

FES

FOUNDATION FOR ECOLOGICAL SECURITY



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# 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 we:

Work 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 set in place the processes of co-ordinated human effort and governance to this end;

Undertake work, either directly or with and through a range of democratic village institutions, their federal bodies, and civil society organisations, (set up) through initiatives that are ecologically sustainable, socially and economically equitable and provide relief to the poor, in particular;

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

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

Collaborate with *Panchayati Raj* and other democratic village institutions, as well as appropriate civil society organisations, in their efforts to contribute towards the objectives of the Society, and to provide technical and financial assistance to them.

## BOARD OF GOVERNORS

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Amrita Patel

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SK Mitra

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

Jagdeesh Rao  
(Ex-officio Member Secretary)

1 Mr. JC Daniel retired from the Board of Governors on 22nd September 2008

2 Mr. Ramaswamy Iyer and Mr. Nitin Desai joined the Board of Governors on 22nd September 2008

# OUR ORGANISATION

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

**The crux of our efforts lie in locating forests and other natural resources within the prevailing economic, social and ecological dynamics in rural landscapes and in intertwining principles of conservation and local self governance for the protection of the natural surroundings and improvement in the living conditions of the poor. By working on systemic issues that can bring about a multiplier change, we strive for a future where the local communities determine and move towards desirable land-use that is based on principles of conservation and social justice.**



# OUR APPROACH

**In a worldview that is dominated by economic thinking, the role of FES lies in centre staging an ecological agenda and reorienting development with a conservation and social justice perspective.**

Human society today is faced with an ecological crisis, largely of its own making, the consequences of which would be borne by our future generations and also drastically alter our lives in the immediate future. The planet is faced with unprecedented mass extinctions of floral and faunal species and rise in sea levels and temperatures. Many credible scientific and research institutes clearly link the increase in temperatures, the many severe storms and flooding to unrestrained ecological destruction, unregulated industrialization and runaway consumption by a globally connected and market driven society.

Closer home in India, the receding glaciers, shrinking cover of natural forests, the rapid loss of biodiversity, the falling groundwater levels, inter annual variations in rainfall, rising temperatures and agrarian distress point at the disturbing health of our ecosystems. Consequences of such gross neglect are palpably felt in both cities and villages.

Central to this impending crisis is an infallible and widespread belief in mankind's dominion over Nature and the promise of an ever-increasing economic growth offering a brighter future. We lose sight of a larger truth that economy and human society are but subsets of the environment and that ecosystems are the life support of the planet and the very foundation of the global economy. Economic progress, indeed 'development' in any and every aspect of our nation's socio-economic endeavours, should rest on secure ecological foundations.

We work with village communities across contiguous stretches of land in determining a land use regime that not only takes into account the fundamental principles of how Nature functions, but also the critical livelihood needs, which are both equitable and enduring. We strive to build a strong democratic leadership supported by even stronger decentralised governance that is convinced of the ecological imperatives of the area. We promote livelihood options that are within the threshold limits of the ecosystems and highlight those practices and principles that are ecologically sustainable, economically viable and socially just. We build on the perceptions and perspectives gained from the ground to influence plans, policy and programmes and build bridges between local aspirations and global responses.



# FORESTS IN A LANDSCAPE

We highlight the criticality of forests and other commons for their role in maintaining ecological services and biological diversity, recycling hydrological and nutrient flows and mitigating harmful effects of greenhouse gas emissions. We bring to surface their inter-linkages with the associated production systems

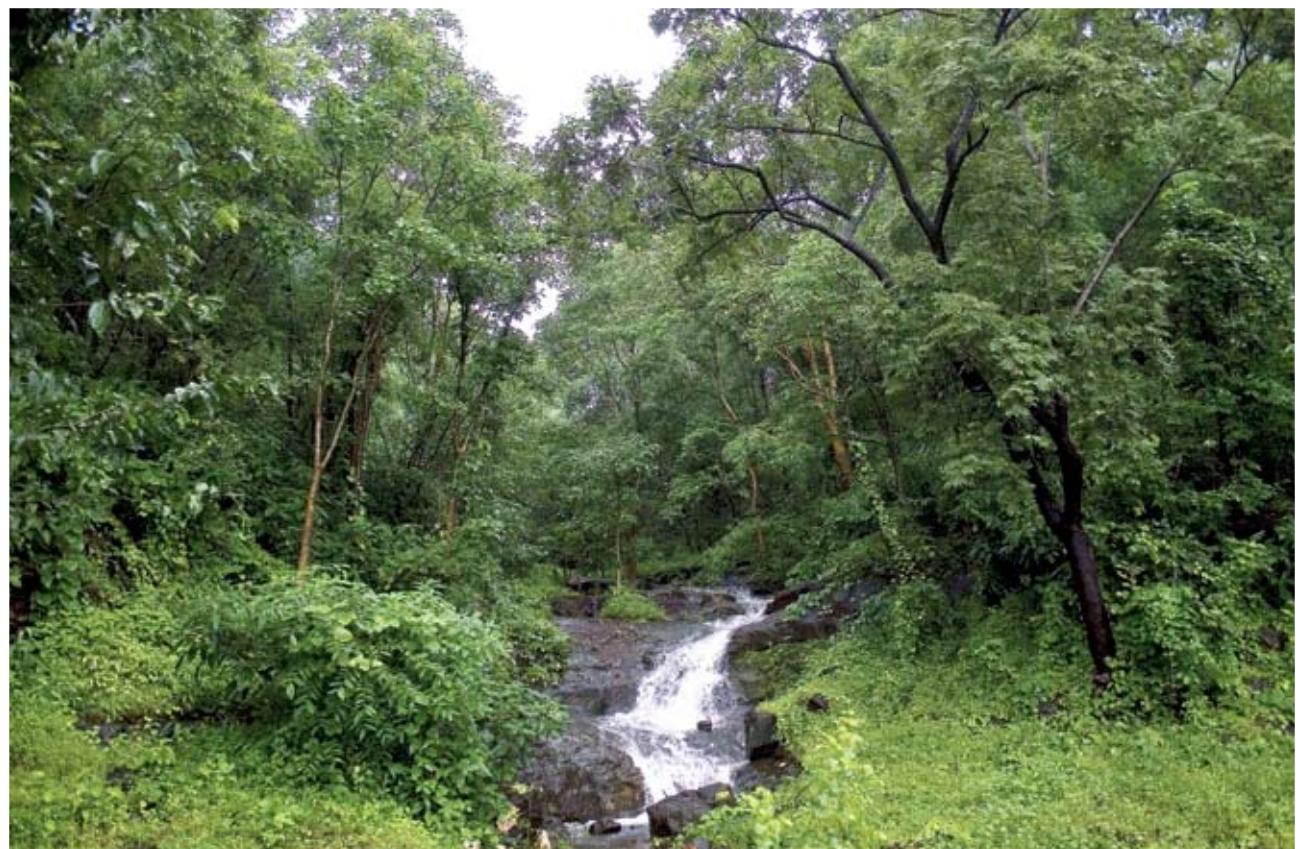
in the landscape, thereby their importance as a land-use option. We locate forests and natural resources within the larger ecological, social and economic landscape so that conservation is determined by the local context and ecological restoration, social mobilization and poverty alleviation measures are strategies aimed at conservation and improving local livelihoods.

Developmental efforts aimed at improving a given area tend to be fragmented approaches often working at cross-purposes with one another. Whereas some areas are brought under conservation regimes, adjacent areas are often over exploited, and while some communities proactively partake in conservation efforts, others pay scant regard to collective decisions on judicious land-use. Moreover, customary norms of protection, access and exchange from the natural environment by rural communities are seldom in coherence with administrative regulations, which usually do not take into cognisance the lay of the land and the local use regimes.

Susanta Kumar Rout



The loss of large expanses of forests, especially in the tropical regions, poses serious threat to the global environment and human survival. While providing multiple benefits to mankind, forests play a vital role in maintaining atmospheric equilibrium, stabilizing natural systems and improving hydrological regimes.



Amit Debnarayan

The various cycles of elements, natural, geo-chemical, biological and physical processes are interconnected in ways which we do not suspect, and influence each other in ways we do not even comprehend.

Conservation and use regimes of forests, grazing lands and water bodies necessitate umbrella institutional arrangements that span across habitations and departmental domains and are alive to customary norms of use and access.

In this context we work towards

- » reinforcing the various inter-linkages in a landscape – forests, grazing lands, agricultural lands, wetlands through systemic drivers such as soil, moisture, nutrients, biomass and biodiversity.
- » assigning different objectives of preservation, conservation and exploitation to different parts of the landscape considering the ecological significance, tenure and livelihood requirements.
- » increasing the availability of biomass and water, as well as addressing injudicious use of these resources by local communities within and across villages.
- » working more pronouncedly on common property resources as they provide the physical setting to revive institutional mechanisms that energize collective action and check undesirable individual behaviour.
- » integrating the various village level institutions

involved in natural resource governance under the *Panchayats* such that they have functional autonomy to perform but are accountable to *Panchayats* on issues concerning conservation and social justice.

- » bringing together the representatives of village institutions, civil society groups, academia and government functionaries on common platforms to build better stewardship of the area. ■

### THE LARGER NEED

- Reorient forest policies to make water the fundamental conservation objective of forest governance and management.
- Recognise forest cover on non-forest government lands, such as revenue wastelands, for their role in taking the pressure off existing forests by meeting human needs.
- Arrive at regulatory arrangements where collective decisions on optimal land use determine or guide decisions of individual land owners. Decisions on ideal land use should be moved away from discussion on land ownership.
- Conceive a common administrative apparatus such as a Department of Natural Resources, to bring together development programmes aimed at improved forest cover, viable farming systems, stable ground water, etc.
- Recognition of fora of village communities, civil society groups, academia, government officials and interested citizens to manage landscape level issues.

# ECOLOGICAL RESTORATION

In our efforts towards restoring degraded ecosystems, to the extent that human action can, we try and proximate natural processes and cycles of recovery,

## THE CONTEXT

- The Himalayas are said to be warming three times as fast as the world average and their glaciers shrinking more rapidly than anywhere else and could disappear by 2035. The Ganges and Indus could become seasonal rather than year-round rivers.
- Reports released by several credible scientific and research institutes warn that we have less than a decade to cap and reverse our polluting emissions failing which, the many severe storms and floods of recent years may only be the beginning of what might become a regular phenomena exacting a high price from human society.
- With 82% of our villages overdraining ground water to meet their needs and cities ferrying water from peri-urban areas, India will be on the list of water-stressed countries by the year 2025. NASA satellite data points out that groundwater levels in northern India have been declining at an alarming rate of as much as one foot per year over the past decade.
- Wetlands are among the most productive life support systems in the world and are getting increasingly degraded owing to factors such as water pollution, expansion of human settlement and infrastructure, encroachment, industrial effluent and poaching, among others.
- Direct impacts of agricultural development on the environment are arising from intensive farming activities depending heavily on fertilizers and pesticides, which contribute to soil erosion, land salination and loss of nutrients as well as water contamination and water logging.

recharge and rejuvenation. Most of our work is located in the rainfed areas of the country where land degradation and depletion of biomass, biodiversity and groundwater levels leave the functioning of ecosystems and the subsistence of rural livelihoods in severe distress. Where supported by appropriate measures of soil and moisture conservation, rest, restraint and regeneration, there is a marked improvement in recharge of groundwater levels, biomass productivity and biodiversity, resulting in increased crop productivity, double cropping, fodder and water availability.

We begin by building and profiling our knowledge on the lay of the land and what lies beneath in terms of the geology; soils; topography; surface and ground water availability; ecosystems and species diversity, populations and succession; and draw restoration plans for improving soil and moisture regimes and providing a microclimate conducive for vegetative growth and revival of ecosystems. We work on contiguous patches of land, typically a catchment of a small river and with all habitations that inhabit the



S.S. Singh

While nature is resilient to normal range of stress and has inbuilt capacities to stabilise and rejuvenate, our efforts are largely centred on assisting natural regeneration by making most of the sub tropical climate and abundance of rootstock in each region.



**The conservation and sustainable management of natural resources, forests and water in particular, through local self-governance institutions go a long way in providing long term security to rural livelihoods and a route out of poverty.**

area by addressing the recharge and flow of water, protection of species and habitats and undertake restoration efforts on degraded forest, grazing and farm lands. We simultaneously bring to the fore the issues of over extraction of water and biomass and the loss of biodiversity within and between villages, and build discussions around regulating the injudicious extraction of natural resources.

We work within and in areas adjoining important Protected Areas such as the Sitamata, (Pratapgarh and Udaipur, Rajasthan), Phulwari-ki-Nal and Kumbhalgarh (Udaipur, Rajasthan); Kanha (Mandla, Madhya Pradesh) and Satkosia (Angul, Orissa) which are known for their unique and diverse floral and faunal biodiversity and are also inhabited by culturally diverse tribal population. Unwavered by the debate that measures aimed at poverty alleviation would lead to conserving these important Protected Areas or the other way round, we work towards protecting these biodiversity rich areas and combine them with efforts to strengthen on and off farm incomes. We have undertaken detailed studies in inventorising the floral and faunal biodiversity in the above mentioned Protected Areas as well as the wetlands of Anand and Kheda districts (Gujarat) to highlight their significance

and integrate them in the larger land use and developmental plans of the area.

In our search for more enduring solutions to safeguard the forests and other natural resources, we also work towards reducing biotic pressure by promoting suitable energy-efficient technology in all the areas where we work and continue to collaborate with other agencies in scaling up the operations and finding innovative solutions. ■

### THE LARGER NEED

- Zoom into agro-ecosystem level exploration of measures aimed at adaptation and mitigation, as changes with regards to climate variability are becoming apparent even to a common man.
- Build bridges between conservation sciences and conventional approaches in natural resource management to enhance systems and cyclical understanding and improve the effectiveness of the interventions.
- Highlight the value of birds, insects, amphibians and reptiles in maintaining the robustness of agriculture both in pollination and pest control. Highlight the value of forests, grasslands and wetlands in serving critical ecological functions that sustain agriculture.
- Share knowledge on the potential and extraction of biomass, biodiversity and water resources across departments and facilitate readily accessible database at block or *tehsil* level.
- Conventional programmes on natural resource management should evolve into issues of balancing demand and supply together, rather than limiting to programmes on the supply-side management of resources.

# COMMONS AND COMMUNITY INSTITUTIONS

Common lands are repositories of biodiversity and add resilience to farming systems by augmenting water and nutrient flows. They are a vital link in hydrological processes, impacting localized precipitation, runoff and

soil erosion. When commons adjoin Protected Areas, they shift the pressure off the core area and ensure continuity of the habitat. They also act as 'sinks' absorbing harmful greenhouse gases that contribute to global warming.

## THE CONTEXT

- In many agro-eco regions, commons make significant contributions to agriculture. In mountain areas, the ratio of agriculture to forestland required for subsistence levels of production is in the range of 1:4 to 1:6.
- India's farmers, particularly from the semi-arid conditions, follow a mixed farming system where agriculture is supplemented by animal husbandry. As many as 69-84% of poor households here depend on the commons for animal grazing.
- The decline in the area of commons varies from 31-55% in the last half century. Causal factors include a growing populace, fragmenting land, development projects and overall degradation of the environment.
- Non-Timber Forest Produce (NTFP) provides substantial sustenance to tribals living on the fringe of standing forests. *Soliga* tribals living close to the forest spend 55% of their time in collection and realize 60% of their income from this activity.
- 14 - 23% of household incomes are met from common property resources for poor households, compared with only 1-3% for the non-poor. While the poor benefit more in relative terms, the rich benefit more in absolute terms.
- The breakdown of local village institutions in the face of the changing fabric of village society, unclear tenure and lack of enabling policy framework has also contributed to the overall deterioration in the condition of the commons.

Village commons contribute an estimated US\$ five billion to the incomes of poor Indian households. Non-Timber Forest Produce (NTFP) provides substantial sustenance to tribals living on the fringes of standing forests. Besides providing food (tubers) during summer months, they are a rich source of supplementary diet and also contribute significantly to household incomes. The poor depend significantly on commons to meet their fuel requirements and to graze their livestock.

Commons provide a unique opportunity to work through a single platform on issues of poverty reduction, reducing inequalities and improving ecological health. Our work on ecological restoration is intertwined with crafting local community institutions, reviving collective action and strengthening tenure arrangements over forests and other common lands in favour of communities.



Manohar Bhilela

Community institutions enable a code of locally agreed behaviour that both energises proactive steps and keeps undesirable individual action in check. While local communities would determine local land use, we are instrumental in synthesizing and putting in local idiom the body of knowledge spread across different agencies such that the communities and their representatives can take informed action.



**Institutional mechanisms that evolve out of collective action often spin off into domains other than those originally envisaged and rightly so. Moreover, in a dominant trend of increasing individualistic behaviour, it is imperative that institutional mechanisms governing all domains mutually reinforce each other for each of them to survive.**

Based upon the administrative category that the land falls under, we work with Village Forest Management and Protection Committees, Grazing Land Committees, Tree Growers' Cooperatives, *Gramya Jungle Committees*, *Van Panchayats* and *Panchayats*.

The core principles of our work in strengthening village institutions in the governance of natural surroundings are:

- » Improving the democratic behaviour of both traditional and the emerging institutions so as to check their parochial and patriarchal interests and make them more inclusive and representative.
- » Nesting various forms of village institutions of management of natural resources under the constitutionally enshrined umbrella institution of *Panchayats* as well as work directly with *Panchayats* and their subcommittees, to strengthen the lowest tier of governance.
- » Facilitate institutional arrangements that enable transactions within and across hamlets and user groups that share resources and have overlapping or competing interests so as to check injudicious exploitation of resources as well as provide equal access to benefits.
- » Bring together the representatives of village institutions, civil society representatives, academia and government functionaries and build better stewardship of the area and its natural surroundings and take informed choices for judicious land use. ■

### THE LARGER NEED

- User based institutions such as water users associations and forest protection committees that are designed around common property resources could prove to be purposeful in managing natural resources. However, they need to be nested under umbrella village institution such as *Panchayats* which are largely performing governing functions, so that the overarching functions of the village commons can be better appreciated.
- Conceive groundwater as a common property and arrive at institutional arrangements of water rights that are based on local hydrology and equal access.
- Reposition 'wastelands' as commons which are repositories of rich biodiversity, sinks for water recharge and support rural livelihoods with fuelwood, fodder and Non Timber Forest Produce (NTFP), and challenge their diversion to extensive plantation of *Jatropha curcas* or other non agricultural land use options.
- Search for institutional options that can segregate merchandising and conservation objectives. Screen the mechanisms such that the poor are not dispossessed and are instead insulated from uncertainties of markets.
- Design and set in place institutional structure at nested spatial scales to address the issue of resource use regulation through local self-governance mechanisms such that issues regarding supply and demand of biomass and water can be (self) regulated.

# RURAL LIVELIHOODS

Contemporary efforts on improving livelihoods often focus on increasing household income without necessarily taking into account the threshold limits of the ecosystems. The key to sustaining the long term viability of agriculture and animal husbandry or rural livelihoods in general, lies in strengthening the linkages between the various elements of the ecosystem – the

biodiversity, nutrients, water, soils, etc. and adopting a farming systems approach encompassing agriculture, animal husbandry and commons.

Such an approach would sustain when the institutional arrangements in the governance of the resources are also equally strengthened. Institutions that focus on merchandising produce appropriated from the farming system and forests should be accountable to institutions such as *Panchayats* which are the overarching institutions entrusted with the responsibility of governing the natural resources and ensuring the inclusion of every section of the population, particularly the poor.

In this context, the recently enacted National Rural Employment Guarantee Act (NREGA) with its pronounced priorities on soil and water conservation and natural resource management in general and implementation through *Panchayats*, provides a timely opportunity to work on strengthening the viability of farming systems as well as improving the functioning of the local self governance institutions. In doing so, there is a critical need to strengthen the technical and administrative capacities at the level of the *Panchayats*.

## THE CONTEXT

- Of over a billion inhabitants, India has an estimated 350-400 million people living below the poverty line, 75% of them in the rural areas. While this number is apparently decreasing at a gradual rate, there is a large number of people living just above this line of deprivation (a dollar a day) and their numbers are not falling.
- In a study conducted across 600 households, 55% of the people identified a decline in availability of minor forest produce as the most important reason for weakening their food security.
- Drylands produce as much as 42% of India's food grains. In these areas as much as 70% of the population depends on agriculture for their livelihoods.
- Small and marginal farmers constitute about 78% of the farming community in India and own close to 70% of the livestock. About 25% of the total fodder requirements and almost 80% of rural fodder needs are met from commons.
- Fuelwood remains rural India's predominant source of domestic energy, and the commons contribute 58% of fuel wood consumed by rural households.
- Unemployment on a Current Daily Status basis rose from 6.0 % in 1993-94 to 7.3 % in 1999-2000 resulting in an additional 27 million job seekers. A more disturbing fact is that of these, 74 % are in the rural areas and 60 % among them are educated.

Bijay Kumar Toppo



In tribal areas, commons and forests contribute directly to the food security and diet diversity of the poor households, especially during the stress periods.



**Commons act as a ‘safety net’ for rural poor and contribute in multiple ways towards livelihoods of poor households. Of the 743 million people living in rural areas around 334 million depend on common property resources. Poor households with very low land holdings have traditionally relied on the common lands for meeting a significant portion of their fodder requirements.**

and more importantly, to facilitate a collectively articulated vision for local development. We continue to assist the village institutions and *Panchayats* in preparing their perspective plans and shelf of activities with a special focus on natural resource management and inclusion of the poor in accessing the opportunities and representing their views. In each location we are cultivating a set of volunteers to assume the stewardship of the area and ensure the participation of local communities.

A recent study conducted from a representative sample of 474 villages in Rajasthan and Madhya Pradesh illustrates the impact of efforts on improving natural resources on rural livelihoods, with improvement in biomass and water availability, bio diversity, solid nutrients and most importantly, robust village institutions. In monetary terms, the fodder grazed or collected from commons amounted to Rs 9,500 per household and contributed to more than 60% of the fodder requirement of the household. The efforts also helped increase the number of livestock units with poor households, helping further reduce inequality in livestock holdings. Cropping area showed an increase of 65 to 94%, leading to improved food security, higher incomes and better crop-livestock

integration. The role of pro poor institutional arrangements aimed at improving the access to commons, promoting subsistence and pluralistic use-regimes, and assisted in raising important questions on ‘what’, ‘how much’ and for ‘whom’ while discussing benefit sharing mechanisms. ■

### THE LARGER NEED

- Though in its third year of implementation and its expansion to all districts of the country since April '08, the NREGA is still in a nascent stage with considerable scope for innovation, systematisation and expansion. It is also timely to start crafting out templates for the next generation issues such as rural enterprises, that such a programme can potentially address.
- With the enactment of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, there is a need to conceive suitable incentives such that the forest right holders are encouraged to maintain forest cover on their lands. There is also a need to address the disincentives in the current regulations that discourage private forests.
- While the improved biodiversity and availability of water, nutrients and biomass can, to an appreciable extent, address the fundamental problems that ail subsistence agriculture, there is a need to explore additional measures that could feed the growing population.
- Realign the policy focus on livestock from ‘milk and cattle’ and irrigated fodder to include small ruminants and a larger farming system approach that takes into account agriculture residue and fodder from commons.
- Promote improved wood stoves as strategies to improve forest re-growth and reduction of black soot emissions which contribute to atmospheric brown clouds and also affect the respiratory health of rural women.

# PROGRESS OVERVIEW

**By working on processes of ecological restoration and improving the character of local self governance which by their very nature are process oriented, we have built a strong constituency of village communities that have brought ranges of hills under better vegetative cover and evolved institutional spaces within and across villages that safeguard the interests of the poor.**

We work with 1,526 village institutions in 27 districts across six states, and assist the village communities in protecting 107,094 hectares of revenue wastelands, degraded forestlands and *Panchayat* grazing lands (*Charagah* lands). We support *Panchayats* and their subcommittees, Village Forest Committees, *Gramya Jungle* Committees, Water Users Associations and Watershed Committees in order to improve the governance of natural resources. Regardless of the form of the institution, we strive for universal membership and an equal access of women and poor in decision making.

Graduating to a landscape approach has expanded our domains to the wider ecological, social and economic dimensions ensuring the long-term durability of our efforts in the rural areas. We plan to extend the work to another 50,000 hectares over the next five years and support the work of other organizations in an additional 60,000 hectares. In order to replicate the lessons learned, we are encouraging village volunteers and honing local skills so as to maintain the quality and promote a better stewardship of the area. Moreover, we are bringing together representatives of civil society, academia, political parties and government functionaries on common platforms aimed at promoting inter-disciplinarity in generating options, coherence in taking action and shared responsibilities in stewardship. The Regional Cells set up recently in the western, southern and eastern parts of the country are carving out a niche for themselves highlighting the unique ecological imperatives of the area and supporting other government and non-government agencies in capacity building and land-use information analysis.

We work in close coordination with the State Governments. The State and District Level Coordination Committees comprising Secretaries of relevant departments like Forest, Revenue, Rural Development, Cooperation, Agriculture etc. help steer policies relating to the lease of revenue wastelands, permissions for working in lands and forestlands and earmarking vast stretches of land, enabling convergence in implementation of programmes. We collaborate with credible organizations, research bodies and academia in undertaking studies and lobbying for issues concerning ecological well-being and social justice. We advocate issues concerning ecological security by commissioning studies, organizing series of lectures and disseminating information through print and film media. We partner with several national and international networks and contribute to influencing policy.



## MEASURES TO BOOST ECO-RESTORATION

- As of March 2009, a total of 107,094 hectares of common lands, forestlands and grazing lands are brought under collective management by community institutions. Soil and moisture conservation and revegetation measures were undertaken on 34,732 hectares of land with 14,325 hectares of land under natural regeneration.
- A total of 11,231 hectares of revenue wastelands have been leased to community institutions. In addition, community institutions have, under tenurial arrangements, over 6,470 hectares of grazing lands, 8,383 hectares of *Van Panchayat* lands, 1,358 hectares of *Gramya Jungle* lands, and 17,803 hectares of forestland under Joint Forest Management.
- The Biodiversity of Kumbhalgarh, Phulwari-ki-Nal and Sitamata Wildlife Sanctuaries, located in the Southern Aravalli Hills, was assessed to inventory the flora and fauna of the area and prepare appropriate conservation action plans. Several species in all floral and faunal groups, hitherto not recorded, have been identified which include 117 species of lower plants, 837 species of higher plants, 80 species of butterflies, 18 species of spiders, 48 species of herpetofauna, 272 species of avifauna and 45 mammalian species. As many as 19 species of plants, 4 species of reptiles, 9 species of birds and 7 species of mammals are designated as threatened. Field data was used to produce maps detailing distribution of floral and faunal diversity, location of habitat of threatened species, hot spots, etc. This information was used to derive Conservation Action Plans which included identification of conservation targets such as ecological systems and communities and species of conservation significance. In addition, critical threats and indicators for monitoring as well as Conservation Action Plans for the villages along the boundaries of the sanctuaries were drawn up.
- In order to assess the ecological health and the changes therein, we developed a 'Biophysical Monitoring Framework' and subsequently comprehensive baseline evaluations of selected watershed areas in Anantapur (Andhra Pradesh) and Bhilwara (Rajasthan) have been completed. Status of all major components such as floral and faunal diversity, geo-hydrology, soil, water, agriculture, catchment area were assessed using a grid-based approach. The baseline evaluation aims to collect information which can be used to support management decisions and project planning processes, including framing conservation action plans and identifying indicators for monitoring the impact of project interventions. Restoration plans are aimed towards enhancing the presence of natural pest controllers, pollinators, seed dispersers, etc. that play a critical role in fortifying the production systems and thereby in strengthening rural livelihoods. Similar assessments are in progress in selected watersheds of Angul (Orissa).
- In order to ensure the technical appropriateness of the soil and moisture conservation measures under NREGS and in watershed development programmes, a series of capacity building programmes were undertaken on various aspects including geo-hydrology for staff members and groups of para workers who hail from villages of project area.

## DEVELOPING INSTITUTIONAL CAPACITIES

- Community institutions include 548 Tree Growers' Cooperatives, 267 Village Forest Protection Committees, 57 Grazing Land Development Committees, 276 Panchayati Raj Institutions, 265 Village Committees, 49 *Gramya Jungle* Committees, and 64 *Van Panchayats* taking the total number of village institutions associated with, to 1,526.
- During the year, multi pronged strategies of building capacities at the local level and regional level were adopted. These were aimed at building leadership, negotiation skills and initiatives of the rural volunteers for better stewardship of the region and for articulating the development agenda of the region. With increase in programmatic allocations in rural areas, especially through NREGA, we were involved in creating a guild of local skilled persons who can play a pivotal role in effective implementation of such programmes. Resource persons imparted skill development trainings in planning and execution of restoration activities.
- We assist local communities in building local and regional platforms, which can scale up the agenda of community led development initiatives. To strengthen collective action and process support at habitation level and *Panchayats*, a total of 467 trainings and meetings were organised at regular intervals.
- Efforts were undertaken to disseminate the various studies in the local idiom and engage with the communities in discussions around ecological indicators like soil fertility, moisture and pollination so as to determine conservation efforts at the local level. With groundwater resources in critical state and extraction patterns on the rise, the findings of geo-hydrology studies and data of water-audits were shared with *Panchayats*, government agencies and other stakeholders of the region so as to evolve strategies and galvanize collective action that regulate usage of groundwater.

## LEARNING PROCESSES

Our engagement with rural communities in building institutions towards the conservation of nature and natural resources is founded on a strong respect for the local wisdom, its rationale if not the content. While it is eventually the communities' responsibility to take decisions that govern their village life and management of natural resources, we challenge them on issues concerning equality and equity and the soundness of their contemporary land use practices. We integrate scientific rigour in efforts on ecological restoration and improve our understanding on issues such as hydrogeology, biodiversity of forest, grassland, agro and wetland ecosystems, and processes of institution building at local and regional scales.

In all the locations that we are involved with, profiling of ecological, hydrological and socio-economical features forms a critical part of designing the intervention strategies. While the geohydrology studies help in understanding the demand and availability of surface and groundwater and the need for conservation measures, the ecological profile is crucial for developing regeneration plans and

understanding the ecosystem diversity and landuse patterns in the area. The socio-economic profiles help embed conservation efforts in the crafting of institutional mechanisms and according primacy to the interests of the poor and marginalised.

Conventional programmes on natural resource management invariably lack systematic and comprehensive monitoring frameworks. As we launched programmes in conserving natural resources at an extensive scale, we developed a comprehensive framework to monitor the ecological, social and economic changes over an area of 5,000 hectares each, in Rajasthan, Andhra Pradesh and Orissa. While we have compiled baseline information in two States and extend to Orissa this year, we shall monitor periodic changes over the coming years so as to reflect and highlight the ecological impacts, the adaptation of social institutional processes and the range of economic benefits across dis-aggregated population.

The three regional cells set up in the western, eastern and southern regions of the country are emerging into resource centers channelling capabilities and energies



S.S. Singh

**Bringing to surface the 'systems' nature of understanding that is very much intrinsic to rural communities that live in close proximity to nature, we assist village communities map and unravel complexities of managing and governing natural resources.**

## STUDIES AND DOCUMENTATION

To improve the effectiveness of our work at the village and landscape level, we take forward the leads from the field locations in the form of well-designed studies, either internally or in collaboration with resource persons/institutions. Some of the important efforts during the year are –

- On the request of UNDP, a study on ‘Biodiversity Conservation, Land Use, Land Use Change and Forestry (LULUCF) Programmes - Ideas for implementation’ was undertaken for the States of Arunachal Pradesh, Chattisgarh, Jharkhand and Orissa. The study aimed to identify gaps and constraints that exist within the current policies and strategies, and suggest measures to develop and implement suitable programmes for conserving biodiversity and enhancing livelihood opportunities.
- During the year, studies were undertaken in a village to assess all the possible options of reducing carbon emissions in a farming system and estimate the likely gains through carbon credits. Another study attempted to understand the influence of climate change and identify vulnerable areas and populations in the sub basin of river Sabarmati.
- A Rapid Landscape Assessment of the Matiyari Watershed, Mandla District (Madhya Pradesh), aimed at analysing the status of the natural resources and identifying critical areas of interventions, helped in planning suitable watershed development measures in a holistic manner.
- A study undertaken to assess the extent of soil erosion in selected micro-watersheds of upper Kolab basin in Koraput District (Orissa), has brought to surface the severity and the causes of the problem in the region, and would prove helpful in suggesting suitable policy measures, programmatic approaches and conservation measures.
- A study titled ‘Bio-fueling Growth: Rhetoric vs Reality of Agro-fuels in the Indian Context’ was conducted to understand the critical aspects concerning mass scale plantations of bio-fuel within the context of the rising food prices and transfer of land resources to fuel crops from food crops.

## COLLABORATIONS

Our collaborations with various scientific and academic bodies help locate our work in the larger context, design pursuits that are grounded as well as technically rigorous and provide sound basis for influencing policy.

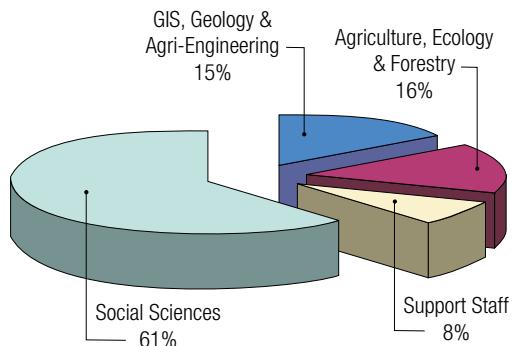
- With support from South Asia Pro-Poor Livestock Policy Programme (SAPLPP), we undertook an initiative titled ‘Valuation of the Commons with specific reference to Pro-poor Livestock Development’, conducted in the States of Rajasthan and Madhya Pradesh. The exercise validates the value of regenerating commons and identifies good practices for pro-poor livestock development. Gujarat Institute of Development Research (GIDR) helped in the economic analysis of such land development.
- Along with International Livestock Research Institute (ILRI) and few other partners, we are implementing an action research project titled ‘Capacity to Innovate’ for fodder enhancement in select locations of the country. The project helps us in developing a theoretical framework around our work on meso-level governance involving government officials, academia, civil society organizations, interested individuals and others.
- We are collaborating with Washington University in St. Louis, for measuring impacts of energy conservation measures on indoor and outdoor particle emissions that also contribute to climate change. We have also begun an innovative initiative on integrating ‘System Dynamics’ modeling into our interactions with village communities and thereby designing various interventions around ‘Coupled Natural and Human Systems’.
- Together with Clemson University, South Carolina, we have initiated studies to understand the groundwater situation in Salri watershed in Agar (Madhya Pradesh). This would help in understanding the impact of water harvesting structures on soil moisture and groundwater flows and in designing planning interventions in the hard rock areas of peninsular India.
- In collaboration with Institute of Science and Technology for Advanced Studies and Research (ISTAR), Anand, we are improving our understanding on ‘Nutrient Dynamics in Dryland Areas’. In the districts of Udaipur and Bhilwara, we are assessing the flow of nutrients from forests/commons to the agricultural fields, the preliminary results of which show encouraging results. Another study on the ‘Ecological Assessment of the Wetlands’ in Anand district revealed a high diversity of flora and fauna but also highlighted the threats being faced by the wetlands.
- We continue to collaborate with Collectives for Integrated Livelihood Initiatives (CINI) in developing a knowledge bank on the districts of Central India by collating information on a GIS platform, to gradually take shape of an Atlas of Central India.

on ecological and socio-institutional aspects and farm based livelihoods. We undertake studies, conduct training programmes and offer services to other organizations on inventorying biodiversity, assessments of ecological, social and economic changes, institution building around commons, Remote Sensing and GIS, etc. We regularly participate in training programmes organized by other organizations so as to learn from their perspectives and enrich the discussion with our experiences on the ground.

## SPATIAL INFORMATION FOR CONSERVATION

Ecological and climatic parameters have a distinct influence in shaping niche characteristics and help determine larger conservation plans for an area. Where spatial analysis juxtaposed with layers of thematic information provides critical understanding of the area and enables informed action, the periodic monitoring of spatial and temporal changes helps pitch a panoramic and visionary argument and strategy. Such spatial representation also helps map the minds of local communities, transgressing their immediate horizons. By surfacing aspects and inter-linkages that are otherwise not readily discernible, such information enables them to articulate their concerns and plans and helps build bridges between habitations.

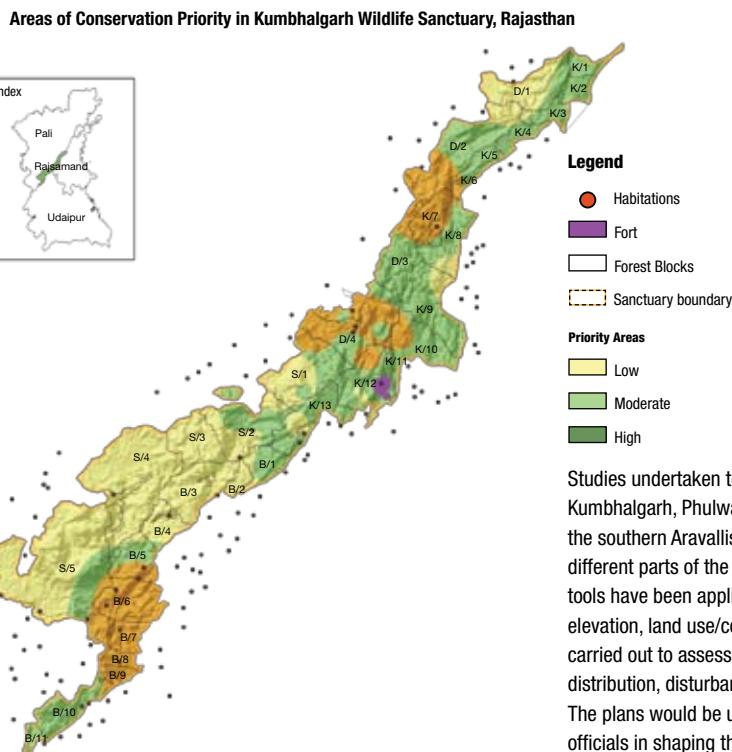
### Our Staff Strengths



**With 231 staff members, we endeavour to be an organization that is imaginative, versatile, innovative and one that accelerates the process of ecological restoration and poverty alleviation in the country.**

We have a well-equipped Geographical Information Systems (GIS) and Remote Sensing facility, and have developed a comprehensive database on various parameters (demographic, natural resources, social, economic, infrastructure, etc.) of several parts of the country. We also add the dimension of spatial analysis to the studies undertaken on water resources, soil, biomass and biodiversity estimation, etc. for

### Biodiversity assessment studies in three sanctuaries in South Rajasthan



Studies undertaken to assess and inventorise the biodiversity of Kumbhalgarh, Phulwari-ki-Nal and Sitamata Wildlife Sanctuaries in the southern Aravallis, helped design conservation action plans for different parts of the sanctuaries. GIS and Remote Sensing tools have been applied in selecting the sample grids based on elevation, land use/cover, slope and aspect. Spatial analysis was carried out to assess various species characteristics, density, distribution, disturbance, threat and priority areas for conservation. The plans would be useful for the local communities and forest officials in shaping their efforts towards conservation.

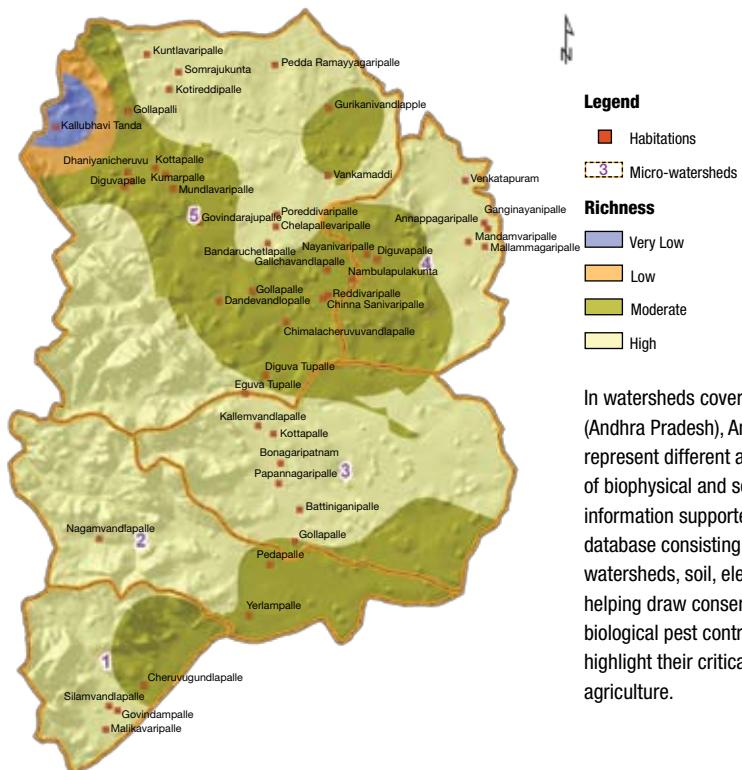
supporting decisions on natural resource management. Over time, such studies have helped establish the impact of conservation action (or the lack of) on water availability, biomass and biodiversity, soil quality, etc.

We continue to compile information from various sources on multiple parameters and of several decades and have captured spatial trends for Gujarat and Rajasthan at the State level and Kolar (Karnataka),

Angul (Orissa), Chittoor (Andhra Pradesh) and Shajapur (Madhya Pradesh) at the district level. In a significant initiative, we are in the process of preparing an 'Atlas of the Development Context of Orissa' and six select districts so as to synthesise information available with various sources, depict development trends over a spatial platform and across decades and make available valuable information for developmental actors on an interactive platform.

### **Rolling out a 'Bio-physical Monitoring Framework'**

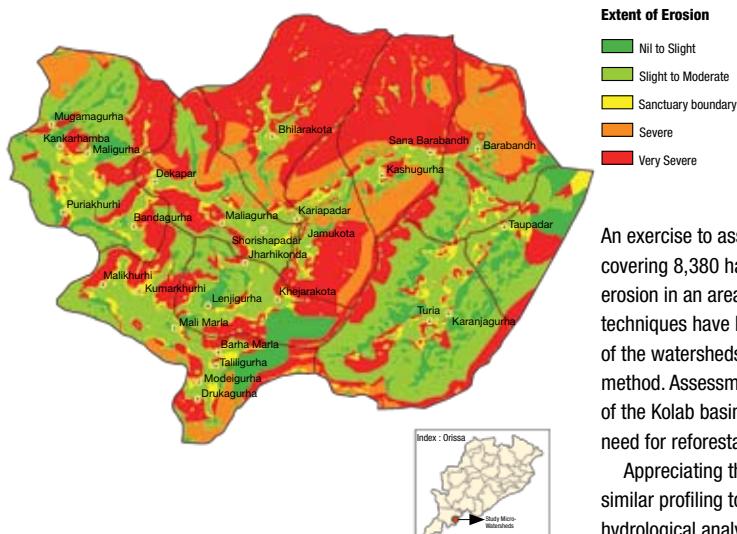
#### **Kadiri Watershed: Distribution of Threatened Species**



In watersheds covering 5,000 ha. each in the districts of Anantapur (Andhra Pradesh), Angul (Orissa) and Bhilwara (Rajasthan) that represent different agro-ecological zones, in-depth monitoring of biophysical and socio-economic indicators is aimed. Baseline information supported by intensive field work helped create spatial database consisting land use/cover, geology, drainage network, watersheds, soil, elevation, slope, etc. While spatial analysis is helping draw conservation action plans, the profile of pollinators and biological pest controllers (spiders) listed in Anantapur watershed, highlight their criticality in maintaining the robustness of dryland agriculture.

### **Assessment of Soil Erosion in Kolab River Basin in Koraput District, Orissa**

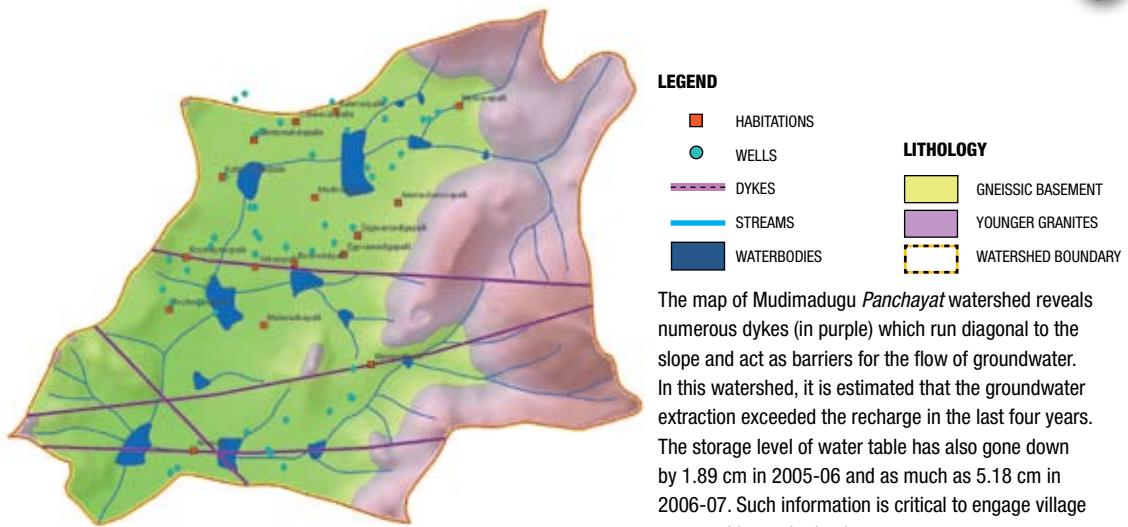
#### **Extent of Soil Erosion in select Micro-watersheds**



An exercise to assess the extent of soil erosion of select watersheds covering 8,380 ha. in Kolab river basin unraveled the high degree of erosion in an area that had good forest cover till recently. GIS and RS techniques have been applied to analyze and classify erosion zones of the watersheds using the Universal Soil Loss Equation (USLE) method. Assessment of the extent of erosion in the entire catchment of the Kolab basin and the resulting siltation would highlight the need for reforestation.

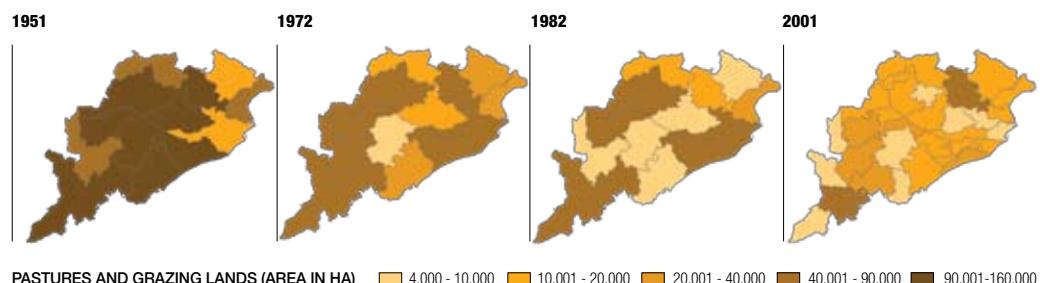
Appreciating the value of such an assessment, we are extending similar profiling to all project locations alongside the ecological and hydrological analysis that is already in practice.

## Water Resources Estimation Study in Srinivaspur Taluk, Kolar District, Karnataka

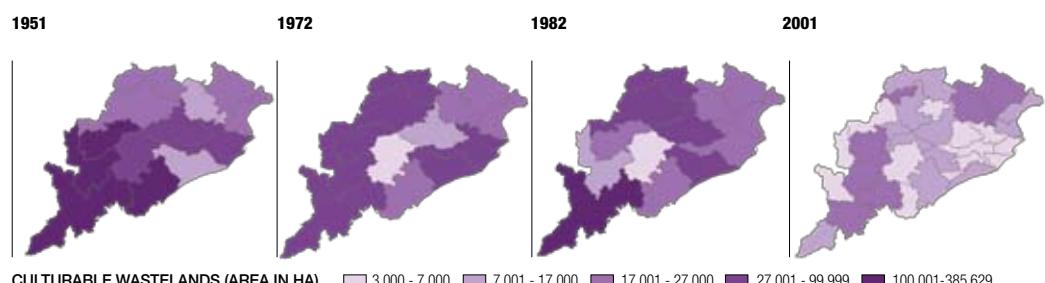


## Orissa State and Six District Atlases and Customized Software

### Area under Pasture and Grazing lands in Orissa



### Culturable Wastelands in Orissa



Compiling information on various developmental parameters for the last few decades, an 'Atlas of Development Trends of Orissa State' is under final stages of completion. District-wise data is linked to maps illustrating spatial trends in demography, infrastructure, natural resources, agriculture and vulnerability aspects. Similarly, block level information of six poverty prone districts has been compiled and trends over the last few decades are presented as District Atlases. A customised software application for accessing the maps and the data has been developed such that decision makers and scholars could analyze information as per their specific needs.

## India Biodiversity Portal



We contributed to the development and launch of the India Biodiversity Portal, which is a repository of information on India's biodiversity and is also designed to harness collective knowledge, seek voluntary participation of users and establish a participative system of content generation, verification and usage. Developed on open source software, Google Earth forms the spatial backdrop. Partnering with another six NGOs, as many as 100 spatial layers were developed and made available for open access.



As an increasing amount of government funds are being made available, and rightly so, towards the restoration of ecological infrastructure and decentralised local governance, we are concerting our efforts towards building responsive and deliberative *Panchayats* and a better stewardship for the area.

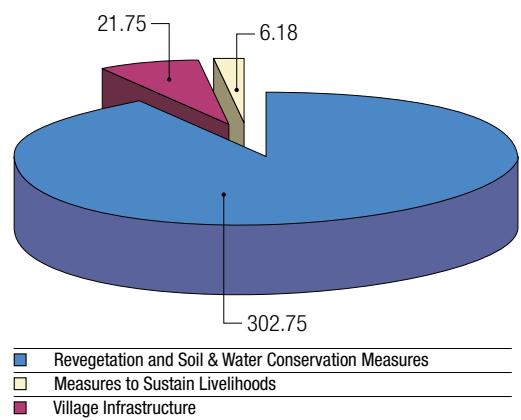
## LEVERAGING PROGRAMMES FOR CONSERVATION

The opportunities presented by the new policy initiatives, increasing availability of public funds for village level expenditure, a better appreciation of the strengths of decentralised natural resource management and a perceptible openness on the part of the government to partner with credible organizations have together created a conducive environment for channeling public spending towards ecological restoration. This also poses fresh challenges for the village level institutions and *Panchayats* to be coherent in their collective articulation, structured in translating their plans into action, transparent in their transactions and accountable to their constituency.

In all the areas that we are present, we assist habitations and *Panchayats* in articulating their visions of local development. Where formally nominated by the district governments, our support extends to a larger area and also helps shape landscape level action through tiers of institutions. We influence decision makers that in rural livelihood systems, infrastructure

### Funds Leveraged from Government Programmes (2008-09)

(Rs. in million)



A total of Rs. 33 million was leveraged from various government programmes by the villages across the project areas in the year 2008-09. Almost 90% of these funds came through the National Rural Employment Guarantee Scheme (NREGS) and were channelled towards the restoration of ecological infrastructure with an equally strong focus on strengthening decentralised local governance and long term livelihood security. We bring out a regular newsletter 'Energising NREGA' which features highlights, issues and updates of the programme and its implementation across the country.

must first be understood as soil, water, nutrient, biomass and biodiversity as they are critical for the viability of farming systems and thereby the rural economy.

Considering the vast opportunities that are unfolding in the form of public spending towards ecological restoration, it is imperative that efforts of the government are matched by parallel initiatives by the civil society organizations in developing regional land use plans and an institutional apparatus that is able to respond to the emerging needs. For this to materialize, we are firstly strengthening the local stewardship for the area, centre-staging local village communities and also involving other interested local citizens. Secondly, considering the need for good hands to efficiently scale up implementation, we are honing the strengths of local skilled persons and familiarizing them with administrative rules and procedures. Thirdly, we are facilitating the formation of fora of village conglomerates that act as platforms of interaction between the government departments, academicians, technocrats and citizen forums so as to build a capacity to innovate together. Lastly, we are considering the feasibility of setting up village or inter-village

information hubs that can help chart participatory and informed plans for local development and also serve as centres for accessing services.

## INTERACTION ON POLICY

Our two decades of experience of working directly with rural communities on issues concerning land use and local self governance provides us an added advantage of being able to synthesise lessons from the ground, compare across locations and qualify their relevance to suit specific situations. We continue to be involved in influencing policies, highlighting the criticality of ecological security as the foundation of socio-economic progress; the role of commons, forests and water in particular, as critical components of the rural economy; the need for tiered self governing institutions that are nested within the constitutionally mandated *Panchayats* and; locating common ground for meeting conservation and livelihood demands.

We promote efforts towards generating clarity and awareness regarding the various provisions of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006



The 'wastelands' where we dialogue and plan with the local communities are also the same grounds where we engage with senior officials to shape development programs in a manner that they better suit local realities.

and National Rural Employment Guarantee Act (NREGA) and help illustrate their smooth implementation in several locations. We have facilitated the submission of community claims over collectively protected forestland under the provisions of the FRA in Orissa and Rajasthan (Udaipur). Being a part of the national consortium of civil society organizations to facilitate the smooth implementation of NREGA, we add our experiences of assisting

Panchayats both in channelling funds and democratizing their character. We have joined hands with like minded organizations to identify policy gaps, institutional deficiencies and investment biases in the livestock sector and advocate pro-poor policies, public investment programmes and institutional development for the welfare of livestock holders. We continue to interact intensively with the Rural Development and Forest Departments at the district level. ■

**We continue to capture our learning and highlight location-specific issues and efforts by bringing out source books, study reports, posters, newsletters and various other communications.**





## Sustaining Commons: Sustaining our Future

We are hosting the 13th Biennial Conference on Commons in Hyderabad, India in January 2011, by co-organising it with the International Association for the Study of the Commons (IASC). The Conference provides a unique opportunity to resurface the discussion and debate on commons and bring experience and evidence from across the world to show that the commons are not a relic of the past, but play a strategic role in maintaining ecological health, reducing poverty, and improving collective action. By placing the conference agenda in the ongoing discussions around conservation, local governance, social exclusion and human rights, agrarian distress and rural livelihoods, and by pitching it at the interface of policy, research and practice, we aim to bring practitioners, scholars and decision makers to a common meeting ground. We have already stepped up initiatives by commissioning reviews and studies and convening discussions with the Governments and civil society practitioners in the lead up to the Conference. We hope that the deliberations in the Conference will feed into the five-year plan formulation process and draw larger policy and programmatic focus on commons.

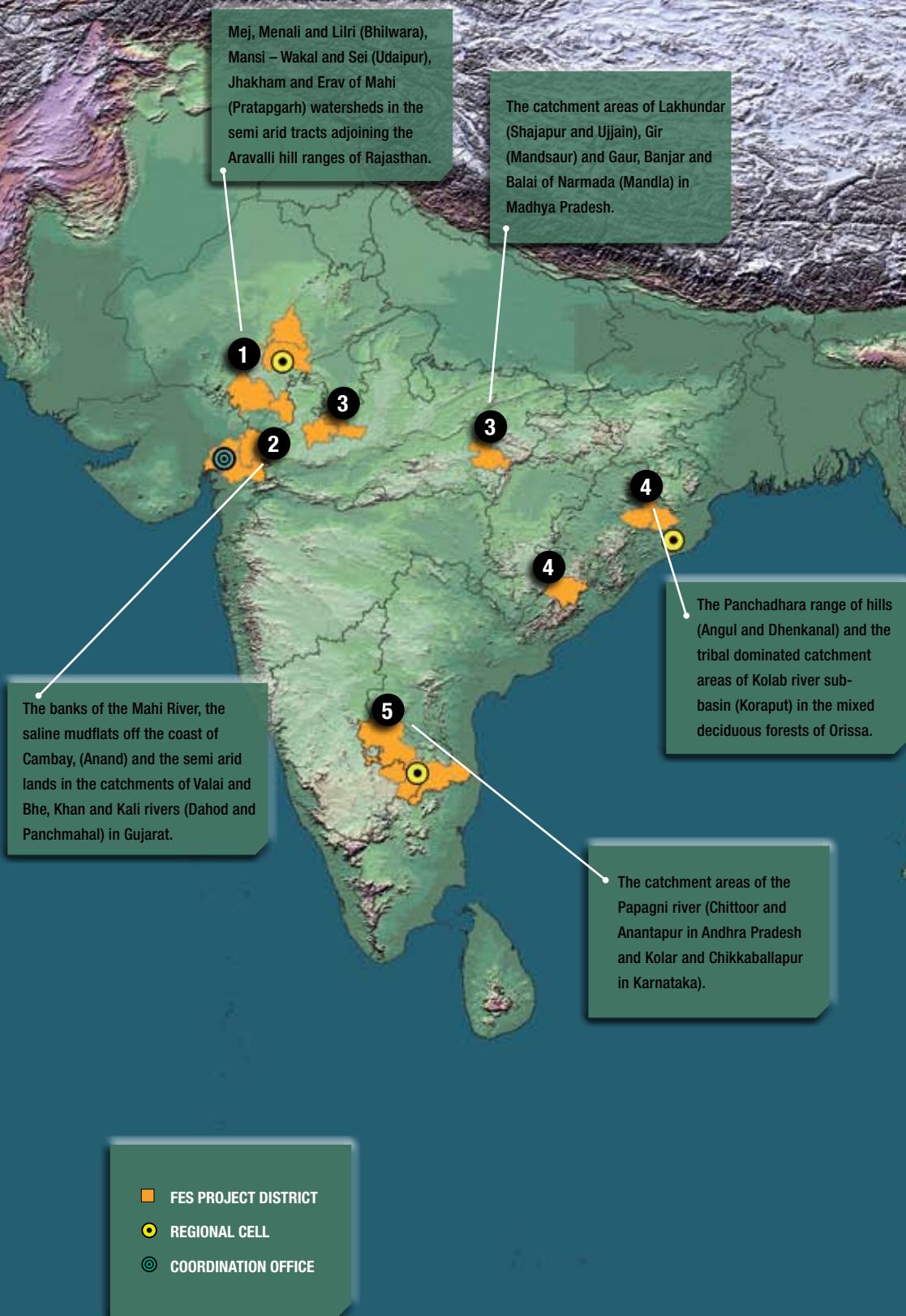
**13th Biennial Conference of  
The International Association for the Study of the Commons  
Hyderabad, January 10-14, 2011**

# PROJECT OVERVIEW

**We have gained experience in restoring degraded landscapes, locating common lands in the larger farming systems, building community institutions for natural resource management at habitation and inter habitation levels, promoting ecologically suitable livelihood activities that lead to improved income levels. We undertake studies on ecological restoration and draw up conservation plans. We are also designing institutional arrangements for the governance of natural resources. With a rich database built over several years, we have a well-equipped facility, which specialises in spatial analysis.**

In all the locations, we work with contiguous villages and across landscapes so as to build on the social and ecological advantages that working at such scales offer. By choice we work in the uplands, which are the head reaches of our river systems and are marked by ecological degradation, a preponderance of common lands and inhabited by economically deprived rural communities. While each location may be guided by specific strategies, the broad organisational level strategic areas are:

- » Reviving the criticality of forests and other common lands and locating inter-linkages with the associated production systems, thereby highlighting the value of forests and the necessity for conservation action.
- » Undertaking pilot level land use planning in different ecological, economic and social settings and addressing the biomass and water scarcities for meeting the consumptive and non-consumptive needs of village communities.
- » Strengthening platforms for discussion at a village and inter-village level by inviting government functionaries, academia and larger civil society to join on issues of conservation and use of natural surroundings.
- » Establishing institutional design principles and mechanisms that provide space for the poor. Developing linkages between village level institutions and the umbrella institution of *Panchayats*, and integration of natural resource management plans by *Panchayats*.
- » Assessing impacts of climate change on various natural and production systems and introducing mitigation and adaptation measures in ongoing practices. ■



## OUR PROJECT AREAS

# FORESTS AND TRIBAL LIVELIHOODS

**Comprising 8% of India's population, tribal communities inhabit around 200,000 villages adjoining the forested areas of our country where they depend on the forests for food, timber, fuelwood, medicine and various Non Timber Forest Produce (NTFP) both for consumption and sale. Besides commercial extraction of timber, change in property regimes, decline in traditional governing mechanisms, and the influx of non-tribal people into tribal inhabited areas have led to widespread degradation of forests.**

We subscribe to the view that in many natural environments that are being modified by human activity, there is scope for conservation and livelihoods to link and benefit from each other and for ecological restoration, social mobilization and poverty alleviation to be multitudinal strategies aimed at ecological well being, decentralized governance and improved livelihoods. We work towards improving both the forest cover and the economic condition of tribal populations by strengthening the interlinkages between forest-water-agriculture. Immaterial of the category of ownership of land whether private, common or public, we continue to influence land use decisions towards an improved forest cover for their role in maintaining the ecological health of the area and in safeguarding tribal livelihoods.

We promote the strengthening of linkages between village institutions incorporated under the Joint Forest Management (JFM) arrangements with the Panchayati Raj Institutions mandated under the Panchayats (Extension to Schedule Areas) Act 1996 (PESA). With the enactment of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, we began assisting villages in submitting claims for the recognition of the land under protection as their community forest. We are also conceiving arrangements that can encourage forest right holders to maintain forest cover on the lands to which they have been given titles such that these lands could continue to play critical ecological functions. We are also in the process of inventorying the biological diversity of the Protected Areas in a few locations to highlight their significance and gradually progress towards integrating them in the larger land use and natural resource management plans of the area.





2004

Manadev Hansda



2009

Chetana Nand Jha

The efforts of 68 habitations of Santrampur block that have been protecting about 2,700 hectares of forestlands are finding acceptance in the region. Adjoining habitations that have recently started protecting about 750 hectares of forestlands have joined the other habitations as a larger conglomerate, offering scope for a collective vision for conservation of the valuable forestlands at a landscape level.

## DAHOD GUJARAT

### FACT FILE

**Agro-ecological Zone**  
Central Highlands and Western Malwa Plateau

**Project Districts**  
Panchmahal and Dahod

**River Basin**  
Valai, Bhe, Kali and Khan

**Mean Annual Rainfall**  
900 mm

**Major Soil Types**  
Medium and deep clayey black soils

**Forest Types**  
Dry Teak Forests, Mixed Dry Deciduous Forests, Grasslands and Scrub Forests

**Major Habitats**  
Forests, Grasslands, Agricultural lands

**Nearest Protected Area**  
Ratanmahal Sloth Bear Sanctuary

**Threatened Species**  
Lesser Florican, Sloth Bear, Dalbergia latifolia, Dolichandrone falcata

**Percentage of Common Lands Including Forests**  
25%

**Percentage of People Living below Poverty Line**  
59%

**Percentage of Scheduled Castes/Tribes**  
91%

**Area Under Protection**  
7,198 ha

**Village Institutions Associated With**  
97

**Total Households of Project Villages**  
17,609

**Indigenous Communities**  
Bhilis

Bordering the States of Rajasthan and Madhya Pradesh, the project area of Dahod is spread over the districts of Panchmahal and Dahod and forms part of the Central Highlands characterised by rain-fed conditions. The area is also listed under Schedule V category considering that it has a significant population belonging to *Bhil* tribes. Almost 80% of the population lives below the poverty line and with limited wage opportunities, migration and indebtedness are very common. The grasslands of Dahod are also home to the 'Lesser Florican', an endangered bird species.

Working in the region since 1998, we are associated with 97 habitations that protect about 7,198 hectares of degraded forestlands and common lands. Severe degradation of forests and low productivity of farmlands coupled with erratic rainfall call for a comprehensive and long-term intervention in improving the natural resources and livelihoods. Our efforts in the region are aimed at promoting robust village institutions that can protect and develop the surrounding degraded forestlands and make their farming systems resilient, and as a consequence improve both their farm-based livelihoods and the ecological well being of the region.

In the Santrampur region, of an entire patch of 6,000 hectares of degraded forest land, about 3,500 hectares is already under protection by local communities. Extending the protection mechanisms to cover the entire patch of 6,000

### UPDATE 2008-2009

- Regeneration activities were undertaken on 123 ha of forestland. A total of 150 kg seeds of local species of shrubs and trees were dibbled on the forestlands protected by Forest Development Cooperative Societies. About 14,000 saplings were planted on forestland as well as adjacent boundaries of farmlands.
- Series of meetings were held with small groups and habitations to understand user regimes, deliberate on collective systems of forest protection and better implementation of National Rural Employment Guarantee Act (NREGA). With a view to initiate eco restoration activities under the scheme, six micro plans covering 750 ha of forestland were prepared of which two were approved by the Forest Department.
- An information kiosk was set up at a traditional tribal fair (*Rewari ka mela*), which attracts people from several nearby villages of Santrampur to disseminate information about various provisions under NREGA and improve awareness as well as implementation.

hectares and simultaneously working on about 4,000 hectares of adjacent farmlands, we are undertaking measures at a landscape level in improving natural resources through village and inter village institutions. With the consent of the District Administration, we are assisting the villages in availing the opportunities under NREGA to undertake measures aimed at improving natural resources. The Government of Gujarat has recently approved another innovative proposal to capacitate and develop a guild of local tribal youth that would assist habitations and village *Panchayats* in effectively using the provisions of NREGA and other ongoing programmes of the government.

In a region marked with high incidence of poverty and few opportunities for employment, the village institutions and their fledgling conglomerate institutions face the challenge of warding off threats to the forestlands not only from within their immediate neighbourhood but also from the communities that lie across the border in Rajasthan. Through a combination of interventions aimed at improving natural resource base, leveraging the provisions of Forest Rights Act (FRA) for registering community rights over the forests and initiatives that are directed towards strengthening local stewardship of the area, we also aim to build a platform for interaction between the villages of Rajasthan and Gujarat in order to protect the entire range of forests. ■



Ruben DekaPukun

### Energizing NREGA

Scaling up the previous year's initiative of developing a cadre of rural youth equipped for effective implementation of development programmes, a larger group of skilled para-workers are being trained from villages spread over Santrampur and Kadana blocks with financial assistance from the District Administration under NREGA. An information kiosk put up in the traditional *Rewari* fair, formed part of the various programmes for raising awareness of the provisions of NREGA as well as mobilizing local village communities to avail the opportunities it offers.

- Considering the experience and expertise, the Forest Department invited the team to be a Resource Support Organization for planning, training and capacity building for community forestry programmes in the district. Various training programmes were organized to enable participatory planning, help prepare micro plans and build overall capacities of the institutions.
- A District Level Coordination Committee meeting was convened under the chairmanship of the Collector, Panchmahal, to better articulate the role of FES in the implementation of NREGA and also link up trained rural professionals with various government programmes. We were asked by the District Administration to train an additional 80 para-workers for extending support to 38 villages of Santrampur and 42 villages of Kadana blocks.
- A detailed livestock profile of a watershed was prepared in order to observe the change in livestock patterns due to various biophysical interventions in the

areas. A geo-hydrological study was also conducted during the year with the main objective of understanding the potential of water recharge in the watershed area. Findings of the study have reaffirmed the community's belief that the area has potential for recharge of ground water. Water level data of 66 wells continues to be recorded to measure the long-term impact of watershed development activities on 3,100 ha of land.

- We could link five trained para-veterinarians (also called *Gopals* locally) with an organization working towards improving animal husbandry practices in Gujarat, for attaining further skills in animal husbandry & veterinary practices and artificial insemination. The *Gopals* have gained recognition for their good service delivery across almost 46 habitations in Santrampur Taluka.



2003

B. K. Sharma



2009

Kumar Rupam

**Having conducted studies to inventorise the flora and fauna of the three sanctuaries in the region, we have mapped the critical habitats and species and prepared conservation action plans. It is increasingly becoming apparent that the village communities that reside within and bordering the sanctuaries need to be active partners in conservation efforts both to improve their livelihoods as well as safeguard the habitats.**

## UDAIPUR RAJASTHAN

### FACT FILE

**Agro-ecological Zone**  
Northern Plains (and Central Highlands) including Aravallis

**Project Districts**  
Udaipur

**River Basin**  
Mansi, Wakal and Sei

**Mean Annual Rainfall**  
650 mm

**Major Soil Types**  
Deep loamy grey brown and alluvium derived soils

**Forest Types**  
Tropical Dry Deciduous

**Major Habitats**  
Forests, Grazing lands, Wetlands, Agricultural lands

**Nearest Protected Area**  
Sajjangarh Wildlife Sanctuary, Phulwari-ki-Nal Wildlife Sanctuary and Kumbhalgarh Wildlife Sanctuary

**Threatened Species**  
*Commiphora wightii*, *Sterculia urens*, Aravalli Red Spurfowl, White-naped Tit

**Percentage of Common Lands Including Forests**  
67%

**Percentage of People Living Below Poverty Line**  
55%

**Percentage of Scheduled Castes/Tribes**  
54%

**Area Under Protection**  
5,589 ha

**Village Institutions Associated With**  
201

**Total Households of Project Villages**  
11,805

**Indigenous Communities**  
Bhil, Garasia, Meena, Kathodi

In Udaipur, our project area is spread across the two blocks of Jhadol and Gogunda, which come under the catchment of the river Sabarmati, and three of its major tributaries – Mansi, Wakal and Sei. The area is home to a unique mix of biodiversity, as it marks the ecotone between the teak dominated forests of the South and the grasslands of Rajasthan. Standing guard against the eastward advance of the Rajasthan Desert, the forests of the Aravalli Hills add to the critical importance of eco-restoration in the area. As much as 90% of the population is tribal, with *Bhilis* and the *Garasiyas* tribes being the predominant communities inhabiting the buffer zones of the Protected Areas of Kumbhalgarh and Phulwari-Ki Nal sanctuaries. Forests and common lands occupy 41% and 43% of the landscape with 16% of the land under agriculture.

Initiated in the year 2000, we presently work with 201 habitations, spread across 11 *Panchayats* where efforts towards restoration and conservation have succeeded in bringing 5,589 hectares of land, mostly forestlands, under community protection. At present most of our work is strung along the Nal Sandol and Madri forest ranges with the communities engaged in protection and regeneration of forestlands through Joint Forest Management (JFM) arrangements. The area has seen the evolution of mutually beneficial multi-user regimes for governing the commons that have found appreciation in contemporary as well as traditional community institutions alike. The recognition of traditional users (*hakdars*) by all institutions across villages has helped

### UPDATE 2008-2009

- As many as 29,990 saplings were planted and indigenous species of seeds were dibbled on a large scale in 154 ha of common land. Eco-restoration measures to the tune of Rs.5.9 million to be facilitated by FES have been included in the District level action plans under National Rural Employment Guarantee Act (NREGA).
- In our efforts to help the tribal poor improve their farming, we assisted villages in the deepening of 43 wells benefiting 153 households and construction of 147 vermi-compost pits across six *Panchayats* in the project area. After executing agreements with the community to ensure their upkeep, hand held solar torch lights were distributed among 240 households in Karech village. As the village lacks electrification, the initiative resulted in a significant reduction in the usage of kerosene for lighting purposes.

in enabling an effective and enduring governance mechanism to sustain initiatives on ecological restoration and in reinforcing the idea of landscape level conservation efforts.

We have been assisting the communities in developing a better understanding of the provisions of the Forest Rights Act (FRA), with concerted focus on community rights, the registration of which we feel is critical to ensure conservation of the forests. We are also exploring the possibilities of integrating the potential of both the FRA and PESA for strengthening community rights over forests. We also continue to inventory the biodiversity of Kumbhalgarh and Phulwari-ki-Nal sanctuaries, the findings of which could pave the way for comprehensive and sound conservation plans for managing the natural resources so as to also ensure long term and sustainable livelihoods to the local stakeholders.

Leveraging the favourable provisions of the NREGA for natural resource management and decentralized governance, building local capacities and crafting out sustainable and ecologically sound livelihood options amid the complexity of tribal livelihood systems continue to be the key challenges in the region. We are in the process of strengthening collaborations with different agencies, especially towards collectively addressing issues of good governance and natural resource management, developing local leadership, and understanding market linkages for Non Timber Forest Produce (NTFP) as well as appropriate farming interventions for the region. ■



Kumar Rupan

### Energizing NREGA

To protect their basic needs of meeting fodder requirement, the Grazing Land Committees of Thala and Piparna of Chitravas vigorously protested the plans of the *Panchayat* to plant *Jatropha curcas* under the NREGA on the 130 hectares of grazing land that they were collectively protecting. In the negotiations that followed with the block level officials and the local MLA, an alternate patch of unprotected land was identified for the plantation, preserving the protected area.

- We encouraged the local tribal communities to file claims for their collectively managed forests and individual holdings and assisted them in better understanding of the provisions of the Forest Rights Act, the role of the Forest Rights Committee and the various procedures to be followed.
- As issues concerning climate change and global warming are gaining attention, we joined hands with two other local organizations under the Friends of Live Earth campaign and celebrated World Environment Day understanding and debating relevant issues. About 125 children from eight schools, representatives from several non-government organizations and government functionaries participated.
- Considering that the institutional mechanisms for

protection of the rich forest cover in the Kamalanath range have weakened over the years, we undertook assessments on the status of the biomass and biodiversity of the area and the prevailing institutional mechanisms so as to design appropriate strategies for intervention.

- Inventorying of the biodiversity in the three Protected Areas of Kumbhalgarh, Phulwari ki Nal and Sitamata Wildlife Sanctuaries was nearing completion during the year. Taking note of the recording of several species of flora and fauna hitherto unrecorded in these areas, the Forest Department has asked us to extend the studies to other Protected Areas of the southern Aravallis and draw comprehensive action plans of conservation.



Around 689 quintals of dry fodder was harvested by the community from the regenerated lands in three villages, which would assure at least two months of fodder availability in the critical dry season. While the institution in Bellari (Kulthana Panchayat) has adopted the system of 'cut and carry' and collects Re. 0.50 for a bundle of grass, the institution at Samnauti has decided to collect Rs. 100 per annum from every household to harvest the fodder.

A recently carved district of Rajasthan, Pratapgarh is situated at the junction of the Aravalli mountain ranges and the Malwa Plateau and displays a unique amalgamation of characteristics of both. The Sitamata Sanctuary with its rich biodiversity falls in the western part of the district. Our project lies in the catchments of Siwna and Gir tributaries of River Chambal and Jhakham and Erav tributaries of River Mahi. The area under forestland category is about 45%. With a predominant population of *Meena* Tribes, the area falls under Schedule V category. The region is characterised by scattered habitations and small villages with 65% of the population living below the poverty line. Common lands (grazing and forest lands) are vital components of the landscape. However, a combination of factors including unfavourable tenurial arrangements, eroding protection and management systems, overgrazing and illegal tree felling has left them increasingly degraded over the years.

Working in the region since 2005, we are associated with 56 village institutions that are protecting 1,575 hectares of common lands and degraded forestlands. Largely due to the efforts of a responsive community that realizes the importance of tenurial arrangements and collective systems for the management and governance of common lands and forestlands, institutional arrangements such as Village Forest Committees, *Charagah Vikas Samitis* and Watershed Development Committees have rapidly spread in a short period of less than four years.

## UPDATE 2008-2009

# PRATAPGARH RAJASTHAN

### FACT FILE

**Agro-ecological Zone**  
Central Highlands, Vindhyan and Satpura range, Western Malwa Plateau

**Project Districts**  
Pratapgarh and Mandsaur

**River Basin**  
Jhakham, Erav of Mahi, Siwna and Gir of Chambal

**Mean Annual Rainfall**  
850 mm

**Major Soil Types**  
Black, yellow with sandy and loamy

**Forest Types**  
Tropical Dry Deciduous and Grasslands

**Major Habitats**  
Forest, Grasslands, Gorges and Sacred Groves

**Nearest Protected Area**  
Sitamata Wildlife Sanctuary

**Threatened Species**  
Rusty-spotted Cat, Four-horned Antelope, Lesser Florican, Fat-tailed Gecko

**Percentage of Common Lands Including Forests**  
60%

**Percentage of People Living Below Poverty Line**  
65%

**Percentage of Scheduled Castes/Tribes**  
69%

**Area Under Protection**  
1,575 ha

**Village Institutions Associated With**  
56

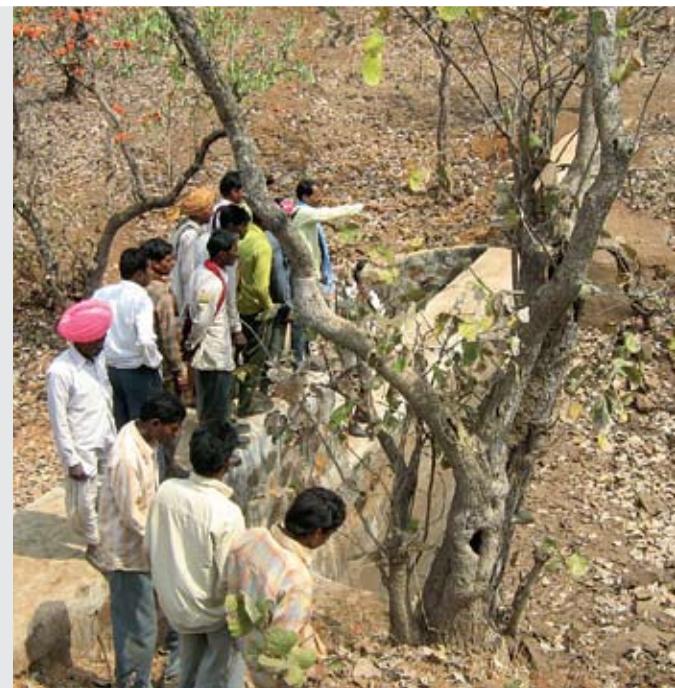
**Total Households of Project Villages**  
5,300

**Indigenous Communities**  
Bhil, Meena

- Soil and moisture conservation measures, such as contour trenches, contour bunds, gully plugs, loose boulder check dams and water harvesting structures were undertaken on 274 ha of land. As part of regeneration efforts, 4,750 saplings were planted and seeds of *neem* and date palm were dibbled on an additional 85 ha of common land. About 2,700 saplings were planted on the farmlands.
- Community management and protection of about 796 ha of common land and forestland led to considerable improvement in the soil moisture regime, biomass production and good survival rate of the saplings. Around 689 quintals of dry fodder harvested from the pastureland assured the availability of fodder for at least two critical months.
- Large sized water-harvesting structures are being constructed under the Public Private Community

Based on the findings of the preliminary studies of geo-hydrology and bio-diversity, appropriate measures aimed at conserving soil and water and improving vegetation that were undertaken on common lands have resulted in improved biomass and improved availability of water. Gaining from the ecological services of an improved landscape, the communities have revived and strengthened their traditional systems of protection and devised equitable water sharing arrangements. We continue to engage with communities on developing a long-term perspective of reviving the nutrient and hydrological regime of the landscape and on measures that could build resilience into their farming systems.

With formal agreements for protection of forestlands under arrangements of Joint Forest Management, plans to implement watershed development programmes on about 12,000 hectares and the opportunities provided by NREGA to undertake eco-restoration measures, we aim to assist communities and their institutions to envision a landscape of healthy ecosystems and habitats and evolve strategies to safeguard their natural surroundings. Various strategies in this direction are being translated into action. Some of the important steps are to develop the relevant information base of the various ecological aspects of the area, as well as build a guild of local stewards who would assist and evolve a platform of multiple actors of the region, including *Panchayats* and government agencies so as to steer and articulate the development agenda of the region. ■



Dwarkar Gupta

### Energizing NREGA

A sum of Rs. 0.75 million was leveraged through NREGA by linking the Perspective Plans prepared by village institutions with the NREGA plan of the *Panchayats*. In addition, the *Gram Panchayat* of Kerwas passed a resolution in the meeting, recognizing seven village institutions as Vigilance Committees for monitoring the ongoing NREGS activities.

Partnership (PPCP) project, with the involvement of the community, ITC and Government of Rajasthan (Water Resource Division).

- During the year, the Forest Department approved registration of four Village Forest Protection and Management Committees (VFPMCs) for initiating revegetation activities on 282 ha of forestland. A total of 10 village institutions (VFPMCs and Watershed Development *Samitis*) were organized during the year.
- Our continued interactions with the village communities led to the evolution of appropriate mechanisms for protection and conservation, framing of certain rules/norms to check illegal practices and reviving of traditional systems for fair distribution of resources.
- More than 100 issues of *Prakriti Mein Hum*, a daily news magazine have been published till date. The magazine covers day-to-day field events and highlights

the various environmental and social issues of different communities. It is being shared with government officials, villagers, local organizations and students for wider dissemination of knowledge and concerns. Plans to make it an e-magazine are underway.

- Along with officials from the Forest Department, there was an active involvement of community members, more importantly children, in the celebrations of *Haryali Mahostav*. Discussions were centered on the Forest Rights Act (FRA) and various other issues of conservation. The event was energized through various activities and competitions organised for the children.



Sanjay Kumar Choudhary

Farm ponds cater to the critical irrigation requirements, improve the moisture regime of the fields along the slope, and help take up an additional crop of redgram on the bunds contributing to the otherwise low household incomes. Innovative approaches such as Systems of Rice Intensification (SRI) are also gaining acceptance as there is a marked increase in production as compared to the conventional methods of cultivation.

## MANDLA MADHYA PRADESH

### FACT FILE

**Agro-ecological Zone**  
Central Highlands (Malwa and Bundelkhand) Region

**Project Districts**  
Mandla

**River Basin**  
Gaur, Balai and Banjar of Narmada

**Mean Annual Rainfall**  
1588 mm

**Major Soil Types**  
Shallow to deep loamy to clayey mixed red and black soils

**Forest Types**  
Tropical Moist Deciduous Forests

**Major Habitats**  
Forests, Grasslands, Gorge & Rock Cliffs

**Nearest Protected Area**  
Kanha National Park and Tiger Reserve

### Threatened Species

Tiger, Swamp Deer, Green Avadavat, Vultures (*Gyps bengalensis*, *Gyps tenuirostris*), *Sterculia urens*, *Terminalia arjuna*

**Percentage of Common Lands Including Forests**  
74%

**Percentage of People Living Below Poverty Line**  
56%

**Percentage of Scheduled Castes/Tribes**  
66%

**Area Under Protection**  
1,082 ha

**Village Institutions Associated With**  
52

**Total Households of Project Villages**  
5,875

**Indigenous Communities**  
Gond (60%) and Baiga (14%)

The project area in Mandla district of Madhya Pradesh falls in the Satpura hill ranges in the basins of three small tributaries of river Narmada, namely Gaur, Banjar and Balai. The forest is classified as moist deciduous to mixed deciduous type, with the Kanha National Park forming an important part of the larger landscape. The district abounds in natural resources, and is yet one of the most backward in India. The population of the district is predominately tribal, with *Gonds* and *Baigas* forming the dominant tribes, who are largely dependent on the forests for their livelihoods.

Initiated in 2006, our work is presently located along the periphery of the Kanha National Park, where efforts are directed towards intertwining efforts in conservation of nature and natural resources as well as improving the local livelihoods. With low productivity of farmlands, increased sale of fuel-wood, high dependence on wages and high incidence of migration being some of the critical issues of the area, our initiatives are aimed towards improving the livelihoods of the poor through farm based interventions such as improving agricultural practices and promoting homestead gardens. We are geared towards working with the *Gram Sabhas*, the fourth tier of Panchayati Raj Institutions, to develop their perspective plans for the development of their village, together with

### UPDATE 2008-2009

- Various soil and moisture conservation measures were undertaken on 225 ha of common land. About 20 ha of fodder plots were developed on community land in two villages to improve fodder production, benefiting 400 families.
- The *Gram Sabhas* approved the perspective plans submitted by 17 *Panchayats* with an outlay of Rs. 26 million for a four-year period for support under National Rural Employment Guarantee Act (NREGA). We facilitated the drawing up of the plans which include measures aimed at development of natural resources and evolving institutional mechanisms.
- In our efforts to facilitate appropriate institutional design for the area, the interplay between the traditional institutions, village level institutions and the overarching role of *Panchayats* has been underpinned. During the process, mutually agreed Terms of Reference have been recorded between the team and

enabling better implementation of NREGA by providing assistance in planning for improvement of natural resources and related livelihoods.

A study of the vulnerabilities at the landscape level undertaken in the Matiyari river basin has highlighted the high level of degradation of forests arising mainly from injudicious land-use practices and lack of protection measures. As the NREGA is still in its formative years there is considerable scope for imaginatively extending its application to nature conservation and measures aimed at ecological restoration. We have begun working with village forest committees and are also discussing formal arrangements for leveraging NREGA for working on the forestlands through such institutions. In increasing the scale of NREGA implementation, we are preparing ourselves by strengthening the capacity building of village stewards who would work both towards furthering the cause of conservation oriented development in the villages and also be sensitive to the democratic processes in village level governance. By working on issues concerning rural livelihoods, betterment of natural resources and strengthening of local governance institutions, we shall extend our spread of activities to the villages adjacent to the wild life park and focus our energies towards making the local communities partners in the conservation action. ■



Smita Ranjane

### Energizing NREGA

Identified as a Technical Support Organisation by the Madhya Pradesh Rural Livelihood Project, we assisted 17 *Gram Panchayats* covering 52 villages in availing the NREGA for undertaking ecological restoration activities on 1,656 ha of land. Applying a watershed development approach, the NREGA is perceived as an opportunity to both improve the livelihoods of the local tribal communities as well as bring the fringe areas of the biodiversity rich Protected Areas under improved conservation regime.

the institutions. Forums comprising representatives from the village institutions are also evolving at inter village level.

- A GIS database for the area was developed with the help of data from various secondary sources such as Census 2001, topo sheets and maps from Geological Survey of India, National Bureau of Soil Survey and Land Use Planning. The database is envisaged to help in designing conservation strategies and action plans for the area. A geo-hydrological study was also carried out to gather information on lithology and aquifer properties of the area.
- An ecological profile of the Satpura-Maikal landscape was prepared in order to better understand the ecosystems and design conservation processes accordingly. A similar profile of Matiyari river basin in Bichiya block points to decreasing forest density and forest quality as the most critical issues in the

landscape. The study provides insight into the most vulnerable areas as well as the high biodiversity value areas.

- In our efforts to support sustainable livelihood practices, cultivation of vegetables as a supplementary livelihood option for farmers was promoted in 55 plots of 27 acres across 18 villages, while 38 farmers were encouraged to pilot System of Rice Intensification (SRI paddy) on 53 farm fields. Discussions were held to promote endemic varieties that require fewer inputs and are resistant to pests. As many as 20 farmers took up planting of 4,000 horticulture species on 12 acres of private land.



1999

Swarnasri Sarangi



2009

Swarnasri Sarangi

A study conducted across 11 villages in Angul district reveals that conservation of forests and commons on the uplands and simultaneous intervention on adjoining agriculture lands has increased net cultivated area by 263 hectares, benefiting 463 families and resulting in an additional income of rupees six million per annum.

## ANGUL ORISSA

### FACT FILE

**Agro-ecological Zone**  
Eastern Plateau  
(Chhotanagpur) and Eastern Ghats

**Project Districts**  
Angul and Dhenkanal

**River Basin**  
Mahanadi and Brahmani

**Mean Annual Rainfall**  
1273 mm

**Major Soil Types**  
Deep loamy, red and lateritic soils

**Forest Types**  
Tropical Dry and Moist Deciduous Forests, Bamboo brakes and Scrub Forests

**Major Habitats**  
Forest, Wetlands, Agricultural lands and Riparian

**Nearest Protected Area**  
Satkosia Tiger Reserve

**Threatened Species**  
Tiger, Elephant, Gharial, Barringtonia acutangula (Hinjal), Entada phaseoloides (Gila)

**Percentage of Common Lands Including Forests**  
50.5%

**Percentage of People Living Below Poverty Line**  
61%

**Percentage of Scheduled Castes/Tribes**  
29%

**Area Under Protection**  
21,189 ha

**Village Institutions Associated With**  
191

**Total Households of Project Villages**  
26,516

**Indigenous Communities**  
Paudi Bhuyans, Juangs

The districts of Angul and Dhenkanal are situated in the central part of Orissa in the catchment of the Mahanadi and Brahmani rivers. The region is drained by several streams and rivulets that find their way into the two major rivers. The district is endowed with rich flora and fauna, with the Satkosia Wildlife Sanctuary forming a distinct feature of the landscape. The mineral rich landscape is facing increasing pressures and ecological threat in the face of rapid developments in mining and industry. Recent industrial developments have also added to the disparities between the rich and the poor, painting a contrasting picture of affluence in the cities and abject poverty in the villages.

Initiated in 1987, the project is presently associated with 191 community institutions that protect and govern nearly 21,189 hectares of common lands. Commons continue to remain central to the livelihoods of rural communities in these undulating terrains, with forests in the uplands helping retain soil moisture and improve the nutrient flow as a critical ecological function for the subsistence agriculture practiced by the rural communities in the lower reaches. The tangible benefits from the commons in a few villages have triggered a chain reaction of positive responses from the neighbouring communities, which have begun protecting whatever common

### UPDATE 2008-2009

- A total of 12,000 saplings were planted in five villages covering 50 ha of common land. In three villages, the community took an initiative to contribute labour for seeding activity, and planted 21 kg of native species of seeds. Two decentralized nurseries raised 14 varieties of forest species to be replanted in the village common lands.
- A total of 25 habitation level resource plans were prepared, and consolidated plans were presented to the village general body and *Panchayats*, which were included in the action plan of 2009-10 under National Rural Employment Guarantee Act (NREGA).
- Regular interactions with the village institutions as well as individuals on conservation and livelihood issues continue to result in framing byelaws for effective functioning and collective action among them. Interestingly, water harvested in newly constructed ponds are seen as collective assets and four villages

resources they have within their village boundaries. Our long-term engagement with the local communities in Athamallik on the issue of their traditional systems of protection of forests has helped 35 village institutions seek community claims over their forests under the Forest Rights Act (FRA). The initiatives undertaken earlier with the *Panchayats* in reintroducing systems of regulation of open grazing of livestock are also increasingly finding acceptance, with the arrangements now spreading to 35 villages.

Positive outcomes from our initiatives on intertwining efforts in nature conservation and improvement of local livelihoods along the periphery of Satkosia Wildlife Sanctuary have led to conceiving a larger conservation action plan in the area. Building on the information already collected, we would carry out detailed ecological assessments of the area so as to understand and periodically monitor the changes in the ecosystem and the services rendered from the same. A concerted effort aimed at improving the protection of the sanctuary and improving rural livelihoods through activities that build on conservation ethic as well as improve income levels is being unfolded. In tandem, we are developing the capacities of the local youth, village institutions and the *Panchayats* so that they can determine and chart the course of action and ensure better implementation of the programmes. ■



Swapanasri Sarangi

### Energizing NREGA

Interactions with local village institutions and *Gram Panchayats* are helping raise demands for effective utilization of NREGS funds. While at one level, habitation level natural resource plans were developed in 25 habitations and submitted to the *Panchayats* for inclusion in NREGA, on the other we are partnering with like minded organizations and key decision makers to improve operationalisation of the programmes as well as find innovative arrangements that can improve transparency and delivery mechanisms.

have come up with rules for collective crop planning and sharing on lands that fall in the command area of the ponds.

- Two solar torchlights each were distributed among 153 households in four villages of Kankadahad block. Initial observations suggest that the devices have helped in reducing the consumption of 1,300 litres of kerosene per month across the households.
- In its 13th year of publication, our quarterly newsletter *Sabuja Barta*, continues to share information on the National Rural Employment Guarantee Act (NREGA), Forest Rights Act (FRA) and sustainable agriculture technologies with the local communities and organisations across the state.
- Constant engagement with the village institutions on their rights over collectively held and managed forest lands has motivated 46 villages in Angul and Dhenkanal districts to claim their rights over such lands under the Forest Rights Act (FRA).

- At the request of the Agriculture Technology and Management Agency, we plan to scale up the pilots initiated on Systems of Rice Intensification (SRI) to build the capacities of 50 farmers and undertake implementation on 50 acres during *Rabi* season.
- A study on energy consumption and conservation vis-à-vis environment of Orissa was undertaken in collaboration with the Washington University in St. Louis. This would help us designing appropriate energy conservation technologies.
- Aggregating block level information on important development trends in demography, infrastructure, agriculture & livestock and vulnerability and presenting them on a spatial platform, atlases have been prepared for the districts of Angul, Koraput, Kalahandi, Rayagada, Kendujhar and Sundergarh.



Bilay Kumar Toppo

A study on 'Criticality of Commons' conducted in sample villages of the area has revealed that although in a degraded condition, the commons still contribute as much as 20-25% to household incomes by way of forest products, shifting cultivation and fodder availability. The findings highlight the need for appropriate protection and revegetation measures to help restore the health of these lands which are critical to the ecological as well as livelihood security of the region.

## KORAPUT ORISSA

### FACT FILE

<b>Agro-ecological Zone</b>
Eastern Plateau (Chhotanagpur) and Eastern Ghats
<b>Project Districts</b>
Koraput
<b>River Basin</b>
Kolab
<b>Mean Annual Rainfall</b>
1540 mm
<b>Major Soil Types</b>
Deep loamy red and lateritic soils
<b>Forest Types</b>
Tropical Moist Deciduous Forests
<b>Major Habitats</b>
Forests, Grasslands, Bamboo brakes
<b>Nearest Protected Area</b>
Kangerghati National Park, Karlapat Wildlife Sanctuary

<b>Threatened Species</b>
Elephant, Themeda sasicola, Strobilanthes jeyporensis
<b>Percentage of Common Lands Including Forests</b>
28.28%
<b>Percentage of People Living Below Poverty Line</b>
83.81%
<b>Percentage of Scheduled Castes/Tribes</b>
62.66%
<b>Area Under Protection</b>
375 ha
<b>Village Institutions Associated With</b>
43
<b>Total Households of Project Villages</b>
2,850
<b>Indigenous Communities</b>
Kond (40%), Paraja (20%), Gadava (10%)

Koraput is situated in the southern part of Orissa, with topography marked by high land plateaus and a number of hills of the Eastern Ghats. The area is drained by five major rivers. The forests are of moist deciduous type with Sal as an important species. The forest cover in the area has drastically reduced with severe extraction in the last few decades. With more than 60% population belonging to *Kond* and other tribes, the district is declared a Schedule V area with the rights to manage their natural resources vested in the *Panchayats*. Reduction in the period of cycle in shifting cultivation, weakening of the linkages between forest and agriculture production systems and increasing fragmentation of land holdings pose a threat to the subsistence agriculture being practiced by the tribal communities. Inequitable land ownership patterns, unviable land use practices along with a weak appreciation of local governance institutions are some of the key issues prevailing in the region.

Initiated in 2008, we work on the upper ridges of the Kolab river basin along two of its tributaries with plans to reach out to 96 habitations of 45 revenue villages. The salient aspects of our efforts include – conservation and judicious use of natural resources, enabling arrangements that provide access by the communities to such resources, and improving livelihood options that are in consonance with the ecosystem functioning. The interventions are designed towards leveraging NREGA for the restoration of the degraded

### UPDATE 2008-2009

- Various soil and moisture conservation activities were undertaken on 220 ha in 20 habitations by availing the opportunities under National Rural Employment Guarantee Act (NREGA). The activities were aimed at improving soil moisture and bringing more land under productive agriculture, thereby strengthening the local subsistence livelihood. In addition, another nine villages were assisted in accessing funds available under NREGA for securing wage employment.
- Village institutions were formed in 43 habitations. A total of 61 habitation and inter-habitation level meetings were organized with a view to orient and also capacitate the members for deliberating on issues of protection and conservation of nature and natural resources.

landscapes as well as improving the democratic functioning of the *Panchayats*. We assist the strengthening of village level institutions for governance of natural resources and integrate them with the functioning of the *Panchayats*.

An exercise undertaken to assess the extent of soil erosion has helped surface the severity of the problem in the area and design necessary interventions. Comprehensive land use plans are being developed and restoration aspects would be implemented under watershed development programmes and by bringing in convergence of various other development programmes. Apart from regeneration and protection of forests on the uplands, increasing the diversity of crops and vegetables and introducing innovative and cost effective measures in diverting water for critical irrigation form important strategies for both – conservation of natural resources and improvement in livelihoods of the tribal communities. While regular meetings at the *Gram Panchayat* level are helping build a larger forum for conservation of forests and natural resources in the landscape, we perceive the involvement of multiple actors and agencies of the area as an integral part of the design to facilitate better implementation and to promote conservation ethic in the region. With shifting cultivation becoming more or less sedentary, the challenge is to secure the uplands with vegetative cover that reduces soil erosion and provides incomes as well. ■



Bijay Kumar Toppo

### Energizing NREGA

*Panchayats* are being informed about the Acts, policies and programmes relevant for effective management of natural resources. Discussions across 60 habitations on the roles and responsibilities of the *Panchayats* and their interface with the other actors both within and outside the government are beginning to create an enabling environment to translate provisions under NREGA, Right to Information Act (RTI) and Panchayats Extension to Schedule Areas Act (PESA) for effective management of natural resources and poverty alleviation.

- As many as 15 villages were assisted in preparing village specific byelaws. With the increase in awareness, community members are able to actively participate in the village meetings, deliberate on the prevailing issues and incorporate their views in the perspective plans, which are being shared with *Panchayats* and government for consideration.
- Exposure visits to different organizations and to other FES project areas were arranged for the representatives of village committees so as to foster mutual trust and build on a collective resolve. Several training programmes were also organized for members of the *Panchayat* and *Panchayati Samiti*, Secretaries and Members of the Legislative Assembly (MLAs) on the role of *Panchayats* in natural resource management.
- In addition to building local institutions for better governance and management of resources, there have been concerted efforts to build leadership that can guide local action and also act as watch groups at village level.
- Being the first year of project initiation, extensive exercises were undertaken to understand the geo-hydrology profile and make an assessment of the extent and risk of soil erosion in the catchment area so as to design appropriate plans. Baseline survey has also been conducted in 31 habitations falling under three *Panchayats*, in order to understand the context and plan for bridging existing gaps.

# COMMONS AND RURAL LIVELIHOODS

**Our approach is guided by an understanding that different categories of land – *de facto* or *de jure* commons, that lie adjacent to human habitations contribute significantly to rural incomes. Albeit the most neglected, such lands are critical especially to the livelihoods of the poor and marginalized for accessing fuel wood, fodder and food. These lands add resilience to farming systems by augmenting water and nutrient flows and the biodiversity on these lands helps improve pollination and reduce pest incidence. Of equal importance is the physical setting that commons offer to revive institutional mechanisms that energize collective action and check undesirable individual behaviour.**

Purposefully managed commons play an important role in reducing vulnerability and act as reserves on which people can fall back on in times of hardship. Efforts for improving productivity and health of commons go a long way in stabilizing and improving agriculture based livelihoods and an effective and encompassing strategy would be to supplement this effort with an array of livelihoods choices geared towards helping the marginalized and women to have better control over their lives.

We work to strengthen local institutions by making special efforts to include people from the socially and economically marginalized groups in determining the land use and access to the benefits, from common lands in particular. Customary norms of protection, access and exchange from the natural environment form the basis for crafting the institutions which may span across villages and administrative domains. We assist the village institutions in arranging lease of revenue wastelands, and simultaneously work with the community members in regenerating such wastelands and grazing lands and improving the availability of both surface and subsurface water. The subsequent increase in biomass and water availability has not only benefited the agriculture and livestock production systems but as also brought improvement in the overall health of natural resources which is known to provide a long term route out of poverty.





We work on the uplands of the lower catchments of the Papagni river basin that is spread across the two semi-arid districts of Chittoor and Anantapur in Southern Andhra Pradesh. The area is located at the tri-junction of the Deccan Plateau, the Eastern Ghats and Western Ghats exhibiting some of the ecological features of all the three and thereby presenting uniqueness to the region. The region is characterized by broken hills ranges, with forestlands on the ridges and revenue wastelands and farmlands located on the lower slopes, and valleys that are dotted with numerous tanks for irrigation.



**Findings of a study conducted to assess the availability and usage levels of surface and groundwater are being shared with the communities of the watersheds as a preliminary step towards initiating deliberations for evolving community based groundwater management systems and evolving a strategy for conservation of both biomass and water resources.**

## MADANAPALLE ANDHRA PRADESH

### FACT FILE

**Agro-ecological Zone**  
Eastern Ghats, Tamil Nadu  
Uplands and Deccan Plateau

**Project Districts**  
Chittoor and Anantapur

**River Basin**  
Papagni

**Mean Annual Rainfall**  
934 mm

**Major Soil Types**  
Medium to deep red loamy soils

**Forest Types**  
Mixed Dry Deciduous, Tropical Thorn Forests and Scrub Forests

**Major Habitats**  
Forests, Grazing lands, Wetlands, Agricultural lands

**Nearest Protected Area**  
Nallamalai Biosphere Reserve

**Threatened Species**  
Yellow Throated Bulbul, Starred Tortoise, Chloroxylon swietenia, Anogeissus latifolia

**Percentage of Common Lands Including Forests**  
57%

**Percentage of People Living Below Poverty Line**  
58%

**Percentage of Scheduled Castes/Tribes**  
20%

**Area Under Protection**  
16,711 ha

**Village Institutions Associated With**  
234

**Total Households of Project Villages**  
14,232

**Indigenous Communities**  
Naik, Sugali, Yanadi, Irula

### UPDATE 2008-2009

- About 70,000 saplings of indigenous species were planted and 310 kg of seed were dibbled on 382 ha of common land. About 18,700 Agave suckers were planted as vegetative barriers. Appropriate soil and moisture conservation activities were undertaken on a total of 333 ha of common land and 118 ha of forestland.
- Under the Andhra Pradesh Community Based Tank Management Program, Tank Management and Improvement Plans (TIPMs) were drawn up for the development of the command area and followed up by various capacity building exercises for members of Water User Associations. The initiative is now being expanded by executing an MoU with the Department of Irrigation and Command Area Development (I&CAD) for building the capacity of Water Users Associations covering 4,300 acres of command area which fall under six Panchayats.

common lands and forestlands over the past decade towards improving bio-diversity and reviving nutrient and hydrological regimes and thereby positively affecting animal husbandry and agriculture, our appreciation and articulation of the various inter-linkages within and across ecosystems has significantly improved. To further our understanding in bringing together the interplay of socio economic factors and natural systems, and capture the decision-making of the local communities in such socio-ecosystems, we have started applying 'Systems Dynamics Modeling' to determine likely implications of our efforts or simulate future scenarios. We have initiated a detailed assessment of ecological aspects as well as quantified the availability and demand of biomass and water in the region. Efforts are in place to disseminate the results in the local idiom so as to highlight unsustainable extraction levels and galvanize the local communities to undertake conservation action.

While the employment guarantee programme has thrown up opportunities to undertake ecological restoration measures at a landscape level, in a region prone to agriculture distress, there is need to explore ways of fortifying farming systems as well as enhance our understanding on the impact of climate change on bio-diversity, animal husbandry and rainfed agriculture and arrive at location specific adaptation measures. ■

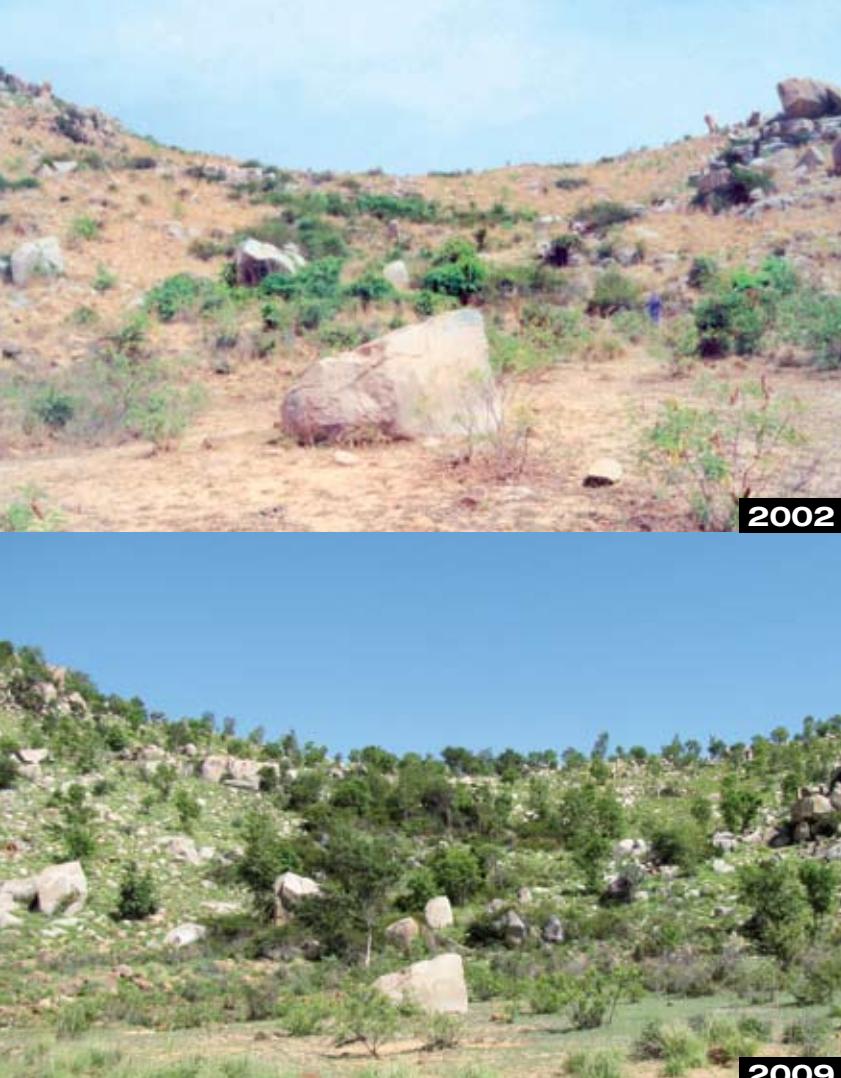


Johnson Topoo

### Energizing NREGA

With the earmarking of additional *Panchayats* by the District Administration for facilitation of NREGA, we have scaled up our presence from 6 to 18 *Panchayats* covering 165 villages. In addition, 15 Village Forest Committees have also been given permission to avail NREGA and undertake moisture conservation activities and revegetation measures on forestlands. Several mechanisms such as 'Friday meetings' amongst local communities and *Panchayats*, 'Monday meetings' also involving local government functionaries and assured worksite facilities are playing a crucial role in improving transparency, addressing grievances and articulating local developmental plans.

- We extended support to 14 *Panchayats* in preparing perspective plans and shelf of activities for implementing National Rural Employment Guarantee Act (NREGA). In addition, we also assisted 15 Village Forest Committees in preparing micro plans for conservation under Community Forest Management arrangements and received administration sanction to the tune of Rs. 11.1 million under NREGA to be implemented in the forest areas.
- In addition to various capacity building programmes, events and inter-village meetings were used as platforms to generate awareness and deliberate on issues concerning conservation and protection. Such meetings and campaigns organized during the year have resulted in developing mechanisms for greater sharing of responsibilities in eco-restoration efforts and also devising mechanisms to combat hazards such as forest fires.
- Several farmers, livestock rearers, and community members from neighbouring areas participated in events such as the cattle fair at Parasuthopu and the farmers' fairs organized at the local level. In all these events, information was disseminated on common land protection, ground water issues and livestock as well as sustainable agriculture practices through various communication methods.
- As many as 455 biogas plants and 47 *bhattis* were installed across 65 habitations with support from Non Conventional Energy Development Corporation of Andhra Pradesh (NEDCAP). Findings of a study taken up in collaboration with Washington University in St. Louis, for assessing the impact of such devices on indoor air pollution levels indicate that the energy conservation programs have helped to reduce the pressure on the Reserve Forests to a great extent, besides improving fuel efficiency and health of the users.



2002

Dr. Subba Rao

2009

Thomas K.A.

In the boulder strewn landscape of Sajjupalle, protection of common lands by the village institutions through collective norms and regulations, has played a crucial role not only in improving water regime and warding off external threats such as mining, but also provided a boost to the biodiversity of the region. The protected lands now house populations of deer, hyenas, bears, hares and wild cats, and threatened floral species such as *Billu* (*Chloroxylon swietenia*) as well as medicinal plants like *Gloriosa superba*.

## CHINTAMANI KARNATAKA

### FACT FILE

<b>Agro-ecological Zone</b>
Eastern Ghats, Tamil Nadu Uplands and Deccan Plateau
<b>Project Districts</b>
Kolar and Chikkaballapur
<b>River Basin</b>
Papagni
<b>Mean Annual Rainfall</b>
694 mm
<b>Major Soil Types</b>
Medium to deep red loamy soils
<b>Forest Types</b>
Tropical Dry Deciduous, Tropical Thorn Forests and Scrub Forests
<b>Major Habitats</b>
Grazing lands, Scrub Forests, Wetlands and Agricultural lands
<b>Nearest Protected Area</b>
Kaundinya Wildlife Sanctuary (Chittoor, AP), Banneragatta National Park (Bengaluru, Karnataka)

<b>Threatened Species</b>
Yellow Throated Bulbul, Starred Tortoise, Wrightia tinctoria, Shorea roxburghii, Red Sand Boa, Kolar Leaf-nosed Bat
<b>Percentage of Common Lands Including Forests</b>
42%
<b>Percentage of People Living Below Poverty Line</b>
23%
<b>Percentage of Scheduled Castes/Tribes</b>
29%
<b>Area Under Protection</b>
7,257 ha
<b>Village Institutions Associated With</b>
145
<b>Total Households of Project Villages</b>
8,629
<b>Indigenous Communities</b>
Nayakas, Lambanis, Kurubas & Madigas

In Chintamani, we work on the upper catchments of Papagni River, covering parts of Kolar and Chikkaballapur districts. The area has a hilly terrain with rocky boulders and sparse vegetation on hill slopes. The common lands found in the area are classified as grazing lands and are under the custody of *Panchayats*. The degraded forestlands are mostly bereft of indigenous species and infested with lantana, an invasive species. Eucalyptus plantations are a common sight on private lands as well as some forestlands. While the numerous cascading tanks have catered to irrigation and water needs of livestock for centuries in the past, the unbridled mining of groundwater for raising water-intensive crops at an annual rate of extraction that was double the replenishment has resulted in an alarming depletion of ground water table in the recent years.

Beginning in 1998, our interventions have reached out to 145 habitations, with village institutions protecting around 7,257 hectares of grazing lands and degraded forestlands. With active engagement of *Panchayats*, custodial rights over grazing lands were devolved to constitutionally mandated Subcommittees of the *Panchayats*, which are coterminous with habitations. The increased engagement of *Panchayats* with its constituents provided opportunities to effectively prepare 'perspective plans' and use the provisions of the NREGA to undertake measures that are aimed at improving the natural

### UPDATE 2008-2009

- In our regeneration efforts, 44,000 saplings of 32 native species were planted on 108 ha of common and private lands across 32 habitations. Soil and moisture conservation measures were undertaken in 150 ha of common and farmlands.
- We have been assisting communities in the formation of village level institutions for improved governance of natural resources. In continuation of our efforts, we have organized 12 Sub Committees under Panchayati Raj Institutions (PRSC). Through our regular interactions we assist the communities to deliberate upon factors for the degradation of natural resources and use and sharing patterns.
- We assisted 20 *Panchayats* in preparing perspective plans and shelf of activities under National Rural Employment Guarantee Act (NREGA), with a special emphasis on conservation and regeneration of natural resources. A series of meetings were held across 45

resources of the area.

Recognizing the need to nest various institutions under the umbrella of *Panchayats* for improved governance, we are focusing our efforts to bring Village Watershed Committees and other similar institutions such as Tank Users' Groups into the fold of *Panchayats*. We aim to match this up by building a landscape level perspective that perceives the need of not only developing but also regulating the use of scarce natural resources, especially water. In this direction, studies to understand the underlying geology and the distribution and movement of groundwater were undertaken along with water audits of watershed areas to understand the availability, potential and the demand in the area. The demand is far in excess of the availability and potential.

With groundwater resources in the region already in critical state and extraction patterns on the rise, the focus is on sharing the findings of the geo-hydrology study and the data of water-audits with *Panchayats*, government agencies and other stakeholders of the region so as to evolve strategies and galvanize collective action that regulates usage of ground-water and other natural resources. A small beginning has been made in demonstrating benefits of low-input agriculture methods and in building capacities of rural volunteers who have assisted *Panchayats* in preparing perspective plans and implementing conservation activities under NREGA. ■



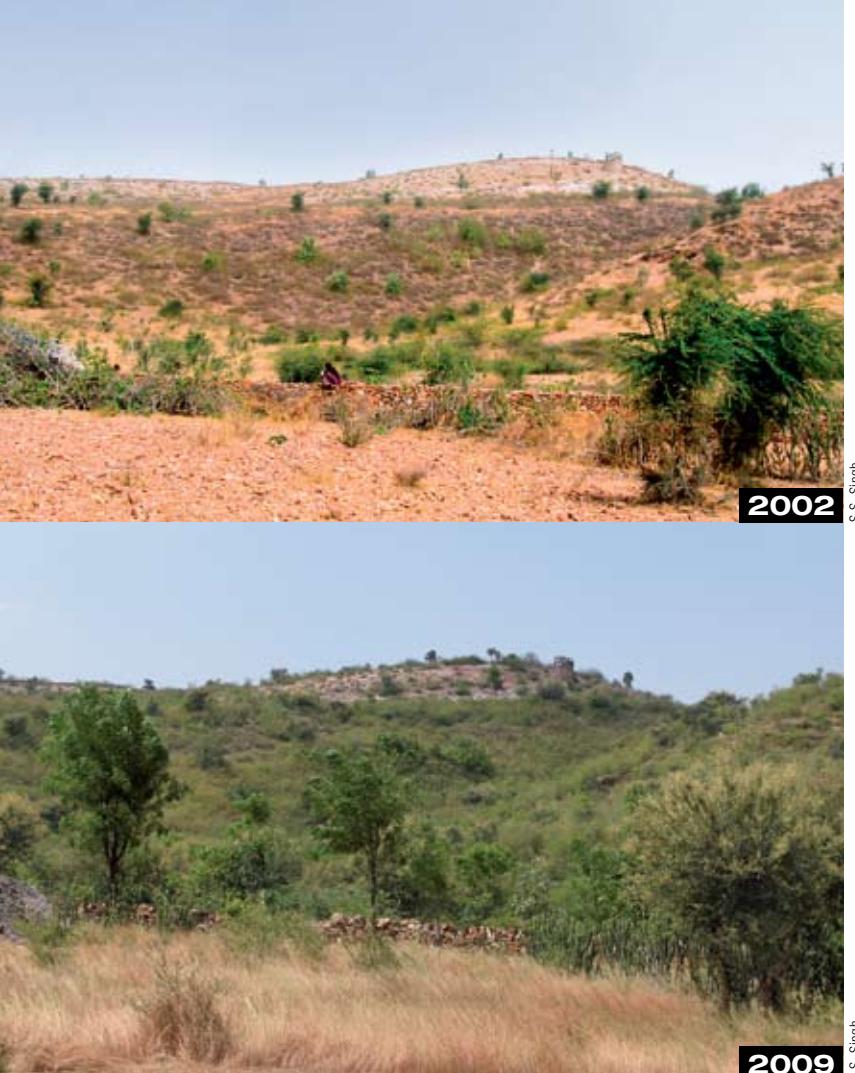
Bhavani Shantakar Gouda

### Energizing NREGA

Twenty *Gram Panchayats* were assisted in preparing 'shelf of activities' under NREGA in three *taluks* of Kolar district. Cultural troupes were engaged to mobilise people to participate in Ward *Sabhas* for preparing future 'plans of action'. Besides training youth and women's groups for effectively monitoring the implementation of the villages level activities, considerable effort is being made to build on the institutional processes at the village level as improved local self governance is as much an end as shaping the sound implementation of the NREGA.

villages to spread awareness about the NREGA.

- With a view to address fodder scarcity in an area where dairying contributes significantly to the livelihoods of the people, 1,080 kg of fodder seeds sourced from Central Seed Production Farm, Hessarghatta were distributed to select farmers to undertake fodder development in 120 ha of irrigated land.
- Rules that have been formed by the Sub Committees of *Panchayats* for better management and governance of natural resources have been compiled as Rulebooks in three *Panchayats*. Plans to share these across the three *Panchayats* and arrive at common principles and local variations and develop a common framework of protection mechanisms are underway.
- Findings from a study undertaken on water resources in Mudimadugu were shared with the representatives of the *Panchayats* with a view to initiate discussions and arrive at certain regulatory mechanisms for water conservation. The study tried to capture the imbalance between availability and extraction by understanding the geology of the area and the socio-economic conditions. Besides exploring reasons for depletion, the exercise has come up with mechanisms for regulation, sharing and conservation.
- In addition to various capacity building exercises, Farmers Field School – a training on farm practices that facilitates participatory method for mutual learning was organized for 42 farmers in two clusters of villages. Subsequently, these farmers have taken up innovative agriculture practices on their farmlands. The experiences of the farmers were shared with larger audiences through a workshop that included officials from various departments and representatives of other local forums.



S.S. Singh

**2002**

S.S. Singh

**2009**

**Successes from earlier initiatives on smaller parcels of common land have inspired the communities to expand regeneration activities to all available categories of common lands within the village boundary and leverage funds from government programmes. In several cases, shortfalls in funds are being met through *shramdaan*, *ughai* and use of village common funds.**

## BHILWARA RAJASTHAN

### FACT FILE

#### Agro-ecological Zone

Northern plain (and Central Highlands) including Aravallis

#### Project Districts

Bhilwara, Ajmer and Jaipur

#### River Basin

Mej, Menali, Khari and Lirli

#### Mean Annual Rainfall

699 mm

#### Major Soil Types

Deep loamy grey brown and alluvium-derived soils

#### Forest Types

Tropical Dry Deciduous and Dry Thorn Forests

#### Major Habitats

Forests, Grasslands, Gorges, Farm lands

#### Nearest Protected Area

Bhensrodgarh and Bassi Wildlife Sanctuaries

#### Threatened Species

Great Indian Bustard,  
Long-billed Vulture

#### Percentage of Common Lands Including Forests

55%

#### Percentage of People Living Below Poverty Line

32%

#### Percentage of Scheduled Castes/Tribes

23%

#### Area Under Protection

25,406 ha

#### Village Institutions Associated With

281

#### Total Households of Project Villages

35,452

#### Indigenous Communities

Bhils and Meenias

Our efforts in the region are spread across villages that fall largely under the basins of Mej, Menali and Lirli rivers and cut across the districts of Bhilwara and Ajmer. The Aravalli and Vindhyan hill ranges intersect the terrain at several places and dry deciduous and tropical thorny scrub forests characterize the vegetation. Commons and forests form about 55% of the total land. Being a drought-prone area with poor average annual rainfall, rain-fed agriculture and animal husbandry are the major means of rural livelihood.

Initiated in 1995, the project is presently associated with 281 community institutions that protect and manage over 25,406 hectares of common lands comprising revenue wastelands, grazing lands and forestlands. Interventions aimed at improving the vegetation on revenue wastelands and collective regulation over vast stretches of grazing lands over the past few years have gradually revived the hydrological regimes and improved biomass production and consequently improved prospects of animal husbandry and double-cropping in agriculture. Having experienced such positive impacts and gaining confidence from the functioning of the village level institutions, the village collectives have gradually evolved into vibrant bodies that are not only leveraging activities from programmes of government and other agencies for improving

### UPDATE 2008-2009

- A total of 271 ha of common land and grasslands were covered under re-vegetation measures and about 260 ha of land brought under the process of natural re-vegetation during the year. Soil and moisture conservation measures were undertaken on 367 ha of common lands of which 132 ha were developed accessing funds under the National Rural Employment Guarantee Act (NREGA).
- As many as 15 water harvesting structures were constructed to facilitate increased availability of surface and ground water, for which the village institutions leveraged an additional sum of Rs.1.9 million from various government schemes for the development of natural resources.
- *Padyatras* and meetings of representatives of villages brought several people on a common platform to discuss prevailing issues and resolve these through

their village infrastructure and natural surroundings but also beginning to debate on equitable and judicious use of natural resources.

Over the year we have improved our understanding on the impact of our initiatives on lives of poor livestock holders, quantification and valuation of the changes and the emerging issues. By fostering linkages with a wide arena of actors including government and non-government agencies, local milk unions and other actors in the region, we have attempted to both – converge our programmes as well as understand what limits or enhances such linkages. Facilitating ecological restoration activities under NREGA has helped broaden our reach and has positively influenced our dialogue with Panchayati Raj Institutions. We aim to build on the existing platform of village collectives, government agencies and other civil society organizations to improve the interactions among various actors and institutions, which would individually and collectively contribute to the development of the region. Besides expanding our activities to neighbouring areas and initiating interventions to strengthen farming systems, we would explore and innovate options for livelihood enhancement in this rainfed region. ■



S.S.Singh

### Energizing NREGA

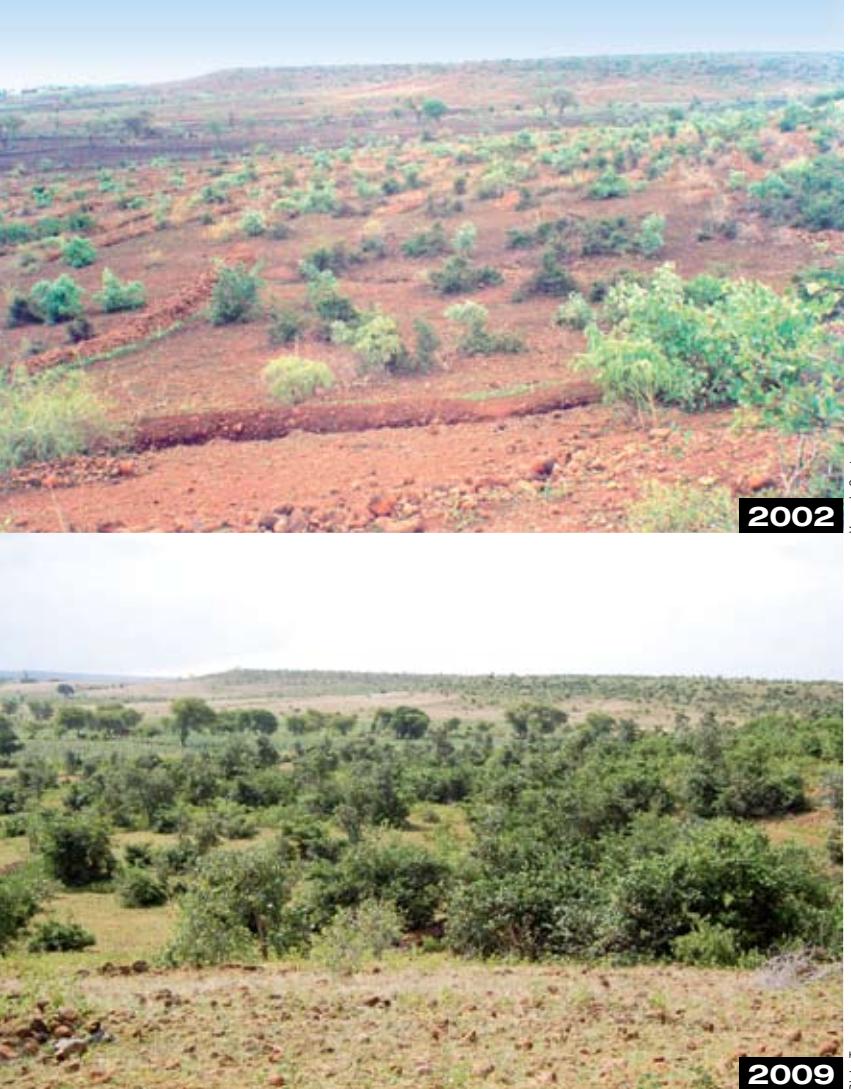
*Chetna yatras* and local folk programmes helped raise awareness on the various aspects of NREGA. Regular meetings at village level helped in assisting 10 *Panchayats* in effectively integrating water conservation and regeneration of degraded commons into the annual plans, and channelled Rs. 3.9 million under the employment scheme as wages to the poor. Our initiatives in this direction are not limited to the creation of durable physical assets and providing wage employment but also to ensure long-term livelihood security and enable better local self governance.

mutual consultations. Officials from government departments, local federations, *Panchayat* representatives and community members participated in the three day *Jan Chetna Yatra* – a local level campaign emphasizing on the need for good governance and convergence for effective integrated rural development

- Enlarged maps of local geo hydrology and land use helped the local communities in enriching their discussions and decisions regarding judicious land use. Pamphlets, handouts and newsletters also helped campaign and disseminate the information to wider audiences.
- As good governance systems should not be limited simply to the protection of common lands but should include rules for benefit sharing and conflict resolution mechanisms as well, we assisted 42 villages in

formulating village specific byelaws that went beyond protection to address equitable distribution and participation as well.

- Besides forming the customary Watershed Committees the local communities have also set up Advisory Committees comprising officials from various departments, banks, local dairy collectives, *Panchayat* members, etc. to monitor implementation as well as dovetail various schemes and programmes to help the needy.
- Four cattle camps (*Pashu Dhan Vikas Shivirs*) were organized in two *Panchayats* along with government departments, NGOs, and community representatives. As many as 2,853 animals were vaccinated and treated against different diseases. The cattle camps also served as a platform to discuss several other livestock related issues.



Yogesh Gupta  
Bipin Toppo

**Conservation and regeneration plans designed and implemented with the help of village institutions for the development of common lands over the last ten years are showing encouraging results. The local institutions have taken a collective call to not plant *Jatropha* saplings on common lands, knowing well that it would lead to fodder scarcity and prove disastrous to a pastoral economy like Agar.**

## AGAR MADHYA PRADESH

### FACT FILE

#### Agro-ecological Zone

Central Highlands,  
Malwa Plateau

#### Project Districts

Shajapur and Ujjain

#### River Basin

Lakhundar, Garhganga  
and Kalisindh

#### Mean Annual Rainfall

950mm

#### Major Soil Types

Loamy to clayey and  
deep black

#### Forest Types

Tropical Dry Deciduous  
and Scrub Forests

#### Major Habitats

Grasslands, Agricultural lands,  
Forests

#### Nearest Protected Area

Kheoni Wildlife Sanctuary

#### Threatened Species

*Adina cordifolia*, *Dolichandrone*  
*falcata*, Indian Wolf and  
Striped Hyena

#### Percentage of Common Lands Including Forests

25%

#### Percentage of People Living Below Poverty Line

42%

#### Percentage of Scheduled Castes/Tribes

30%

#### Area Under Protection

6,885 ha

#### Village Institutions Associated With

59

#### Total Households of Project Villages

4,993

#### Indigenous Communities

Bhilala (1.3%)

Characterized by an undulating topography of staggered small hillocks and narrow valleys, we work in the catchment area of River Lakhundar of Shajapur and Ujjain districts. The area is part of the Malwa plateau, which is famous for the draught breed of cattle called '*Malwi*'. While the forest area comprises a mere 1%, common lands occupy 25% of the area, and support the fodder and grazing needs of the livestock dependent local communities. Agriculture and animal husbandry are the two major occupations of the people in the region.

Our association with the communities dates back to 1996, and presently we are engaged with village institutions spread across 59 villages that protect and manage 6,885 hectares of common lands. Measures aimed largely at conservation of soil and water and protection of common lands to improve grass cover and growth of natural rootstock of tree species such as *Butea monosperma*, *Diospyros melanoxylon* and bushes of *Carissa caranda* (*Karonda*), etc. have improved the availability of fodder, fuel wood and *Karonda* fruit – an important source of livelihood for the poor. Construction of numerous water-harvesting structures has made water available for human and livestock needs as well as recharged shallow wells in the downstream, which has resulted in a marked increase of area under double cropping. Having

### UPDATE 2008-2009

- A total of 6,622 saplings were planted and 253 kg of seeds of native and hardy species were dibbled on 80 ha of common land, which is being protected by 19 villages. Soil and moisture conservation measures were undertaken on 169 ha of common land falling under six villages.
- In order to improve the recharge of ground water and reduce the high run off, new earthen water harvesting structures were constructed bringing an additional 50 ha of farmland under supplementary irrigation and enabling the farmers to take a second crop. As a pilot initiative in the area, micro irrigation systems are also being installed on 8 ha of farmlands to help judicious use of the resources.
- We are working with *Panchayats* to generate awareness about the various provisions under National Rural Employment Guarantee Act (NREGA) by conducting capacity building programmes.

realized the need for strong collective rules for the usage of water that is harvested, some villages have devised mechanisms for equitable water distribution while others are in the process of forming their own village specific rules.

By developing detailed geo-hydrological profiles of watershed areas, we are in the process of improving our understanding of aquifer boundaries, groundwater storage potential and the impact of recharge on groundwater. Critical for locating and designing water recharge structures, this information is shared with the communities and the government to facilitate interventions that suit the terrain and geology of an area that is prone to drinking water scarcity every few years.

Although the planting of *Jatropha* on the common lands was initially embraced by the local communities, several villages have soon realized the possible negative impacts that it could have on grass and fodder production and thereby on animal husbandry, and are now dissuading others from taking up bio-fuel plantations. In an area where communities have gained from protection of common lands in the form of increased availability of fodder and water, we aim to support measures to enhance subsistence livelihoods of the poor as well as strengthen community efforts on natural resource management by working closely with *Gram Panchayats* and supporting them in effectively leveraging opportunities from NREGA. ■



Manohar Bhilala

### Energizing NREGA

*Gram Sabhas* were organized to discuss the various aspects of technical sanction, budget and the roles and responsibilities for implementation of the activities under NREGA. Interaction with the community members helped create awareness and do away with their initial apprehensions about wages under the NREGA and encouraged the villagers, especially the women, to take part in the implementation of water conservation activities on the common lands under the programme.

- We have initiated efforts in management of natural resources in the Tarana block of Ujjain district, which also falls under the catchment area of river Lakhunder, increasing the area of operations in the catchment. During the year, we conducted baseline surveys on ecological and socio-economic aspects of the area and have initiated activities in five villages.
- As a result of our continuous interactions with the community to devise equitable distribution systems and develop transparent management systems over resources, water in particular, communities from three villages have come up with collective management and regulatory mechanisms. We assisted 15 watershed development societies to come up with byelaws for regulating use of water and providing for maintenance of water harvesting structures.
- Village institutions and their conglomerates meet frequently to deliberate on the regional issues, and

arrive at a consensus amongst different user groups and for resolving intervillage disputes. Such platforms were also helpful in arriving at mutually beneficial arrangements between the migrant pastoralists and the local residents.

- Efforts made by the village institutions towards protection and conservation have led to the regeneration of many local plant species, increased diversity and availability of biomass and improved soil and moisture regimes in the area. Realizing that planting of *Jatropha* is competing with their grazing regimes and that the returns promised were unrealistic, the local communities have stopped taking after care measures and are not allowing planting in new areas.



2001

Jaswant Dhamelia



2008

Ramesh Patel

**Efforts by the communities in restoring the severely ravined lands along river Mahi through appropriate soil and water conservation and revegetation measures has helped create a conducive environment for as many as 54 floral species to naturally regenerate. In a recent botanical study conducted by an academic institution, the floral diversity in terms of trees, shrubs and herbs was found to be almost four times higher in the protected common lands than that in the adjacent unprotected ones.**

## ANAND GUJARAT

### FACT FILE

**Agro-ecological Zone**  
Central Highlands, Gujarat  
Plain and Kathiawar Peninsula

**Project Districts**  
Anand, Kheda and Vadodara

**River Basin**  
Mahi and Sabarmati

**Mean Annual Rainfall**  
870 mm

**Major Soil Types**  
Medium and deep clayey black soil and loamy sand (*Goradu*) soils

**Forest Types**  
Tropical Dry Deciduous

**Major Habitats**  
Wetlands, Agricultural lands, Saline-Mudflats, Mangroves and Ravines

**Nearest Protected Area**  
Nalsarovar Bird Sanctuary, Jambughoda Wildlife Sanctuary

**Threatened Species**  
Sarus crane, Black-necked Stork, Hyena

**Percentage of Common Lands Including Forests**  
33%

**Percentage of People Living Below Poverty Line**  
33%

**Percentage of Scheduled Castes/Tribes**  
22%

**Area Under Protection**  
2,145 ha

**Village Institutions Associated With**  
78

**Total Households of Project Villages**  
20,113

**Indigenous Communities**  
Nil

The 78 project villages that we are presently engaged with in the region, are spread across the four districts of Anand, Kheda, Vadodara and Panchmahal in Central Gujarat and fall under the Mahi river basin. Undulating topography, loose soil structure and absence of vegetative cover has led to the formation of gullies and severe ravines in the common as well as private lands all along the 100-mile long banks of river Mahi. Vast stretches of saline mudflats bring in complexities of salinity ingress along the coast of Gulf of Khambat, which is known for its estuarine complex. With six wetlands that are known for rich diversity of migratory waterfowl and other bird life, the Anand-Kheda region has been declared an Important Bird Area (IBA). Though the area is reported to have the highest density of trees in the country, diversion of grazing lands to industries, salinity ingress along the coast and severe anthropogenic pressure on wetlands are some of the issues being faced by the region.

Using low cost soil and water conservation measures wherever necessary to support vegetation measures, our interventions have resulted in bringing 1,146 hectares of deep ravines of common lands along the river Mahi under improved vegetative cover. In a sample study undertaken on some common lands to note the change in diversity of plant species, it was found that plant diversity has increased from

### UPDATE 2008-2009

- Regeneration activities were carried out on 72 ha of ravine land managed as commons by planting about 17,200 saplings while another 15,000 saplings were planted on the farmlands of the area. Appropriate soil and moisture conservation activities were undertaken on another 229 ha. We are assisting two *Panchayats* in preparing perspective plans for undertaking conservation works in the ravine area utilizing the provisions under National Rural Employment Guarantee Act (NREGA).
- We have initiated steps to improve the availability of drinking water for human and livestock consumption in the coastal villages of Khambat that suffer from severe salinity ingress and have also grown vegetative shelter belts along the coastline for preventing salt laden winds from further advance.
- While the ongoing studies on the ecological status of the three most important wetlands (Khodiyar, Pariej

19 in number to 72. Undertaking measures to develop vegetative shelterbelts in about 1,000 hectares on the saline mud flats have helped reclaim hitherto unproductive agricultural land in the hinterland by minimizing the impact of salt laden winds. Salinity mitigation efforts have impacted reduction of total dissolved solids (TDS) in groundwater, which is severely contaminated due to salinity ingress from 5,600 to 1,574 mg/L.

With a combination of interventions ranging from ravine reclamation along river Mahi, measures aimed at restoration of shelterbelts along the coast coupled with interventions aimed at mitigating drinking water scarcity of coastal communities and preparatory plans to initiate measures for community conservation of wetlands, we aim to work with communities to conserve the fragile ecosystems of the region. While NREGA provides a unique opportunity for scaling up conservation measures to address ravine reclamation and undertake measures to reduce salinity ingress, we aim to assist *Panchayats* and their constituents, government agencies and other key stakeholders to build a concerned citizen's group to address the issues of land degradation. With initiatives to conserve the wetlands through community participation and exploring options such as eco-trails in the region, we aim to rebuild the relationship of people with nature and conserve the diversity of the ecosystems in the region. ■



Amit Deonurari

### Energizing NREGA

To effectively leverage the NREGA for reclaiming the ravines flanking the 100-mile stretch of the Mahi river, interaction initiated with affected villages and *Panchayats* helped establish a platform to deliberate and take action on issues of land degradation. In this direction, regeneration and soil and water conservation measures under the NREGA were carried out on the ravine land leased to four Tree Growers' Cooperatives.

and Kanewal) are nearing completion, results indicate that Khodiyar has the maximum diversity of waterfowls, followed by Kanewal and Pariej. The preliminary findings suggest that, as the wetlands are the habitat of many migratory and resident water birds, activities such as poaching, mud excavation, extensive cattle wading, encroachment, nutrient and waste water influx, and solid waste dumping should be prevented to keep the habitat active and productive.

- In our efforts to identify viable alternatives to address the threat posed by expanding ravines, we have initiated collaboration with the Central Soil and Water Conservation Research and Training Institute (CSWCRTI) for the cultivation of bamboo on a pilot scale to assess the extent of their role in the reduction of soil loss.
- While monetary gains are easily evaluated through conventional accounting systems, the benefits from

regeneration efforts – both direct and indirect, are not easy to identify, quantify and impute value. The Natural Resource Accounting System (NRAS) developed by us and the study of the changes in a patch of 102 ha of land under vegetative cover over a three year period shows an increase of 76.5 tonnes of carbon sequestered, 2.6 tonnes of nitrogen, phosphorous and potassium, and 284.5 tonnes green weight of standing biomass, which are valued at an incremental increase worth Rs. 0.67 million.

- A study of the villages surrounding the Pariej wetlands was conducted during the year in order to understand the various interlinkages between the communities and the wetlands they are dependent on and to plan suitable interventions to safeguard the wetlands. Discussions are in progress with local actors and government departments to initiate measures to conserve these important wetlands.

## AUDITORS' REPORT

We have audited the attached Balance Sheet of Foundation for Ecological Security as at 31st March, 2009 and also the Income and Expenditure Account for the year ended on that date hereto. These financial statements are the responsibility of the management of the Society. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material mis-statement. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

Further, we report that:

- (i) We have obtained all information and explanations, which to the best of our knowledge and belief were necessary for the purposes of our audit;
- (ii) In our opinion, proper books of account have been maintained by the Society, so far as appears from our examination of those books;
- (iii) The Balance Sheet and the Income & Expenditure Account dealt with by this report are in agreement with the books of account;
- (iv) The Balance Sheet and Income and Expenditure Account dealt with by this report comply with the accounting standards applicable to the Society;
- (v) In our opinion and to the best of our information and according to the explanations given to us, the said accounts read together with "Notes" appearing in schedule "14", give a true and fair view in conformity with the accounting principles generally accepted in India:
  - (a) in the case of Balance Sheet, of the state of affairs of the Society as at 31st March, 2009 and
  - (b) in the case of the Income and Expenditure Account, of the excess of Income over Expenditure of the Society for the year ended on that date.

As required by the Rule no. 13.7 of the Society, we further report that:

- (i) no personal expenses of Officers and members of the Governing Board, except for those payable as per the terms of the appointment/agreement or authorised by the rules and regulations of the Society, have been charged in the books of accounts,
- (ii) the transactions of the Society are not in contravention of the constitution of the Society, its rules and regulations,
- (iii) The Board of Governors has been properly constituted in accordance with the covenants of Society's rules and regulations.

For C.C.Chokshi & Co.

Chartered Accountants

H. P. Shah

Partner

Membership No.33331

Place: Anand

Date: 03.07.2009

# BALANCE SHEET

(AS AT MARCH 31, 2009)

	Sch.	2009	2008
		Rs.	Rs.
<b>SOURCES OF FUNDS</b>			
CORPUS FUND	1	196,652,793	196,460,762
RESERVES AND SURPLUS	2	33,610,274	30,745,327
PROGRAMME FUNDS	3	45,628,179	43,432,782
<b>TOTAL</b>		<b>275,891,246</b>	<b>270,638,871</b>
<b>APPLICATION OF FUNDS</b>			
FIXED ASSETS	4		
Gross Block		55,864,763	44,529,862
Less: Depreciation		29,096,032	26,481,423
		<b>26,768,731</b>	<b>18,048,439</b>
Add: Capital work-in progress		—	5,652,562
		<b>26,768,731</b>	<b>23,701,001</b>
<b>CURRENT ASSETS, LOANS AND ADVANCES</b>			
Inventories	5	107,889	143,638
Cash and Bank Balances	6	245,949,533	219,852,459
Other Current Assets	7	369,237	25,493,291
Loans and Advances	8	6,463,694	5,338,573
		<b>252,890,353</b>	<b>250,827,961</b>
Less: Current Liabilities & Provisions	9	3,767,838	3,890,091
<b>NET CURRENT ASSETS</b>		<b>249,122,515</b>	<b>246,937,870</b>
<b>TOTAL</b>		<b>275,891,246</b>	<b>270,638,871</b>
Significant Accounting Policies	13		
Notes on Accounts	14		

As per our attached report of even date

Amrita Patel  
Chairman

For C.C. Chokshi & Co.  
Chartered Accountants

Place : Anand  
Date : 03.07.2009

H.P.Shah  
Partner

Place : Anand  
Date : 03.07.2009

Jagdeesh Rao  
Executive Director

Schedules and Notes on Accounts are posted at [www.fes.org.in](http://www.fes.org.in)

# INCOME AND EXPENDITURE ACCOUNT

(FOR THE YEAR ENDED MARCH 31, 2009)

	Sch.		2009	2008
			Rs.	Rs.
<b>INCOME</b>				
Fund Received:				
– For Projects		103,517,156		95,702,446
– Others		14,996		19,000
Interest and Other Receipts	10	103,532,152	95,721,446	
Receipts on Study, Survey and Training		21,957,163	10,946,605	
		1,586,122	8,572,265	
	<b>TOTAL</b>	<b>127,075,437</b>	<b>115,240,316</b>	
<b>EXPENDITURE</b>				
A. STRENGTHENING COMMUNITY BASED INSTITUTIONS AND NATURAL RESOURCES				
Planning and survey		596,727	777,999	
Formation and strengthening of community based institutions		330,851	303,682	
Soil and water conservation measures		12,732,532	14,487,685	
Revegetation measures		1,426,330	4,244,070	
Measures to sustain livelihoods		2,441,446	3,015,654	
Energy conservation activities		466,173	1,029,099	
Capacity building activities at village level		2,706,940	4,503,664	
Managerial assistance	11	29,118,858	18,781,442	
		49,819,857	47,143,295	
B. SUPPORT SERVICES				
I. CAPACITY BUILDING				
Survey and planning for new projects		2,286,308	524,126	
Capacity building of staff members		1,963,401	2,004,625	
Promotional activities and advocacy		4,283,878	3,657,069	
Documentation, studies and dissemination		2,822,798	3,505,984	
		11,356,385	9,691,804	
II. ADMINISTRATION AND RECURRING EXPENSES				
Staff salaries and benefits	12	23,533,303	24,850,164	
Travel and conveyance		731,318	678,742	
Professional fees and consultancy charges		934,889	784,116	
Motor vehicle running and maintenance		205,460	287,854	
Rent, rates, taxes and electricity charges		1,745,626	2,138,727	
Communication expenses		1,352,124	1,146,689	
Printing and stationery		662,609	449,378	
Computer maintenance		653,426	753,201	
General repairs and maintenance		749,379	739,668	
Insurance premium		412,430	475,987	
Statutory audit fees and expenses		280,803	219,798	
Miscellaneous expenses		1,935,028	749,538	
		33,196,395	33,273,862	
C. Expenses from Other Funds		94,372,637	90,108,961	
D. Expenses from Studies, Survey and Training		9,314	52,082	
		1,435,580	3,730,708	
		95,817,531	93,891,751	
Depreciation (Sch. 4 Column G)		3,570,916	2,644,462	
Loss / (Profit) on sale of Assets		18,024	(144,451)	
		3,588,940	2,500,011	
Less: Adjusted against Capital Fund (Ref. Sch.2.A)		3,588,940	–	2,500,011
	<b>TOTAL</b>	<b>95,817,531</b>	<b>93,891,751</b>	
Excess of Income over Expenditure		31,257,906	21,348,565	
Amount transferred to Capital Fund Account (Sch. 2 A)		150,542	3,100,231	
Amount transferred to Projects Account (Sch.3.B)		30,858,122	15,497,462	
Amount transferred to / (from) Other Funds (Sch.3.C)		7,341	(24,542)	
Balance of Excess of Income over Expenditure carried to Balance Sheet		241,901	2,775,414	
Significant Accounting Policies	13			
Notes on Accounts	14			

As per our attached report of even date

Amrita Patel  
Chairman

For C.C. Chokshi & Co.  
Chartered Accountants

Place : Anand  
Date : 03.07.2009

H.P.Shah  
Partner

Place : Anand  
Date : 03.07.2009

Jagdeesh Rao  
Executive Director

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# FUNDING AGENCY-WISE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2009

Sr	Particulars	INCOME				EXPENDITURE				Non Recurring Expenses incurred during the year	Balance As on 31.03.2009	
		Opening Balance As on 1.4.2008	Fund received/ transferred and refunded during the year	Interest and Other Income	Total Income during the year	Recurring Expenses incurred	Total Expenses incurred during the year	Excess of (Expenditure) over Income/ Expenditure for the year				
A	B	C	D	E	F	G	H	I	J	K	L	M
<b>(a) INDIAN CONTRIBUTION</b>												
1	Jamsetji Tata Trust (JTT)	-	40,280,000	329,763	40,609,763	4,318,000	862,466	3,158,154	8,338,620	32,271,143	2,884,440	29,386,703
2	Tree Growers' Cooperatives Project & Co-finance (TGC)	17,332,662	25,099,367	479,334	25,578,701	20,778,528	1,105,031	10,986,296	32,869,855	(7,291,154)	511,965	9,529,543
3	ITC - Sunehratkal	150,269	17,373,494	37,999	17,411,493	16,200,051	64,678	1,097,502	17,362,231	49,262	327,248	(127,717)
4	National Bank for Agriculture and Rural Development (NABARD)	897,814	2,066,788	52,325	2,119,113	1,993,386	231,716	391,204	2,616,306	(497,193)	-	400,621
5	Sir Ratan Tata Trust (SRTT)	1,750,874	1,500,000	39,762	1,539,762	1,742,090	45,604	791,284	2,578,978	(1,039,216)	-	711,658
6	Madhya Pradesh Rural Livelihood Project (MPRLP)	-	1,201,341	-	1,201,341	284,959	-	914,823	1,199,762	1,579	-	1,579
7	International Livestock Research Institute (ILRI)	-	841,286	7,757	849,043	-	42,937	366,342	409,279	439,764	-	439,764
8	Tata Social Welfare Trust (TSWT)	(747,680)	747,680	-	747,680	-	-	-	-	747,680	-	-
9	Water and Sanitation Management Organization (WASMO)	-	656,778	23,300	680,078	293,520	-	-	293,520	386,558	-	386,558
10	ITC Rural Development Trust	-	607,000	-	607,000	584,608	-	-	584,608	22,392	-	22,392
11	District Development Agency & District Rural Development Agency (DDA & DRDA)	16,043	547,159	-	547,159	682,289	-	-	682,289	(135,110)	-	(119,067)
12	United Nations Development Programme - Small Grant Programme (UNDP-SGP)	235,258	289,936	83,780	373,716	386,249	42,235	1,500	429,984	(56,268)	-	178,990
13	Collective for Integrated Livelihood Initiatives (CINI)	-	200,000	5,171	205,171	-	533,795	-	533,795	(328,624)	-	(328,624)
14	Samai Pragati Satyog (SPS)	100,296	130,561	-	130,561	153,487	-	53,037	206,524	(75,963)	-	24,303
15	World Food Programme (WFP)	34,880	100,590	-	100,590	135,470	-	-	135,470	(34,880)	-	-
16	Andhra Pradesh Community based Tank Management Project (Govt. of AP)	-	90,000	-	90,000	225,000	-	67,638	292,638	(202,638)	-	(202,638)
17	Council for Advancement of People's Action and Rural Technology (CAPART)	178,715	-	3,985	3,985	12,095	-	3,060	15,155	(11,170)	-	167,545
18	United Nations Development Programme (UNDP)	170,061	(61,169)	-	(61,169)	107,460	-	1,432	108,892	(170,061)	-	-
19	National Rural Employment Guarantee Scheme (NREGS)	225,747	(117,264)	-	(117,264)	107,515	857	-	108,372	(225,636)	-	111
	<b>Total "a"</b>	<b>20,344,909</b>	<b>91,553,547</b>	<b>1,063,176</b>	<b>92,616,723</b>	<b>48,004,667</b>	<b>2,929,319</b>	<b>17,832,272</b>	<b>68,766,258</b>	<b>23,850,465</b>	<b>3,723,653</b>	<b>40,471,721</b>
<b>(b) FOREIGN CONTRIBUTION</b>												
20	Concern Worldwide	72,663	5,216,813	6,722	5,223,535	1,659,061	1,322,624	1,244,528	4,226,213	997,322	259,101	810,884
21	Ford Foundation	-	4,339,542	134,717	4,474,259	-	443,545	29,633	473,178	4,001,081	-	4,001,081
22	The British High Commission (BHC)	(1,699,824)	1,699,824	-	1,699,824	-	-	-	-	1,699,824	-	-
23	Washington University in St. Louis	-	509,426	-	509,426	-	196,112	47,381	243,493	265,933	-	265,933
24	Edie Hofmeister	-	198,004	1,622	199,626	156,129	-	156,129	43,497	-	43,497	
	<b>Total "b"</b>	<b>(1,627,161)</b>	<b>11,963,609</b>	<b>143,061</b>	<b>12,106,670</b>	<b>1,815,190</b>	<b>1,962,281</b>	<b>1,321,542</b>	<b>5,099,013</b>	<b>7,007,657</b>	<b>259,101</b>	<b>5,121,395</b>
	<b>TOTAL A(a+b)</b>	<b>18,717,748</b>	<b>103,517,156</b>	<b>1,206,237</b>	<b>104,723,393</b>	<b>49,819,857</b>	<b>4,891,600</b>	<b>19,153,814</b>	<b>73,865,271</b>	<b>30,858,122</b>	<b>3,982,754</b>	<b>45,593,116</b>
<b>B Corpus Fund</b>												
25	Interest Income Transferred from Corpus Fund (Ref. Sch.1)	-	-	20,236,720	20,236,720	-	6,464,785	13,771,935	20,236,720	-	-	-
26	Interest Income Transferred from Corpus Fund (Ref. Sch.1) for Co-Finance	-	-	270,646	270,646	-	-	270,646	270,646	-	-	-
	<b>TOTAL B</b>	<b>-</b>	<b>-</b>	<b>20,507,366</b>	<b>20,507,366</b>	<b>-</b>	<b>6,464,785</b>	<b>14,042,581</b>	<b>20,507,366</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>GRAND TOTAL (A+B)</b>	<b>18,717,748</b>	<b>103,517,156</b>	<b>21,713,603</b>	<b>125,230,759</b>	<b>49,819,857</b>	<b>11,356,385</b>	<b>33,196,395</b>	<b>94,372,637</b>	<b>30,858,122</b>	<b>3,982,754</b>	<b>45,593,116</b>
	Previous Year's Total	3,685,975	95,702,446	9,903,977	105,606,423	47,143,295	9,691,804	33,273,862	90,108,961	15,497,462	465,689	18,717,748

# THE STAFF

## EXECUTIVE DIRECTOR

Jagdeesh Rao Puppala

## PROJECT SUPPORT GROUP

Dinesh Reddy Malipeddi  
Subrata Kumar Singh  
Jashvant Vallabhhai Dhameliya  
Rajesh Verma  
Brajesh Kumar Dubey  
Jyoti Patil  
Rahul Chaturvedi  
Mayank Trivedi  
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Jayasree Sreenath  
Shailesh Hiralal Christi

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Ashok M Jani  
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Alkesh Rasikbhai Patel  
Rahul Vaminisetty  
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Falguni Bhatt  
Dipal Virendrabhai Amin

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Shirish Kumar Navnital Shah  
Francis Peter Macwan  
Dineshbhai P Patel  
Srinivasan S  
Ashaben Dilip Kumar Shukla  
Muni Swamy Narakula

## ADMINISTRATION

Dibyendu Mondal  
Neeraj Tripathi  
Trushit K Dave  
Rama Ramnathan  
Amit Sindhwala  
Rohiny Warrier  
Manubhai G Parmar  
Bharatbhai Maganbhai Patel  
Rajaram Gupta  
Dallubhai L Vasawa  
Sanjay Prabhatbhai Parmar  
Kalpesh P Bhoi

## GIS CELL

Ravindranath Rangoori  
Dr Bhupendra Singh Mehta  
Arpit Deomurari  
Dharmendrakumar J Chavda  
Bimalkumar Natvarbhai Patel

## ARAVALICELL

Sanjay Joshi  
Dr. Justus Joshua  
Bhanu Pratap Singh  
Dr. Ajay Saxena  
Chiranjit Guha  
Himani K P Kala  
S Rajendra Kumar  
P Ragunathan  
Abhijit Chatterjee  
Sohan Lal

## EASTERN CELL

Sisir Kanta Pradhan  
Himadri Bhuyan  
K Sandeep

Ravi Niwash  
Miloni Mishra  
Dhirendra Kumar Sahoo

## PAPAGNI CELL

Venkat Raj Dyda  
P Divakar Reddy  
M Ram Prasad  
V Dhanasekaren  
Kuldeep Jadav  
Sandeep Verma  
Ram Sourav Adhikari  
S Vijaya Sekhar  
K M Narasappa  
E Sahadevan  
Chengalva Prasad

## BHILWARA TEAM

Shiv Shanker Singh  
Alka Tirkey  
Shantanu Sinha Roy  
Shyam Singh Lakhawat  
Vaibhav Bhatia  
Vivek Vishal Singh  
Nishant  
Snigdha Borah  
Bandana Sambyal  
Bharat Mogare

## ACCOUNTS

Iva Pandey  
Tapas Das  
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Ganga Dadhich  
Rupendra Singh  
Giriraj Prasad Kumawat  
Narayan Hari Vyas  
Shambhu Lal Verma  
Sunil Kumar  
Harnath Singh Khadiya  
Arjun Singh Charan  
Kanha Ram Gujar

## UDAIPUR TEAM

Yash Shethia  
Dimpal Kumari  
Kumar Rupam  
Dr. Leena Gupta  
Rubina Tabassum  
Anamul Haque  
Vipul Saurav Khalkho  
Soonumit Lepcha  
Veerendra Singh Rathod  
Chandra Kant Hol  
Heera Lal Seenva  
Dheeraj Kumawat  
Laxmanbhai Nanjibhai Cholaviya  
Dhuli Ram Gameti  
Kesu Lal Meghwal  
Narayan Singh Chundawat  
Jamana Lal Gawariya  
Asha Cholaviya  
Arjun Ameta

## PRATAPGARH TEAM

Brij Kishor Sharma  
Rajesh Ranjeet Tete  
Panchratius Ekka  
Shipra Gupta  
Manisha Singh  
Nandini Singh  
Vinod Kumar Pandey  
Mridul Kumar Tripathi  
Sheikh Khairul Rahaman  
Dinesh Amulakhbhai Parmar

Shailendra Kumar  
Raghuvir Singh  
Raghunandan Bairagi  
Bharat Singh Udwat

## AGAR TEAM

Bipin Bimal Toppo  
Rashid Parvez Khan  
Shika Lakra  
Kundan Kumar Kaushal  
Sanjay Kumar  
Meenakshi Kumari Choudhary  
Ashok Chouhan  
Ashok Kumar  
Dinesh Kumar Yadav  
Babul Esodiya  
Manohar Bhilala  
Gangaram Suryavanshi  
Vinod Kumar Chandel

## MANDLA TEAM

Sanjay Kumar Choudhary  
Smita K Ranjane  
Susanta Kumar Rout  
Namami Sharma  
Ravi Rajiv Paul Bara  
Manika Thapa  
Sourav Pahari  
Amar Singh Kusare  
Rajesh Kumar Yadav  
Keertan Baghel  
Rohit Kumar Rajak  
Dileep Kumar Yadav  
Manoj Kumar Bisen

## ANGUL TEAM

Swapnasri Sarangi  
Manas Kumar Mohapatra  
Pradeep Kumar Maheran  
Anil Kumar Singh B  
Shreya Mitra  
Dawa Pemba Sherpa  
Sutapa Mukherjee  
Ashok Satpathy  
Ashwini Pati  
Niranjan Sahoo  
Ranjan Kumar Dhir Samant  
Mayadhar Mishra  
Laxmidhar Pradhan  
Naresh Chandra Pradhan  
Prativa Mohapatra  
Anand Chandra Pati  
Bibhudendra Dehury

## KORAPUT TEAM

Dr. Mihir Kumar Jena  
Bijay Kumar Toppo  
Jyoti Prakash Rath

## MADANAPALLE TEAM

Johnson Topno  
Mayank Narayan  
Nirakar Pradhan  
Arun Damodaran  
Sneheshd Kd  
Chitra Desai  
Subhabrata Das  
S Kamala Kumari  
C Bhaskara  
S Venugopal  
C Ram Mohan  
M Krishna Murthy  
N Daniel

B A Aseervadamma  
P Saraswathi  
P Ubedulla Khan  
K Reddeppa  
Ramana Reddy  
K P Sree Ramulu  
Ameer Basha Shaik  
Srinivasulu P  
Kesavulu A

## CHINTAMANI TEAM

P Vijay Kumar  
Jojo John  
Bhavani Shankar S. Gowda  
Shilpi Roy  
C Sowbhagya  
C Narayanaswamy  
S Venugopal  
C Krishnappa  
Chandrasekhar Kannan  
Sudharshan Reddy  
A M Ramesh  
G B Leelavathi  
Soma Kumara K  
Thomas K A  
G A Nirmala  
Narasimha Reddy  
S G Gopi  
T S Usharani

## DAHOD TEAM

Chetana Nand Jha  
Puberun Dekaphukan  
Akhilesh Kumar Verma  
Moumita Laha  
Pratap Singh  
Suresh Kumar Mahavar  
Karansingh Sevabhai Bhuria  
Manabhai Kohyabhai Damor  
Baghabhai R Khant  
Prakash Patel  
Atulkumar Chhaganbhai Patel

## ANAND TEAM

Ramesh Bhai N Patel  
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Satish Macwan  
Maniben D Solanki  
Subhash J Purohit  
Dinkarbai B Panchal  
Ishwar T Sargara  
Dimpal Patel  
Girish Vaishnav  
Yogeshkumar G Patel

*As on March 31, 2009*

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