravine lands are protected. Initially given a 15-year land lease in 1992-93, the Tree Growers'

Co-operative Society (TGCS) representing the village presented an exemplary case of collective action recently when they detained an influential group from illicit tree-felling and punished them at the Gram Sabha. Such sustained efforts helped the cooperative in getting their land lease renewed for another 15 years.

“The sense of oneness and unity the incident brought was overwhelming and it seemed we are reunited once again, even more strongly.”



Dahyabhai Bhoi
Chairman, TGCS

Update 2016-2017

- > Communities across 51 villages of 2 blocks were supported for preparing plans under the Intensive Participatory Planning Exercise (IPPE).
- > A total of 825 acres of common and private lands have been treated through bio-physical measures and planting of 76,000 saplings of local varieties.
- > Process of obtaining Community Forest Rights (CFR) for 4,000 acres of forestland across 27 habitations is being supported in 2 blocks.
- > 715 members of rural cadre were trained on planning and implementation of MGNREGS and IWMP.
- > Agriculture-related knowledge support was provided to over 6,800 farmers for promoting agricultural practices suited to local agro-ecological conditions.
- > Knowledge-exchange platform, *Samvad Karyakram*, drew more than 6,000 community members, Panchayat representatives, government officials, etc.



September
2001



March
2003

Google Earth Imagery



August
2017



June
2016

Google Earth Imagery

Khorwad: Lying along the ravines of River Mahi, 100 acres of degraded common land, which had only six floral species, now supports 72 species, and also provides grass for livestock. Acknowledging the efforts of Khorwad village in checking the spread of ravines, the district administration renewed the lease for another 15 years and granted tenure for an additional 40 acres.

Jaswant Dhambale

Dinkar Parashal



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

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

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 1736 mm to 2317 mm and the number of rainy days from 116 to 147

North-Eastern Region

Characterised by unique climatic and topographic conditions and the largest number of endemic floral and faunal species found in one region in India, we work with diverse ethnic groups in certain pockets of this region. We follow a four-pronged strategy of working directly with communities, partnering with conservation organisations, undertaking studies for better understanding of an area, and supporting conservation action through fellowships.

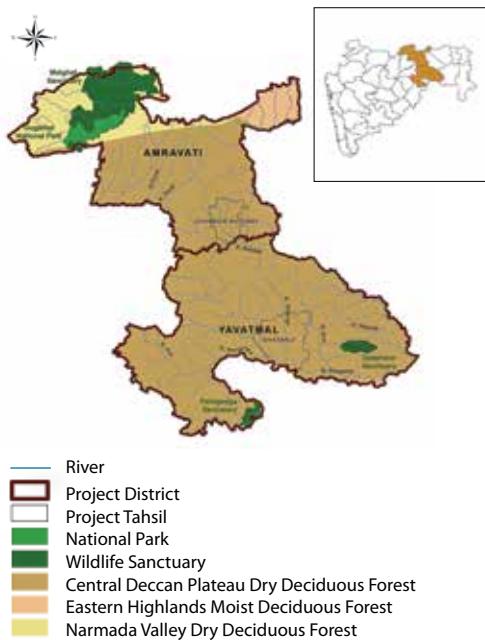
Our approach focuses on supporting communities for developing conservation action plans that take into consideration findings of the studies we undertake, to bring scientific rigour, and value traditional, indigenous wisdom and practices. We support village councils design management plans to safeguard Community Conserved Areas (CCAs) and ensure continuity in conservation through collective decision-making across vast landscapes by building local perspectives.

During the year, we continued to assist CCAs strengthen their management plans through a range of capacity building and awareness programmes, and support the Nagaland CCA Forum promote collective action and reach out to more CCAs.

We will continue our engagements with the existing CCAs, while seeking out CCAs in other states of the region, such as in Tripura and the West Karbi-Anglong district of Assam. We are exploring convergence with various agencies for the implementation of CCA management plans, and partnering with universities and subject experts for documenting the region's biodiversity and community capacity building.

Communities developed conservation plans for areas rich in biodiversity and critical to the ecology of the region by understanding governance mechanisms, resource-use patterns, and from insights gained through studies on ecology and biodiversity.





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 1238 mm to 1297 mm and the number of rainy days from 70 to 71

Maharashtra

In Maharashtra we work in areas characterised by acute agrarian distress – Ghatanji taluka, Yavatmal district and Chandur Railway taluka, Amravati district in the Vidarbha region. Factors including, compact Deccan basalts that permit limited water recharge, lack of formal credit arrangements to assuage high-risk cash crop cultivation, and increasing agricultural costs, have escalated agrarian distress in this region.

We work with village communities to leverage funds of government flagship programmes towards protection and restoration of common lands, forests, and water bodies. We focus on strengthening local governance for improved management of natural resources and connecting farmlands with common pastures and forests.

We are working towards reviving River Waghari by mobilising communities and other stakeholders along the river to undertake restoration measures in the catchment area to improve water availability for a robust farming system. To this end, schemes such as the Jalyukt Shivar Abhiyaan, National Rural Livelihoods Mission (NRLM), and MGNREGS are being leveraged to restore the natural resource base and improve economic opportunities of communities, while assisting communities tailor their consumption of natural resources to suit the ecological capacity of the area.

Building on the momentum gained in the past few years, we shall continue supporting communities to address concerns regarding distress agriculture and uncertain livelihoods through management and restoration of land and water resources and promotion of sustainable agriculture practices.

We work with local communities in understanding resource-use patterns, connecting farm-forest-pasture interfaces necessary for a viable farming system, and adapting to practices that lend resilience to their livelihoods and strengthen collective action for better management of natural resources.



Sanjay Patel



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 2016-17, the receipts totalled INR 457.79 million, as against the previous year's income of INR 428.90 million, an increase of 7% over the previous year.

- Of this, domestic sources accounted for INR 184.38 million (40%). The major share of domestic contributions came from private donors, that is, INR 108.74 million (24%), while government-supported agencies contributed INR 57.85 million (13%). Interest on corpus and other receipts was INR 17.79 million (4%).
- The balance of INR 273.41 million (60%) is from foreign sources.
 - Covered by FCRA : INR 90.24 million (20%) – Indian Donors
INR 173.04 million (38%) – Foreign Donors
 - Not Covered by FCRA : INR 10.13 million (2%)

At the end of the year, the corpus fund was INR 226.82 million, and reserves and surplus amounted to INR 50.34 million.

Utilisation

During the year, the total utilisation of funds was INR 430.60 million, which is 94% of the total receipts, as against 81.8% (INR 350.54 million) utilisation of the previous year's receipts. The major heads of fund utilisation were:

Particulars	INR in million	Percentage
Strengthening Community-based Institutions for Conservation of Natural Resources	293.18	68
Informatics, Capacity Building, Studies, Commons Initiative, and Public Education	83.81	20
Administration and Recurring Expenses	44.69	10
Capital Expenditure	8.92	2
Total	430.60	100

Leverage of Funds

Besides utilising funds sourced from donors and government agencies, the organisation leveraged funds to the tune of INR 502.57 million from the following sources for implementing various project activities:

Particulars	INR in million
National Bank for Agriculture and Rural Development (NABARD)	21.46
Integrated Water Management Programme (IWMP)	65.44
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	245.95
Departments such as Agriculture, Horticulture, Forest, etc.	92.56
Community Contribution	77.16
Total	502.57

Sharp & Tannan Associates were the Statutory Auditors for the year 2016-17.

Auditor's Report and Financial Statements for the year ended on 31st March, 2017 are available at <http://www.fes.org.in/pdf/balance-sheet-2016-17.pdf>

Acknowledgement

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

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

We would like to thank Anita Cheria, Barbara Sargent, Blake Ratner, Bryan Bruns, Chris Short, Edwin Daniel, Gautam Yadama, Liz Alden Wily, Marco A Janssen, Michael Taylor, Peter Hovmand, Ruth Meinzen-Dick, Satish Sharma, Ton Dietz, Tiffany Marie Knight, Ved Arya, Apoorva Oza, and Jayesh Bhatia for helping us in many ways. We are also thankful to Ashwini Chhatre, Binoy Acharya, GB Mukherji, Harini Nagendra, Lakshmi Lingam, NC Narayanan, ND Khurody, Mihir Mathur, S Siva Raju, Rucha Godbole, Sushil Saigal, Inayat Sabhik, Pranab Choudhary, Rita Brara, K Rajesh, Rucha Ghate, Fred Nelson, Stephanie Cohn Rupp, VS Prakash, Ellis Ballard, Kelsey Werner, Rajeswari Raina, Kamal Kishore, Ilse Köhler-Rollefson, and Nitya Ghotge for their continued support and guidance.

We offer our thanks to Survey of India, National Bureau of Soil Survey and Land Use Planning-Nagpur, Forest Survey of India, Census of India, National Remote Sensing Agency-Hyderabad, and ESRI-New Delhi for providing data and

technical assistance to our GIS Cell.

We thank Panchayat and Rural Development Department-Chhattisgarh, Groundwater Survey and Development Agency (GSDA)-Maharashtra, Priya Khan (OSD), Government of Maharashtra, Vodafone Foundation, NASSCOM Foundation, and National Remote Sensing Centre (NRSC)-Hyderabad for their support in developing the Composite Landscape Assessment and Restoration Tool (CLART).

We thank Alka Narang and Shashi Sudhir of United Nations Development Programme (UNDP)-Delhi; NN Sinha, Paritosh Upadhyay, and Brajesh Dash of Government of Jharkhand; Deoranjan Kumar Singh and Pranabjyoti Nath of Government of Odisha for their support in developing the GIS-Enabled Entitlement Tracking (GEET) system, and forest departments of Rajasthan, Himachal Pradesh, and Telangana, Wildlife Management Circle-Hyderabad; World Resources Institute-India; Tetra Tech, AED; and USAID for assistance with the Integrated Forest Management Tool (IFMT).

We thank Ashok Chandrashekhar, Julian Kurmen, and Brian Curci of IBM Global for their support in project management methodologies; Harekrishna Mishra from IRMA for leading the network and security committee; Aaron Addison from Washington University in St. Louis; Promod K Singh from IRMA; Wildlife Institute of India (WII); Rajeshwari Raina, Kamal Jain, Anirban Basu, and Ashis Saha for their support in developing India Observatory. We also thank Aasheesh Pittie, BM Parasharya, Ramki Shreenivasan, Biodiversity Heritage Library, Global Biodiversity Information Facility, Birdlife International, eBird, Xeno-canto, Encyclopedia of Life, and Sálim Ali Centre for Ornithology and Natural History for their support in developing the Indian Biodiversity Information System.

We appreciate K Srinivas for making time for us, even at short notice; and Senthil Ganesh for facilitating Training Programmes on Team Building.

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

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