ANNUAL REPORT

2013 - 2014

AFPRO

Action For Food Production

Content

Aim

The aim of the Society is development of weaker sections of the rural community, and to move towards sustainable development, through overall increase in their knowledge and skills in the areas which directly affect their standard and quality of life.

Vision Statement

AFPRO as a secular socio - technical development organization with Christian inspiration visualizes itself as working to enable the rural poor - including women and men belonging to small and marginal farmers and the landless, dalits, tribal people, fisher folk and unemployed youth - to move towards sustainable development, through an overall increase in their knowledge and skills in areas that directly affect their standard and quality of life. It visualizes itself as an organization that over the next decade will enable the marginalized rural groups to achieve enhanced socio - economic and personal status in society through appropriate technologies for the management of natural resources.

Mission Statement

AFPRO dedicates itself to its mission of alleviating rural poverty by promoting and working through voluntary organizations; with a focus on enabling the marginalized and weaker sections of rural society to participate in the process of rural development by strengthening their resource base and capabilities through improved knowledge and skills, both in the technical and socio - economic development areas.

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Abbreviations

ADP	Area Development Programme
BCI	Better Cotton Initiative
BCS	Better Cotton Systems
BMP	Better Management Practices
BRGF	Backward Regions Grant Fund
CCA-RAI	Climate Change Adaptation in Rural areas of India
CLTS	Community Led Total Sanitation
CSA	Climate Smart Agriculture
DPC	District Planning Committee
DPR	Detailed Project Report
DWS	Drinking Water Security
ETP	Effluent Treatment Plant
EVA	Extreme Risks, Vulnerabilities and Community-based Adaption
HID	Human and Institutional Development
IIT	Indian Institute of Technology
IFFCO	Indian Farmers Fertilizer Cooperative Limited
IP	Implementing Partner
IFS	Integrated Farming System
IWMP	Integrated Watershed Management Program
KVK	Krishi Vigyan Kendra
LEISA	Low External Input and Sustainable Agriculture
MELD	Monitoring, Evaluation, Learning and Documentation
MGNREGS	Mahatma Gandhi Rural Employment Guarantee Scheme
NAPCC	National Action Plan on Climate Change
NBA	Nirmal Bharat Abhiyan
NEI	North East Initiative
NGP	Nirmal Gram Puraskar
NHWDP	Nabard Supported Holistic Watershed Development Programme
NRDWSP	National Rural Drinking Water Security Programme
NRLM	National Rural Livelihoods Missions
O&M	Operation and Maintenance
PDOs	Panchayat Development Officers
PIM	Participating Irrigation Management
RO	Reverse Osmosis
RAPCC	Rajasthan Action Plan on Climate Change
RFPMIS	Rajasthan Farmers Participation in Management of Irrigation System
SHG	Self Help Group
SO	Support Organization
SRI	System of Rice Intensification
SRO	State Resource Organization
SWI	System of Wheat Intensification
VDC	Village Development Council
VWSC	Village Water and Sanitation Committee
VWDA	Vasundhara Watershed Development Agency
WP	Work Package
WSP	Water Security Planning
WSP	Water and Sanitation Program
WWD	World Water Day

Resource Support

- Better Cotton Fast Track Fund (BCFT)
- Ballarpur Industries Limited (BILT)
- Bharat Aluminum Company Ltd. (BALCO)
- Bharat Dynamics Limited (BDL)
- Royal Norwegian Embassy
- Government of Maharashtra
- Government of Karnataka
- Water Resources Department, Government of Rajasthan
- Government of Assam
- Government of Chhattisgarh
- GiZ, Germany
- Indian Council of Agricultural Research (ICAR)
- IKEA Trading Company (Hong Kong) Pvt. Ltd.
- India Water Partnership (IWP)
- International Fund for Agricultural Development (IFAD)
- LAFARGE India Pvt. Ltd.
- Monsanto, U.S.A.
- National Bank for Agriculture and Rural Development (NABARD)
- Navajbai Ratan Tata Trust (NRTT)
- Ministry of Panchayati Raj, Govt. of India
- NR Management Consultants
- Panchayat Raj Engineering Department (PRED)
- Sir Ratan Tata Trust (SRTT)
- The Energy and Resources Institute (TERI)
- United Nations International Children's Emergency Fund (UNICEF)
- Ultratech Cement Ltd.
- Water Aid
- World Vision India
- YASHADA, Government of Maharashtra

Note of the Executive Director

As the end of the International Decade for Action 'Water for Life' 2000 – 2015 nears, and dialogues on a post 2015 action plan emerge, our experiences from carrying forward national commitments - already well aligned with goals of the international community – reflect strengths in approaches adopted, challenges overcome and recommendations which would bring goals closer home. Improving access to safe drinking water, integrated water resources management, water use efficiency, water related monitoring and evaluation, and sanitation and hygiene are some of the themes touched upon through our programmes; contributing to an improvement in the quality of life of the rural population of India.

As part of the fraternity of civil society organizations, ensuring drinking water security even in water stressed conditions has been a challenge we have faced. Fundamental principles of hydrology, hydrogeology and its application are being relied upon to provide practical technical solutions; ones which are ensuring that every village we work in is drinking water secure. The humble watershed approach needs to be given due significance in both planning and management of water resources, especially in hard rock areas. However, engineering marvels ensuring adequate quantity of safe drinking water need to be followed by strong 'social engineering' if issues of sustainability are to be addressed.

Multiple approaches are being demonstrated to increase efficiency in water use. Financial mechanisms in the form of incentives (subsidies) and disincentives (tariffs) are being relied upon to expose farmers to water efficient practices. However, in addition to such mechanisms, cost effective solutions also need to be promoted to encourage adoption by small and marginal farmers. Traditional practices need to be identified, documented and actively promoted as alternates to existing technologies.

The multi sectoral nature of the Water Security approach is indicated by the inclusion of cross cutting issues of sanitation and hygiene. Triggering exercises need to be prioritized in those villages where at least drinking water security has been achieved. The multi sectoral nature of Water Security is also indicated by its strong linkages with Food and Energy security. There is a growing policy support for the contribution of Soil Management in enhancing both the profitability of agriculture through scientific application of nutrients, and its role in ensuring sustainability of the soil.

Water Monitoring Networks, especially at the local level are an underrated component of decision making processes related to the management of water resources. Monitoring spatial and temporal variations in both the quantity and quality of water resources can guide users of the resource towards better management practices. Such monitoring networks can also feed into scientific processes for assessing impacts of climate change at local levels. With a strong presence amongst local communities and favorable acceptance of technical support from them, the role of civil society organizations and Panchayati Raj Institutions in strengthening the density of existing water monitoring networks needs to be given due consideration.

Climate Change Projections under different climate scenarios indicate inter-annual and inter-seasonal variability in temperature and rainfall over the Indian subcontinent. With Water Security Planning (WSP) actively being adopted as a preferred approach to the management of water resources, there is a need that such planning processes take into consideration the impact of climate change on the total availability of water resources, as well its impact on consumption patterns. Climate Proofing Water Security will help built the adaptive capacities of local communities to cope with climate change.

No wonder that these committed approaches, the learnings through partnerships with communities and sharing and exchanging ideas with the communities have resulted in the better and sustainable agricultural livelihoods models. Yes, cross cutting issues are to be identified, which need to be tackled through meaningful policy dialogues at the state and national level.

We are confident with our network of partners and visibility. We humbly commit ourselves for better outcomes and wider scale of applications. A sustainable environment in compliance to improved agricultural livelihood and enhanced adaptive capacities are the ultimate goals. I take this opportunity to record appreciation for the support and encouragement we received from the members of the Governing Body of AFPRO, the Committee Members, the dedicated support from the Regional Managers, staff at this Head Quarter, and the Regional Offices and those who are working at the project locations. The donor agencies of various backgrounds showed unique partnership and demonstrated co-operative relationship. (We also appreciate the support from the Norwegians through the Embassy of Norway in India to support for a research project "EVA" which is in progress and doing well).

Civil Society Organizations also have a major role to play in creating an enabling environment for the decentralized management of water resources (governance). One amongst several factors limiting effective service delivery at the village is a cadre of trained service providers. Panchayati Raj representatives especially those at the village level hold ample potential to be trained as effective 'Service Providers'. However, foremost is the building of their functional capacities. Coming in a close second is the need to equip them with skills to enable financial decentralization, a route which propagators of pro poor approaches should encourage with some constraint.

Acknowledging the role of natural resources management in the development of the poor and marginalized, our work has been actively supported by International Organizations, Bilateralism, National funding Organizations and Corporate. Enabling the dissemination of experiences, our implementing partners in the field and the policy and advocacy groups which we support will too carry forward Best Practices.

D.K. Manavalan I.A.S (Retd)
Executive Director

Increasing Resilience of Indigenous Communities to Water Induced Hazards

For farmers in 48 flood prone project villages, in Dhemaji district of Assam, the annual occurrence of floods would routinely wreak havoc to their livelihoods. Cyclic in nature, agricultural land would be left covered by silt, sand or waterlogged; productions compromised and opportunities to cultivate lost for several of them. For such farmers, 'Living better with the Floods' represented an innovative approach, one which held the potential to fade their woes away.

Name of Project	Live Better with the Flood – An Approach for Sustainable Livelihood Security
Duration	July 2012 – December 2013 (Extension Phase I)
Location	38 Villages, Dhemaji District, Assam
Resource Support Agency	Indian Council for Agricultural Research (ICAR)
Total beneficiaries	3400 Farmers

Integrated Farming System (IFS) & Restructuring of Cropping Patterns

Having supported these farmers over five years, many no longer look upon floods as an insurmountable hazard. With successful models under Integrated Farming System (IFS) having been demonstrated, and tools such Restructuring used to plan cropping patterns; over 3000 farmers have built their capacities to live better with the floods. While, diversification and intensification of agricultural production systems have offered them opportunities to strengthen livelihood bases, non-farm based skill development activities were attempts to reduce dependence on a single resource – land. Directed towards greater livelihood security, programme interventions have opened pathways for social and economic development.

Local Institution Strengthening & Sustainability

The last lap amongst these farmers, however, was represented by a unified concern on sustainability of approaches and interventions introduced. Creation and strengthening of institutions at the village level represented the preferred approach. Village Development Councils (VDCs), Self Help Groups (SHGs) and Farmers Clubs (FC) have been created with vision to ensure that efforts made are not lost; and technological models created are disseminated to adjoining areas.

48 Village Development Councils and 100 Self Help Groups

2 Self Help Group Federations

Market Linkages Activities

Arunachal Pradesh is the closest market for farmers in Dhemaji. However, absence of collectivization mechanisms prevented farmers from receiving best prices. Keeping this in mind, capacities have been built on 'Market Linkages' and 'Collective Bargaining'. The VDCs operating on a cluster basis will execute these assigned responsibilities. Also, to strengthen all institutions, their capacities have been built on financial management and book keeping.

Although, additional efforts are required to create self reliant institutions, ground work has been laid. Building on this have been successful efforts to link all institutions created with centrally supported National Rural Livelihoods Missions (NRLM). Extension support of the local Krishi Vigyan Kendra (KVK) under NRLM has also been assured through adoption of both project beneficiaries and institutions; thus bringing sustainability closer to home.

Exploring the 'Convergence' approach for reduction in Vulnerabilities through enhancement of livelihood options

Yavatmal is a 'Backward, Distressed or Vulnerable Region' of Maharashtra. In an effort to reduce the persistent development deficit characterizing this region, the Government of Maharashtra (GoM), International Fund for Agricultural Development (IFAD) and Sir Ratan Tata Trust (SRTT) have been collaborating through a programme titled 'Convergence of Agricultural Interventions in the distressed districts of Maharashtra'. Leading this initiative in 10 villages of Yavatmal district, our tryst with the programme entered its fourth year.

Name of Project	Convergence of Agriculture Interventions in Maharashtra (C-AIM)
Duration	October 2010 – October 2013
Location	10 Villages in Yavatmal Block, Yavatmal District, Maharashtra
Resource Support Agency	Government of Maharashtra (GoM), IFAD and SRTT
Total beneficiaries	4742 Households

Regeneration, Conservation and Proper Utilization of Natural Resources

Local communities engaged in agriculture based livelihoods were vulnerable, primarily due to a dependence on an erratic rainfall pattern, absence of alternate sources of assured irrigation and ownership of land plagued by increasing degradation. Regeneration, conservation and proper utilization of natural resources formed the foremost strategy to vulnerability reduction. Land Management practices have reduced erosion, increased soil moisture retention and checked land degradation associated with it. Water conservation through a series of rainwater harvesting structures (farm ponds) have reduced vulnerabilities through a reduced dependence on rainfall, increased access to protective irrigation and strengthened economic conditions of farmers.

884 ha of Land Treated & 1.50 lacs cum of Irrigation Potential created

Crop, Nutrient and Pest Management

Local communities engaged in agriculture based livelihoods were also vulnerable due to the economically unprofitable nature of agriculture. Field camps and Farmers Fields Schools (FFS) were used to transfer technologies to farmers on Crop, Nutrient and Pest Management as part of the Low External Input and Sustainable Agriculture (LEISA) approach. Its demonstrations in cash crops such as cotton and soybean, and cereals and pulses have further contributed to a reduction in vulnerabilities, through an improvement in production and reduction in input costs. Overcoming small marketable produce, characteristic of small and marginal farmers, collectivization and market linkages have improved incomes earned; cumulatively increasing the net returns of the farmers.

400 ha Crop, Nutrient and Pest Management (Low External Input and Sustainable Agriculture)

Farm and Non Farm based Micro Enterprise Development farmers

The vulnerability of local communities was also traced to their exclusive dependence on agriculture as a livelihood. The creation of alternate employment opportunities through small and medium enterprises has effectively demonstrated its scope in vulnerability reduction. Farm and Non-farm based, village level Self Help Groups (SHG's) were strengthened on enterprise formation; and access to credit facilitated. Representing a special effort to address differential vulnerabilities, women based Self Help Groups were prioritized for support. The systematic and scientific development of fodder on field bunds etc. will lend an additional support to livestock based enterprises (dairy) through access to green fodder for milch animals, ensuring milk production is maintained.

123 SHGs Strengthened

Institutional Strengthening

Functional capacities of three local institutions – Village Development Councils (VDCs), Self Help Groups (SHG's), and Producer Groups have been developed. These institutions are actively engaged in facilitating access to credit and building market linkages for small and marginal farmers. Sustainability and scaling up of programme interventions has been an additional challenge addressed through the programme. Linkages with the local Krishi Vigyan Kendra are ensuring that technical support systems to farmers continue in the long run. Also, Village Information Centers are disseminating information on Crop, Pest and Nutrient Management Practices.

10 VDC, SHGs, 123 SHGs, 10 Producer Groups Strengthened

C-AIM represents a unique model of vulnerability reduction through forging of collaborations forged between multiple stakeholders at the village level, the institutional set up at the district level and financial institutions such as national level development organizations and corporate. Through the strengthening of livelihood bases its significance increases many fold under the climate change regime especially since strengthened economic bases can improve resilience's to climate change.

Moving beyond 'Better Management Practices' towards 'Better Cotton Systems' (BCS)

Name of Project	Better Cotton Initiative (BCI)
Duration	April 2013 - March 2014
Location	116 Villages, Yavatmal District, Maharashtra; 146 Villages across Dhoraji, Surendrangar & Wankaner District, Gujarat
Resource Support Agency	IDH and IKEA Trading (Hong Kong) Pvt. Ltd.
Total beneficiaries	Gujarat: 18000; Maharashtra: 13000

Yavatmal in Maharashtra and Rajkot and Surendranagar in Gujarat are the major cotton growing areas in India. Absence of scientific cotton cultivation practices, especially excessive application of fertilizer and pesticide and improper management of natural resources, however, are posing the greatest hindrance towards cotton yield and quality. The other factors having impacts on cotton production and quality in those areas include water scarcity, open or unprotected storage of cotton, soil erosion and poor soil health. A total of about 30,000 cotton farmers across three blocks of Gujarat and one block of Maharashtra have been introduced to Better Cotton Standard Practices in cotton. The social challenges of cotton production have also been addressed through a special focus on 'Decent work' – women and children.

During the reported period, emphasis was given mostly on cotton cultivation with effective soil health management. A value addition to Soil Health Management, addressed through the programme, has been the adoption of a convergence approach to soil testing. Two corporate, one each in Gujarat (IFFCO) and Maharashtra (Rashtriya Chemical Fertilizers) have jointly supported approximately 5000 farmers in soil testing – macro and micro nutrients. Management of Micro nutrients especially sulphur has been encouraged in the sulphur deficient region of Saurashtra, Gujarat; while macro nutrient deficiencies have been supplemented in soils of our farmers in Yavatmal. On one hand, the scientific application of fertilizers are contributing to improvements in Soil Health; while on the other it has led to a reduction in input costs.

In addition, soil and water conservation activities were carried out to demonstrate technical solutions aimed at addressing the issue of over exploitation of groundwater affecting cotton cultivation during the drought and low rainfall years. Also, the high density of tube and borewells has made this area more vulnerable. With support from IKEA in Rajkot and Surendranagar districts of Gujarat, multiple water conservation measures were implemented including deepening of check dam, farm ponds, cement nala bunds and waterways. This activity also generated awareness among the farmers on importance of soil and water conservation measures.

Activities during the reported year

- Farmer's registration, categorization and formation of learning groups
- **IEC material development**
  (MPCs, Farmers Field Book, Leaflets, Farm assessments Form, RIR Form)
- **Training to Field Facilitators, Field Coordinator, Documentation Officer and Project Coordinator**
  (MPCs: nutrient and water management: IPM based crop protection; decent work & fibre quality management; and supply chain process)
- **Modular Training of LGs on MPCs**
  (Facilitated by Project Staff to LG)
- **Setting up of Demonstration Plot**
  (2 acres of agriculture land/ selected villages as demo plot)
  IPM included: pheromone traps, Marigold and Cowpea against insects; bio fertilizer and bio-pesticide (like Neem seed kernel extract)
- **Soil and Water Conservation**
  (Settling tank for reducing salt concentration - 27 Nos, Waterways - 7329 mts, farm ponds - 5 Nos, Land levelling - 3 acres, check dam deepening - 2, dugout pond - 17 Nos)
- **Farm assessment**
  (Through peer review between LGs, facilitating checks form IPS & BCI & 3rd party credibility form verifiers)
- **Decent Work**
  (Safe harvesting practices; non-involvement of child and pregnant women; awareness creation on " Labor right, equity and labor laws")

KEY IMPACT AND OUTCOME

- Proficiency development of Community Resource Person (CRP)
- Habit of information sharing and collective action by farmers
- Awareness among farmers towards scientific methods of irrigation, fertilizer and pesticide management and decent work
- Soil test-based nutrient management (30-40% reduced chemical fertilizers)
- Reduced water use (20-30%)
- Improved fibre quality
- Reduced cost of cultivation (15-20%)
- Linkage development with Agricultural Universities to streamline the use of inputs
- Approximately 400 farmers from Gujarat benefitted from Soil and Water Conservation measures
- 16,936 cum of storage capacity created by dugout ponds
- Recharge of additional 24 wells covering 40 ha land due to construction of cement nala bund

Key achievement during the reported year

- Cotton Production stands at 20,000 MT & 12,000 MT Lint in Gujarat and Maharashtra respectively
- 100% Learning Groups (LG) from Wankaner, Dhangadhra and Yavatmal; and 50% from Dhoraji were certified as Better cotton growers and they were issued license from BCI to participate in the Better Cotton Supply Chain.
- Capacity building of 150 para professionals on BCS from both Gujrat and Maharashtra.

Key challenges

- Farmers' expectation for higher remunerative price.
- Water salinity in Wankaner.
- Insufficient rainfall resulted in lowering of water table in some areas restricting irrigation; leading to reduced participation in LG meetings.
- Demonstrating good supply chain /procurement system to the farmers.

Case Study: Sulphur – A nutrient for improvement of cotton quality and productivity

Sulphur (S), being a constituent of sulphur containing amino acids and other metabolites, plays a pivotal role in various plant growth and development processes. It is increasingly being recognized as the fourth major plant nutrient after nitrogen, phosphorus and potassium. Cotton is a crop that utilizes relatively large amounts of sulphur. Usually, cotton contains more sulphur than phosphorous, with the S uptake ranging from 7 to 33 S kg/ha. S deficiency symptoms occur when soils have available SO_4-S less than 10-15 mg/ kg of soil. Sulphur deficiencies are most likely to occur on light textured soils or in areas where root system is confined largely to upper surface soil because of compaction or perched water table. Sulphur deficiency in cotton often results in smaller and lighter green coloured leaves; severe deficiency can result in reduced branching, flowering and boll set and plants appear stunted.

Research study from Junagadh Agriculture University, reveals that during a span of 10 years (1990-2000) the available Sulphur status declined from 24.4 to 14.5 ppm in soils of Saurashtra region and region becomes a sulphur deficient zone. All the project areas under BCI project in Gujarat come under this Sulphur-deficient zone, as indicated in the map. During the cotton season 2013, the recommended use of sulphur was demonstrated in 638 demonstration plots from Gujarat for improving the quality and weight of cotton. Liquid S was distributed in the form of Monosulphide (contains 80% S) @ 2.5 L/acre. Farmers from demonstration plot applied Sulphur after diluting with water specifically in cotton ball formation stage. Sulphur application showed dark green coloured leaves facilitating enhanced photosynthesis and thereby resulted in improved plant growth. A significant increase of seed weight (4-5% per acre) and improvement in cotton quality were also observed in the demonstration plots as a result of Sulphur application.

Without Sulphur **With Sulphur**

Appearance of cotton leaves with and without external Sulphur supplement

Working towards Making Gram Panchayats Drinking Water Secure

Population projections (2050) reflect an Indian population well over the 1.5 billion mark. With utilizable water resources in India – surface or groundwater – more or less constant, there is growing concern that several regions in India will become 'Water Stressed' and eventually 'Water Scarce'. In an effort to reduce the pace of reaching this evident fate, the Ministry of Drinking Water and Sanitation introduced the National Drinking Water Security Pilot Programme (NRDWSPP).

Name of Project	National Rural Drinking Water Security Programme (NRDWSP)
Duration	July 2012 - July 2014
Location	30 GP Mulbagal Block, Kolar District, Karnakata
Resource Support Agency	Panchayati Raj Engineering Department and Zilla Panchayath, Kolar
Total beneficiaries	43, 413 Households

NRDWSPP is being piloted in 15 water stressed blocks in India, with Mulbgal block, Kolar district, Karnataka being one of them. Here overexploitation of groundwater for irrigation is a cause of concern especially since it has direct repercussions on the availability of water for drinking purposes. Several GP's record acute shortages of water during the summer season creating a need to address competing water use across sectors, rather than stand alone drinking water security. Operating on this fundamental principle, we have proactively contributed to NRDWSP as 'Support Organization' for the second year running.

Water Budgeting and Preparation of Drinking Water Security Plans

30 GP Water Budgeting and Preparation of Drinking Water Security Plans

Participatory planning processes have been ensured through active participation of both local communities and their PRI representatives, and representatives from line departments in preparation of water budgets for all 30 GPs. Also, the information contained provides decision makers with ample opportunities to identify strategies to better manage this demand and supply. Reflecting documentation of these strategies is community based Drinking Water Security (DWS) plans.

Demonstrations of Drinking Water Security Plans (Source and System Sustainability)

Translating planning processes into action has been the implementation of DWS plans in 5 pilot Gram Panchayats - Hebbani, O. Mittur, Ambalikal, Tayalur, Pitchgunthahalli. Supply side improvements include recharge measures such as rejuvenation of surface water bodies, and recharge pits. Demand side improvements amongst others include improvement in irrigation efficiencies (drip irrigation, mulching etc). Through the programme, continuous strides are being made to balance demand with supply, thereby progressing towards a more sustainable water regime.

Important systems of interest in these GPs are those of piped water supply. In compliance with national guidelines, all households in the pilot GP have been covered with access to piped water. Sustainability of this system is being promoted through periodic monitoring of operation and conveyance losses. Water meters installed in households will facilitate scientific monitoring; while trained watermen will initiate processes for necessary repair. Collection of water tariffs will further strengthen the sustainability of the system through introduction of processes of financial decentralization.

Demonstrations of Drinking Water Security Plans 5 GP (Source and System Sustainability)

Promotion of Sanitation and Hygiene Practices

Sustainable Sanitation and Hygiene is addressed through capacity building of the institutional set up at the village level. Engaged in triggering exercises, Swatchtadoots triggered thousands of households into construction of toilets, overcoming hurdles of community participation and access to financial resources.

Promotion of Sanitation and Hygiene Practices through 34 capacitated Swatcha Doots Tiggering the construction of 9084 toilets

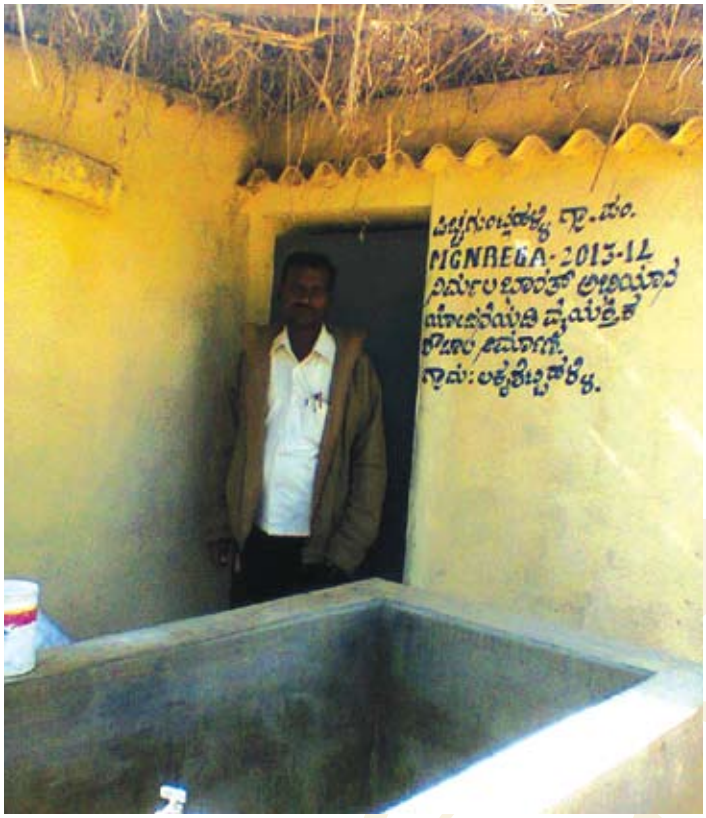
The pilot project in Mulbagal block holds the potential to be part of a policy dialogue on mainstreaming climate change adaptation into Rural Drinking Water Security Programmes. Supporting this is an existing acceptance of decentralized management of water resources,

fundamental approaches of hydrology and hydrogeology and active convergence from several line departments.

Human and Institutional Building

Human and Institutional Development (HID) at the village level is addressed through a series of capacity building initiatives. The support of World Bank, Panchayat Development Officers (PDOs), and District and Taluk Coordinators (including under the NBA) assisted in working towards the common goal of Drinking Water Security. Convergence of Capacities results in strengthened functional capacities of institutions at the village level – Village Water and Sanitation Committees (VWSC), Swatchtadoots and Watermen. Supported institutions contribute to preparation of DWS plans; mobilize communities towards implementation, coordinate release of funds (NBA and MNGREGA etc.) and monitor implementation.

Human and Institutional Building (Locals, Village Water and Sanitation Committees, Watermen). Amongst others, 30 watermen, 30 bill collectors were trained



Triggering a Swatchh Bharat: A Swatchhtadoots efforts and Community Commitment unite to declare Kuppampalya 'Open Defecation Free'

Narayana Swamy is a youth from Kuppampalya Gram Panchayat, Mulbagal block, Kolar district, Karnataka. He belongs to Gram Panchayat where only four percent of the households had access to sanitation and were Below the Poverty Line. Limiting total coverage were awareness on benefits of household sanitation, financial support and inadequate institutional support to execute processes.

Short listed by the Gram and Taluk Panchayat under the leadership of the Panchayat Development Officers (PDOs) due to his motivation to improve the lives of his fellow community members, he was trained on Community Led Total Sanitation (CLTS). Converging with the institutional set up created under the Nirmal Bharat Abhiyan (NBA) he has triggered all the households in his Gram Panchayat towards the construction of household toilets.

An active Swatchhtadoot, he has overcome several hurdles limiting his communities access to sanitation – lack of adequate labour, delay in release of funds etc. With the financial support sanctioned under the formerly Nirmal Bharat Abhiyan and the Mahatma Gandhi Rural Employment Guarantee Scheme (MGNREGS), 106 household toilets have been constructed. A model, his contribution has been recognized by his Gram Panchayat being promoted as a 'Model' under the NBA, The Minister of Rural Development and Panchayati Raj, Principal Secretaries and Water and Sanitation Program (WSP) representatives have encouraged his work by visiting this GP.

Demonstrating Community based Operation and Maintenance of Drinking Water: A capacity building approach

Name of Project	Demonstration of a Model of Community Based Operation and Maintenance of Water Supply in 46 GPs of Dongargaon Block of Rajnandgaon district, Chhattisgarh
Duration	August 2013 – March 2014
Location	46 GPs, Dongargaon block, Rajnandgaon district Chhattisgarh
Resource Support Agency	UNICEF
Total beneficiaries	1266 Households

The 73rd Constitutional amendment mandates decentralization of governance through Panchayati Raj Institutions. Operation and Maintenance of drinking water supply systems by village level institutions fall within this mandate. While sporadic incidences of village level institutions managing their systems may emerge, systematic efforts are required to engage village level institutions in planning and managing their drinking water supply systems.

Gram Panchayats in Dongargaon block of Rajnandgaon district of Chhattisgarh predominantly receive their drinking water requirements from groundwater – hand pumps, borewells and dugwells. While, line departments such as PHED through their techno - financial support have a presence in these Gram Panchayats, active participation of local level institutions in O&M is highly restricted. Limiting participation amongst others are capacities to contribute to O&M.

Operation and Maintenance of Water Supply

Extending technical support to UNICEF and its partners in the field; and closely collaborating with the institutional machinery at the district level, we entered into 46 of the 52 GP in Dongargaon. Structured trainings, targeting key stakeholders were organized - Sarpanch, vice Sarpanch, Secretary, Ward Panch, Anganwadi Workers, Mitanin, Teachers, SHGs members and villagers. Drawing from guiding principles of the National Rural Drinking Water Security Programme (NRDWSP), focused sessions were conducted on drinking water – quantity and quality, water safety, solid and liquid waste management and hygiene practices.

Demonstrated Operation and Maintenance of Watermen Supply in 46 Gram Panchayat

Soliciting active participation of these stakeholders, capacities were also built on systematic appraisals of the key opportunities and barriers characterizing the drinking water sector. Documented as GP level Action Plans, these assessments will form initial negotiating tools to bridge gaps and improve drinking water conditions in the GP's. It has also laid the foundation of engaging with institutions at the village level to manage drinking water systems; and develop an understanding on available mechanisms at the block/district level for both technical and financial support.

Outcomes of these assessments have highlighted the need to intensify routine operation and maintenance of all existing infrastructure. Such O&M will also increase efficiencies through reduction in losses and ensure both greater coverage and sustainability of the source. Also, significant scope for improvement in solid and liquid waste management practices emerged. Outcomes of such trainings demonstrate the potential held by local institutions to contribute to effective management of water resources. They also highlight barriers which require prompt and proactive bridging, if the confidence of communities in existing systems of governance, and in visions of the future were to be reinstated.

Nirmal Gram Puruskar's have for long been associated with recognition of substantial strides made in sanitation and hygiene practices. They have served as drivers, motivating local communities including schools, etc to construct and use sanitation facilities; and adopt both individual and community level hygienic practices.

Supporting the Ministry of Drinking Water and Sanitation through UNICEF in its endeavor to assess achievement of NGP worthy targets, AFPRO extended it technical support to a concurrent evaluation of NGP surveys conducted by state appointed surveyors. Technical support was extended to assess the accuracy with which survey data was collected; and compliances with procedural requirements for conducting the survey.

Such third party evaluations reflect strengthening of monitoring protocols in operation amongst state and district level machinery, as well as greater accountability between service providers and service receivers. They also represent the need to ensure greater compliances in adoption of procedural requirements of the survey; and it adoption of scientific techniques of data collection and compilation.

Promoting Sustainable Sanitation in rural India

Name of Project	Promoting Sustainable in rural India
Duration	July 2013 - June 2014
Location	14 GPs Kuru block, Lohardaga district, Jharkhand
Resource Support Agency	NR Management Consultants

The Nirmal Bharat Abhiyan (NBA) outlines demand driven approaches for promotion of sanitation and hygiene practices in the country. Executing this vision is an institutional set up operating at the village, block and district levels etc. However, functional capacities of several of these institutions are limited in terms of effective delivery of assigned roles and responsibilities. Therefore, concerted efforts are required to improve capacities to facilitate amongst others greater coverage of sanitation and hygiene.

Supporting the Government of Jharkhand in realization of national goals is the Global Sanitation Fund (GSF). Channelized through NR Management Consultants (NRMC) and executed through AFPRO, a programme on 'Promotion of Sustainable Sanitation in rural India' is in operation in 14 GPs of Kuru block, Lohardaga district, Jharkhand.

Institution Building and Strengthening

Village, Water and Sanitation Committee Trained in 3 GP

Implementation of programme objectives has been driven by the need to initially facilitate adequate representation of relevant stakeholders at the GP level. Regular consultations with Gram Sabha members, organizations having a local presence etc. have ensured active participation of the local community including members from the VWSC and Jal Sahiyas. Necessary group formations and their capacity building have also been facilitated where gaps existed. They have served as valuable mediums for delivery of approaches enshrined under the Community Led Total Sanitation (CLTS) Campaign.

'Walk of shame' taken up as part of triggering activities amongst the communities have generated a general sense of acceptance of better sanitation and hygiene practices. Culminating into the generation of demand for sanitation facilities, construction of both single and double pits latrines were initiated during the course of the programme. Falling back on IEC strategies, several material developed as part of the project – wall paintings, slogans, calendars, street plays etc. – are contributing to the generation of a greater sense of awareness among the community.

Awareness Building

Implementation of the programme has been rigged with numerous challenges ranging from prevalence of extremist movements, low confidence levels of the community in the institutional set up and slow and inefficient processes of sanctioning of funds. However, overcoming these hurdles have been efforts to work in close collaboration with the government set up; successes recorded in terms of construction of toilets in several target households. The state of Jharkhand requires an up scaling of successes if national goals of open defecation free statuses have to be achieved.

Triggering Exercises in 7 Villages

Taking 'Decentralized Democratic Governance of Water Resources' to the community

Name of Project	Rajasthan Minor Irrigation Improvement Project
Duration	May 2013 - April 2014 (Extension Phase)
Location	77 WUAs, Bhilwara, Chittorgarh and Pratapgarh Districts, Rajasthan
Resource Support Agency	Water Resource Department, Government of Rajasthan
Total beneficiaries	31065 Households

Access to irrigation holds the key to revolutionizing livelihoods, especially of those who inhabit the dry and rainfed areas of this country. While, investments in extending irrigation to several geographies have been significant; considerable strides are required if social and economic benefits are to be maximized; and sustainability of infrastructure created ensured. Taking center stage in execution of this vision are the users of such irrigation facilities; and supporting them have been socio technical support extended by us for a fourth consecutive year.

Recognizing decentralization of democratic governance as the most appropriate approach to the management of irrigation systems, Rajasthan Farmers Participation in Management of Irrigation Systems (RFPMIS) Act – 2000 and Rules 2002 – Participatory Irrigation Management (PIM) has been in operation since 2002. However, with the Water Resources Department assessing gaps in functional capacities of Water User Associations (WUA) created under the Act and its Rules, extensive efforts have been made to bridge these gaps through 'Rajasthan Minor Irrigation Improvement Project'. Close collaborations have also been forged with leading technical institutes in the state and concerned line departments of agriculture as well.

Strengthening Functional Capacities Participatory Irrigation Management (PIM)

Recognizing the contribution of sound socio-technical support extended by us, we were entrusted with the capacity building of an additional 27 WUAs during the extension period. Thematic areas continued to be amongst others on operation and maintenance of distribution channels, distribution of water and collection of tariffs. Refresher meetings amongst the initial batch (50 WUA) further aimed to strengthen capacities. Overcoming limited participation of WUA members in trainings/ meetings etc, noteworthy improvements have been recorded; attributable to multiple strategies which addressed critical social and economic factors limiting participation in the group.

Deficits in technical capacities have been addressed through series of workshops organized by Irrigation Management Training Institute (IMTI)-Kota. Attending these workshops were Members of Management Committee (MMC) of individual WUAs. Also, strategies of formulation of a Technical Support Group (WTSG), comprising technical experts, are ensuring continued technical assistance to WUAs. Noteworthy improvements in functional capacities of WUAs have been independent estimation of respective water courses.

Social inclusion has been encouraged through reduction in operational losses and consequent improvements in availability of irrigation to tail end users. However, timely extension of O&M activities is essential for confidence building and strengthening of WUAs. Also, extension of livelihood support through convergence with the agriculture department formed an integral strategy for social inclusion. Addressing the demand for technical support, necessary guidance has been facilitated in both *kharif* and *rabi* crops. Also, better management practices in agriculture were encouraged through mobilization of communities for soil testing; an exercise which has found growing favor amongst the WUAs.

Financial decentralization is essential from perspectives of operationalizing the concept of Participatory Irrigation Management (PIM). Financial decentralization through tariff generation, collection and management by WUAs has been piloted as a potential approach. However, such approaches are gradual in nature and even minor successes represent overcoming of several barriers – the greatest being institutional/political structures of tariff collectors (local patwaries). Functional capacities to manage finances have been encouraged through orientations on book keeping. Also, all WUAs have been mobilized for opening of bank accounts.

Thus, the project has grown in scope and coverage; creating an enabling environment for effective delivery of new found roles and responsibilities under the concept of Participatory Irrigation Management.

Watershed Management

Overview: Like the previous years, during 2013-14 also AFPRO addressed many rural development issues in stress affected and tribal dominated regions in India. Many of our interventions were centered on water related issues both ground water as well as surface water. These interventions are mainly for creation of drinking water sources and conservation and augmentation of water resources through community based watershed approach. Since several decades, watershed management have been considered as an approach to plan water resources. It is well understood that every watershed is unique in its characteristics, problems and interventions; therefore, it's planning and implementation requires consideration of community needs and local specific factors. Project performance thus depends on appropriateness of the processes in different stages of the project. However from AFPRO's perspectives, water management is no longer confined to soil and water conservation measures, while it also addresses the issues of strengthening livelihoods by effective surface and ground water management through appropriate hydrogeological approach, taking climate variability and its best adaptive measures into account. Climate change adaptation in water and agriculture sectors along with coping with disaster preparedness through systematic planning and implementation with local community is a crucial challenge. Minimizing vulnerabilities and managing climate-related risks are some of the major criteria considered in water and watershed planning processes. In many cases, climate change exacerbates existing management challenges, such as water shortages, water use conflicts, protecting water quality and managing natural hazards. Therefore, when adaptation is integrated into water and watershed plans, consideration must be given to the degree to which climate change is compounding those problems and to how strategies and responses need to be refined to address additional pressures related to climate change.

NABARD Supported Holistic Watershed Development Program (NHWDP)

Name of Project	NABARD Supported Holistic Watershed Development Program (NHWDP)
Duration	October 2009 - September 2014
Location	3 Watersheds, Karanja Lad block, Washim District, Maharashtra
Resource Support Agency	National Bank for Agriculture and Rural Development (NABARD)
Total beneficiaries	2556 Households
Total Coverage	7771 hectares

Imrproved agriculture lead by conservation and restoration of natural resources resulted in enhanced livelihoods of the farmers of Vidarbha region of Maharashtra since 2009. Being an open ended programme of soil and water conservation and with a total coverage of more than 7770 ha land area, it was an integrated environmental regeneration programme for rehabilitation of watersheds to regenerate natural resources for sustainable development of nearly 15000 individual beneficiaries from mixed social group. The project is designed for increasing in-situ soil and water conservation along with the overall development of families through various supporting activities like livestock development, horticulture development, women development and improvements in livelihood of landless. Human resource development also forms an integral part of overall program approach and strategy. The project activities were implemented on three watershed clusters – Poha-Dhamni, Manbha and Wapti Kupti.

Project Component
(Implemented in cluster approach)

- Water Resource development (Construction of water conservation and harvesting structures in the area)
- Land development (Various mechanical and biological measure including Bunding, Trenching and Planting, contour cultivation, vegetative bunding)
- Promotion of capacity based land use methods (Afforestation, agro-horticulture, dry land horticulture, silvi-pasture, fodder development)
- Social and Institutional development (Village meetings and Gramsabha; community mobilization; theme based training workshops; CBOs like women SHG, farmers' club and VWC formation and strengthening)
- Agriculture Development (Promotion of integrated crop and nutrient management practices)
- Livestock development
- Establishing micro and small enterprises through women SHGs and landless

Output during the reported period

Particulars	Location		
	Poha Dhamni	Manabha	Wapti- Kupti
Number of check dams completed	3	4	3
Number of LBS constructed	29	18	87
Land area brought under crop cultivation (ha)	2381.7	1549.5	2034.5
Land area brought under dryland	23.0	6.4	52.5
Horticulture (ha)	51.0	20.0	34.3
Land area brought under agro-horticulture (ha)	4	4	4

Demonstrating success year after year, during the reported period, altogether in three clusters this project completed 10 check dams, as a result of which, almost 6000 ha areas could be brought under crop cultivation. Nearly 190 ha of total land area were cultivated with dryland- and agro-horticultural crops, enabling additional income generation for the project beneficiaries. Community participation, capacity building and technical support were the three prime driving forces for the success of this project.

Challenges

- Technology acceptance by the farmers.
- Awareness creation among the community in highly populated villages.
- Mobilizing community for financial contribution to maintain their institutions.
- Capacity building of the members of the VWCs for effective project implementation.

Case Study: Dryland Horticulture builds adaptive capacities in Maharashtra: (A No Regret for the Drylands)

Abdul Rasid Abdul Bani is one of the many who inhabit the drylands of India. Exposed to low rainfall and long dry spells, water scarcity limits his livelihood opportunities. His low capacities to adapt make him even more vulnerable to climate change. Exposed to dryland horticultural, he took to the cultivation of pomegranate in one acre of his field with ease. Cultivated in water scare areas, it is suitable to prolonged hot and dry conditions. Additionally being winter hardy and resistant to drought; and with a high market value, it will bring him an average annual income of over a lakh. Trained on crop management practices, he initiated water efficient irrigation practices – drip irrigation – in his field. Routinely watering his plants, he is living example of improving the adaptive capacities of farmers in the drylands.

Integrated Watershed Management Programme (IWMP)

Integrated Watershed Management Programme (IWMP) is a joint programme of Central and State government. It is implemented on the basis of Common Guidelines-2008 (revised 2011) for watershed projects. IWMP is being implemented through Water Conservation Department in all thirty three rural districts of Maharashtra, with financial assistance from the Ministry of Rural Development, Govt. of India and Govt. of Maharashtra.

Integrated Watershed Management Programme (IWMP) – Direct Implementation

As Project Implementing Agency (PIA), AFPRO was allocated 2 rainfed watershed clusters by Vasundhara Watershed Development Agency (VWDA, Pune, Maharashtra): MR-10 and IWMP-19 / SA 38A / 2011-12. In the first watershed cluster (MR10), Kalamb and Washi block of Osmanabad district were selected, which comprise 7 micro watersheds in 6 villages. The total geographical coverage under this cluster is 5186.08 ha, out of which about 4500 had undergone treatment with various watershed measures. The Detailed Project Report (DPR)was prepared for the watershed project IWMP 11/MR-10 planning the following activities. The second watershed cluster (IWMP-19 / SA 38A / 2011-12) falls in the Tulajapur block of the same district, including 7 micro watersheds with 4 villages. The total geographical area under this watershed is 5219.10 ha out of which 4576.53 Ha area is planned for treatment with various measures of the project. The total geographical area includes Private land (4539.13 ha), government land including forest (127.13 ha).

Project Activities

- Conducted Socio economic survey in 4493 ha area
- Carried out Drainage line survey in 6 villages
- Prepared Detail Project Report of IWMP-11 (MR-10) watershed cluster
- Selected Entry Point Activities through Gramsabha
- Formed and Registered Watershed Committee in 6 villages
- Prepared Livelihood Action plan of 6 villages
- Completed IEC activities in the cluster villages

Capacity Building on Watershed Management under Integrated Watershed Management Programme (IWMP)

Name of Project	State Level Resours Organization under IWMP
Location	Pune, Aurangabad, Amravati, Nagpur, Western Ghats Region, Maharashtra
Resource Support Agency	State Institute of Rural Development
Total beneficiaries	91

Capacity building is a crucial component for achieving the desired results under any development activity. This is a continuous process enabling functionaries enhance their knowledge and skills and develop the correct orientation and perspectives, thereby becoming more effective in performing their roles and responsibilities. YASHADA is the State Institute for Rural Development, working as Apex agency to implement various capacity building programmes for stakeholders under IWMP. For conducting capacity building events on various themes, YASHADA appointed NGOs through screening process on the basis of relevant experiences and strengths. These NGOs are categorized into three levels (Viz. State Resource Organization, District Resource Organization and Project level Resource Organization) as per their deliverables at different levels. As one of State Resource Organization (SRO) under IWMP in Maharashtra, AFPRO conducted several rounds of capacity building activities. Amravati, Pune, Aurangabad, and Western Ghat were the four divisions allotted to AFPRO. During the year 2013-14, altogether 91 people were capacitated by AFPRO from 11 representative districts from the aforesaid divisions.

Details of work carried out under IWMP trainings for Yashada (SIRD) during the financial year 2013-2014

Thematic areas taken during the reported period

Livelihood Promotion	*Social Mobilization*
Division - Pune	Division - Aurangabad
District (5) Satara; Kolhapur; Pune; Solapur; Sangli	District (5) Satara; Kolhapur; Pune; Solapur; Sangli
Target group ★ Community Organizer ★ Livelihood Expert ★ Agriculture Expert	Target group ★ Community Organizer ★ Livelihood Expert
Total beneficiaries: 68	Total beneficiaries: 23

Monitoring, Evaluation, Learning & Documentation (MELD)

Name of Project	State Level Resours Organization under IWMP
Duration	July 2013 - June 2018
Location	Pune, Ahmednagar and Solapur Division, Maharashtra
Resource Support Agency	Govt. of Maharashtra
Total beneficiaries	406504.36 ha

Similar to Capacity Building, Monitoring, Evaluation, Learning and Documentation (MELD) is an important and crucial component of IWMP. An effective MELD system is imperative for tracking the near real time progress and performance of the project, streaming the processes and interventions, documenting experiences for shared learning, recommending possible mid-course corrections and assessing impacts of interventions. Vasundhara Watershed Development Agency has requested the Expression of Interest to work as Monitoring, Evaluation, Learning and Documentation (MELD) agency under IWMP. Action for Food Production had participated in the competitive bidding process. AFPRO has selected as one of the MELD agency through technical and financial bidding.

Project Activities

- **Participation in meetings / consultations** *(With JDA, SAOs, DPMs, TAOs)*
- **Submission of MoU and providing bank guarantee**
- **Appointment of core team and Field team** (Core team of eight members)

Preparatory phase evaluation

- Evaluation was conducted in 6 components for a total of 55 watershed clusters
- The components were: Entry Point Activity, PIA & WDT, Village Level Institution Building, Detail Project Report, Natural Resource Management and Capacity building
- The final report has been submitted to Additional CEO and JDA

Integrating watershed management with climate change adaptation approach A Pilot Project on "Climate Proofing in Watershed - Anjeni"

The manifestation of climate change in the form of extreme weather events has always been a challenge to the rural community of India. On the contrary, high climate variability and drought have always been endemic to the monsoon belt. To address the challenges posed by climate change along with the imperatives of poverty alleviation and economic growth, National Action Plan on Climate Change (NAPCC) came in force in India in 2008. The focus of NAPCC is to improve the understanding of climate science, adaptation, mitigation, energy efficiency and natural resource management & conservation. As a follow-up; the state of Rajasthan developed RAPCC (Rajasthan Action Plan on Climate Change). To link the watershed activities with Climate Change aspects, GiZ along with NABARD jointly decided to select two watershed from Rajasthan and two watersheds from Tamilnadu to convert the watersheds as "Climate Proofing in Watershed" and Anjeni Watershed have been selected for implementation as one of the watershed as Climate Proofing Watershed. To plan and design the watershed as climate proofing watershed, a series of workshops and discussion have been taken place amongst GiZ. NABARD, IIT-Delhi as Climate experts and with few other stakeholders and finally, with due sanction of FSR proposal by GiZ and NABARD, the FSR have been prepared for FIP for the remaining area. Process of net-planning was followed to identify felt needs and priorities and as a result; it initiated to develop a proposal for betterment of livelihood of the target community through Land and Water improvement and Management techniques in context of climate variability in the watershed village. Anjeni watershed has an undulating topography, with an average 10 – 30% slope in the upprer ridge which is kept barren, and 1 – 5% slope in the lower part. The agriculture in the area is basically rain fed, with a very limited irrigation facilities. This project was initiated with the vision that different adaptive measures to climate change alongwith watershed activities would help the farmers enhance the livelihoods.

The key activities under this project focused at promotion of socio-economic development of community through optimum utilization of natural resources, adopting alternative enterprises and creating income generating activity through effective conservation of soil nad water. Detailed analysis of climate scenario and future projections was done using different tools and climate lens and accordingly the activities were planned and appropriate adaptation measures were developed. One of the most important components of the activities is that the active community involvement and contribution throughout the project period.

Our initiatives for involvement of the local community are greatly reflected by activities including formation of women SHGs and farmers club. During the year 2013-2014, a few selected members from farmers club were grouped together to form FFSs (Farmers' Field Schools) in order to promote climate smart agriculture. In conjuction with agriculture, farmers were also motivated for adopting horticultural practices, especially promotion of vegetable garden. Vegetables, being short duration in nature, are most likely to escape the stress period and provides additional benefits to the farmers.

After agriculture, livestock, especially goat rearing, is the second major source of livelihoods in Udaipur district. Knowing the importance of livestocks in the livelihoods of the farmers, special attention was given towards the animal health and nutrition. An animal health camp, especially for Pre-monsoon animal vaccination camp was organized during the reported period. Leaves of Ziziphus rotundifolia, locally called as Ber tree, are used as the primary fodder source for goats. It is envisaged that tree leaf fodder from this locally available Ber, which can thrive extreme weather conditions, can be increased by three folds while budded with improved varieties like Z. mauritiana. VWC members and PFA field staff were trained to perform the budding operations and a total of 65 existing Ber trees were budded ensuring food security for livestock and thereby generating an alternate livelihood for the agricultural communities who are potentially vulnerable to the extreme events due to climate change. Furthermore, another activity undertaken during this year was the installation of a mini "Agro-meteorological observatory laboratory" in the watershed to help farmers adapt weather based farming practices.

Output

- A mini "Agro-meteorological observatory laboratory" was installed
- Four farmers club, with nearly 15 members in each club, were formed and registered with NABARD for FFS activities
- Total 12 women SHGs are formed with average 20 members out of 9 hamlets of Anjeni village
- Vegetable gardening was started by 26 farmers
- Sixty-five existing Ber (Ziziphus rotundifolia) trees were budded to increase fodder production
- Animal health care activities (treatment and vaccination)

Outcome

- Increased ground water level, up to 1 m in certain open wells, as a result of soil and water conservation (SWC) measures on the upper catchments
- Non arable land is effectively covered through Silvi-pasture development based on land capability classification
- Improved agricultural production through sustainable farming practices
- Stabilized crop yield due to adoption of suitable cropping pattern and crop management system
- Community capacity building for strengthening village level institutions for post project maintenance and further watershed development

Issues and Challenges
• Mobilization of tribal community
• Getting labour for accomplishing the desired tasks within the stipulated time period
• High wage rates and daily payment system at the local level
• Legal issues to work in the forest land use situated at upstream of the watershed

Case Study - 1

Tikma Ram, 67 years old farmer lives in Anjeni Village and his livelihood was basically dependant on conventional agriculture. He is one of the members of the FFS formed by AFPRO. During a NABARD supported filed visit to Dholpur (Maharashtra), he was amazed to see a wheat intensification practice called "Systematization of Wheat Intensification (SWI)". With that inspiration and alongwith the support from other farmers, Tikma Ram took the initiative for SWI in his field.

An on-site training on improved wheat cultivation practices was organized under this project for a few selected farmers. Those farmers were tought about a short duration heat and cold resistant wheat variety, named Raj 4083, developed by Rajasthan Seed Corporation, that needs only 4 irrigations instead of 5 -6 irrigation in local verity. Taking the full advantage of this learnings, Tikma Ram used this variety in his field (1 bigha) @ 20 kg/bigha (instead of 30-40 kg/bigha for local variety) and was able to get higher yield (7 quintols) than the traditional variety (6 quitols). In addition, he also started cultivating different vegetable crops, promoted through our project. He further developed onion nursery under the guidance of SMS and produced 70 kg onion from 0.5 bigha land. Moreover, Tikma Ram obtained a total earnings of about Rs. 1500 through vegetable cultivation and Rs. 2500 through wheat cultivation. He is very much convinced by the project activities and motivated other farmers also to join FFS activities and start earnings.

Case Study - 2: Ensure food security for livestock and livelihood: Ber-Budding for increased fodder production

After agriculture, livestock, especially goat rearing, is the second major source of livelihoods in Udaipur district. Leaves of Ziziphus rotundifolia, locally called as Ber tree, are used as the primary fodder source for goats. It is envisaged that tree leaf fodder from this locally available Ber, which can thrive extreme weather conditions, can be increased by three folds while budded with improved varieties like Z. mauritiana. In Anjeni watershed, Village Watershed Committee members and PFA field staff were trained to perform the budding operations. 65 existing Ber trees were budded ensuring food security for livestock; and securing an additional livelihood for the agricultural communities who are vulnerable to extreme events due to climate change.

Water and Climate Resilience Program (WACREP)

The concept of Water and Climate Resilience Program (WACREP), under India Water Partnership (IWP), was initiated at the Country Chairs' Meeting in November 2012 in New Delhi (India), aiming at supporting countries and regional organizations to integrate water security and climate resilience programming at trans-boundary, national and local levels through policy dialogues and participatory approaches.

Name of Project	Water and Climate Resilience Program (WACREP)
Duration	October 2013 - March 2015
Location	10 Villages, Bhinder Block, Udaipur District, Rajasthan
Resource Support Agency	India Water Partnership (IWP)

It also aims to boost the capacities of partnership, institutes and stakeholders to integrate water security and climate resilience in development planning and decision making process leading to local climate resilience investment program and plans. To assess the perceptions on climate change adaptation and vulnerability reduction of 10 villages in Udaipur district, AFPRO Regional Office at Udaipur avails the opportunity to engage with WACREP as a support organization (SO) for planning, execution and monitoring of ongoing project activities in a participatory approach with the local community.

Key goal

To Improve community resilience against climate change in semi -arid region of South Rajasthan, India

Specific Objectives

- To conduct a scientific study to evolve a suitable knowledge products to promote climate resiliency and to develop an adaptation framework in existing water and agriculture sector
- To promote science uptake for efficient practices and technologies as adaptation approach to evolve models suited in hilly regions
- To establish participatory learning and documentation system for replication to benefit wider community through policy and advocacy

Project Activities

Data collection for vulnerability assessment

- Literature review
- FGD and PRA
- Mapping for 10 villages

Meeting/awareness camps

- 53 village level meetings
- 8 Cluster level meetings
- 6 Mass awareness events through cultural program, World Water Day (WWD) celebration
- Awareness program on climate change with support of Rajasthan Collage of Agriculture (RCA), Udaipur
- Base line survey of 25% of total house hold in 10 villages

Other Activities

- Identification of 26.2 ha common pasture land in 3 villages
- Local exposure visit of the core group of one of the villages in Bindar Block
- Distribution of *kharif* & *rabi* inputs to selected farmers under Farmers Field School (FFS)

Key outputs

- Project inception meeting with local NGO partner and consultant
- Formation of village level core groups
- Formation of cluster level core groups of local community
- Formation of cluster level core groups for women
- Organized an orientation cum training of cluster core group members
- Preparation of draft vulnerability assessment report of 2 villages
- Completed participatory documentation of village resources (physical and natural) of climate change scenario of 7 villages

Extreme Risks, Vulnerabilities and Community - Based Adaptation in India (EVA): a pilot study

Name of Project	Extreme Risks, Vulnerabilities and Community - Based Adaptation in India (EVA): a pilot study.
Duration	July 2012 – June 2014
Location	9 villages in Jalna district of Maharashtra
Resource Support Agency	Royal Norwegian Embassy

Recent researches on Climate Change have projected an overall increase in temperature in India by 1 to 4°C towards 2050s; forecasting the risks of frequent occurrence of extreme events such as droughts, floods and cyclones. The changes in temperature and rainfall have direct impact on land, water, agriculture and forest. Therefore, adaptation measures are of utmost importance to deal with climate change variability, particularly in water scared areas of arid India. The EVA Project aimed at bringing forward climate change impact and vulnerability assessment towards land, agriculture and water resources; and thereby getting insights into adaptive capacity of rural communities of Jalna District in the dryland region of Marathwada (Maharashtra). Further, it also assessed the role played by different government and non-government agencies for the stress-affected areas of Jalna.

OBJECTIVES

- To assess and develop community-based adaptation strategies
- To build capacities among vulnerable farmers and local groups
- To manage extreme climate risks and adapt to climate change
- To create knowledge platform for implementation
- To draw policy and governance implications for policy makers and practitioners at local, district and state level

Among the six different work packages (WPs), WP 5 was assigned to AFPRO, focusing on community engagement, outreach and awareness through participatory research approaches - bringing community preferences to bear on the formulation of adaptation strategies at local and state level. AFPRO lead the software part of the project; developing capacity building approaches for stakeholder engagement, organizing workshops. The WP 5 aims at putting the findings of the project into practice through stakeholder engagement, capacity building and dissemination of results to policy makers, practitioners, civil society, farming communities and the scientific community.

Joint Field venture by all the collaborating agency's (AFPRO, TERI and CIENS-NIBR, NIVA, CICERO)

- Study conducted on risks and vulnerabilities to drought interviewing farmers and government officials
- Identified list of adaptation options

Block level and Community level workshops

- With stakeholders including farmers, block level and district level government officials
- Prioritized and ranked adaptation options from the list already identified

Activities during the reported period

Village survey for all the nine villages for understanding groundwater and analyzing it with secondary data from GSDA

- 54 wells were selected (6 wells from each village) and monitored for 12 months
- Wells were selected from the upper, middle and lower ridges of the villages
- Actual static water level and water use for agriculture and domestic use was monitored every month

Household (HH) survey in all the nine study villages to understand and analyzing the socio-economic condition of the village and their response to drought

- 50 HH from each village including the landless families
- 9 educated unemployed youths were appointed and trained as surveyors for conducting this survey

Institutional and governance mapping

Interviews were conducted with various Government officials at taluka, district and state levels;

- To explore the institutional arrangements, partnerships and networks that is existing within a village or among villages and outside institutions regarding drought risk management
- Role of Government and private/civil society institutions towards community-based adaptation to extreme drought and water stress in relation to agriculture and watershed development

Strengthening Livelihoods through Development of Water Resources

Name of Project	Jalgram Pariyojna
Duration	July 2012 – July 2016
Location	4 Villages, Korba District, Chhattisgarh
Resource Support Agency	Bharat Aluminum Company Ltd. (BALCO) & NABARD
Total beneficiaries	6180 Households

According to Economic and Human Development indicators, Chhattisgarh has 12.6 million poor. Supporting the state in their development efforts are non-state actors such as corporate having their operational areas in Chhattisgarh. Through a project titled 'Jalgram Pariyojna' economic development of four tribal dominated villages from Korba district has been initiated. Bharat Aluminum Company Ltd.(BALCO) and NABARD have supported the development of water resources and agriculture and allied activities in these villages for a second year running.

Over 7500 cum of Irrigation Potential through construction of Farm Ponds

Development of Water Resources

Blessed with abundant rainfall and undulating topography, water resources in these villages have been systematically developed through the creation of infrastructure; harvesting the potential of both rainwater (check dams, farm and community ponds) and groundwater (dug wells). This infrastructure has strengthened livelihoods of farmers through access to protective irrigation, increased moisture retention around surrounding fields and supplementary irrigation for a second crop. In addition, the infrastructure has enabled diversification of livelihoods through demonstrations on Integrated Farming Systems (Agriculture – Livestock - Fish).

Crop and Nutrient Management Demonstrated in 9.5 acres (*Kharif*) & 32.5 acres (*rabi*)

Crop and Nutrient Management

Supplementing these efforts, Crop and Nutrient Management practices have maximized benefits. Functioning on a cluster based approach; demonstrations of both System of Rice Intensification (SRI) and Cereal, Pulse and Vegetable cultivation have been introduced. While, SRI has improved the efficiency of input utilization (seeds, farm nutrients, water, farm mechanization), production and net incomes; rabi demonstrations have reduced the dependence on a mono crop and contributed to additional incomes. Social acceptability and sustainability have been encouraged through cultivation of locally preferred crops and establishment of linkages with the local Krishi Vigyan Kendra (KVK).

Human and Institutional Development (HID) have added an impetus to development efforts. Strengthened Village Development Councils (VDC) are assessing the development requirements in their villages and converging with local schemes for additional financial support (Gramin banks and NABARD). While successful convergence with the Department of Animal Husbandry has benefitted locals through improvement in general health of small ruminants and cattle (regular vaccination drives); convergence with the Department of Panchayati Raj (MGNREGS) has led to strengthening of additional infrastructure.

Jalgram Pariyojna represents a partnership approach, one where three diverse partners (A Corporate, a National level Funding Organization and a leading Civil Society Organization) share common vision and responsibilities towards rural development. It represents the effectiveness of practical technical solutions in improving the quality of life tribal families.

Case Study: Secured Livelihood of the Tribal Farmer Family by Effective land and Water Management

The 71 year-old Aman Singh, is a scheduled tribe farmer (Kanwar) in Dondro village of Korba district in Chhattisgarh. Being the head of the family, he had to bear the liabilities of all the 14 family members, especially after unfortunate death of one of his sons, who left behind his family. The uncertainty of income from farm activities made the financial condition of Aman Singh quite unstable. The only source of regular income was the 'Old Age Pension' from the Gram Panchayat, an amount of Rs. 300 per month. Due to high rainfall and undulating topography, Dondro village is prone to recurrent heavy run-off and soil degradation, resulting in poor crop productivity and crop quality. This ultimately lead to food and economic insecurity to the local people. Besides, lack of awareness about improved agronomic practices was another factor contributing economic and livelihood insecurity. Mr. Aman Singh has a total land of 3.5 acres, where he was cultivating only *kharif* paddy crop in conventional manner. The farmer was completely unaware about modern agricultural practices like SRI. Unavailability of water during rabi season pulled the farmer off from going for the cultivation of *rabi* crops. Thus, there was a serious need for adoption of effective land and water management and introduction of new improved agricultural techniques. To address this, AFPRO took initiative on constructing check dam under the project titled "Jalgram Pariyojana". Reduction in soil erosion and increased water conservation due to AFPRO's interventions lead to enhanced agricultural production for the farmer.

The construction of check dam brought tremendous changes to Aman Singh's life. One acre of his total land falls near the new cascaded check dam constructed by AFPRO. Before construction of check dam, the yield of paddy was 2000 kg/acre, whereas, due to ensured and protective irrigation from cascaded check dam, the yield has increased to 2800 kg/acre. On a trial basis, Aman Singh tested the SRI in a small piece of land near check dam and got dramatic result, where yield was doubled than the normal. In one acre of land, he also introduced *rabi* crops like wheat, gram and mustard to his land for the first time, and earned Rs. 8000- 9000 as an additional income. The cascaded check dam is also facilitating fishing opportunities among the farmers for self-consumption, providing them nutritional benefit. The betterment of financial conditions helped Aman Singh's son, Itwar Singh open a vehicle repair shop from where he is presently earning about Rs. 20,000 per month. Mr. Itwar Singh is having adequate infrastructural facilities at their home due to enhanced income from the shop and protected and ensured crops for secured livelihood for round the year.

Improvising Existing Water Resources to Strengthen Livelihoods

Name of Project	Water Project
Duration	October 2012 – June 2014
Location	10 Villages, Koraput District, Odisha
Resource Support Agency	BILT Unit Sewa – Jeypore
Total beneficiaries	965 Households

Incorporating fundamental principles of Environmental Management, several industrial units have taken initiatives to treat their waste water. Operating Effluent Treatment Plants (ETP), considerable precaution also needs to be taken while discharging the treated waste water. A potential environmental hazard, use of this recycled water for agricultural purposes, needs to be approached with caution. Drawing from our experiences of working on the 'Water Project' in its 1st year, marked shifts in implementation strategies have been recorded in the year which followed. Representing this shift has been concerted efforts to reduce the dependence of tribal's on utilization of treated waste water from adjoining channels. Driving this initiative has been BILT through its unit at Jeypore in Koraput district of Odisha.

Development of Irrigation Infrastructure

Environmental Management has been encouraged through Operation and Maintenance of existing waste water channels. Engaging local communities, repair of the channel has resulted in both reductions in conveyance losses and in potential environmental damage. Elimination of practices of using this water for irrigation, by local communities requires a long term engagement with community and introduction of alternate sources of irrigation. Simultaneously, access to safe drinking water has been encouraged through operation and maintenance of hand pumps. Also, safe drinking water has been encouraged through the creation of sanitary environments around local drinking water sources.

Operation and Maintenance (1 km of Waste Water Distribution Channel) & Over 7500 cum of Irrigation Potential through construction of Farm Ponds

Creation of irrigation potential has been adopted as the second approach to environmental management. Progressively expanding the total storage capacities created, farm ponds have been promoted as economically viable technical solutions. These surface water bodies have trapped the potential held by rainfall in such high rainfall areas; and have reduced dependence on the use of ETP water for irrigation.

Crop and Nutrient Management

Strengthening livelihoods of communities, crop management practices have been introduced to enhance the knowledge of local communities through scientific processes of cultivation. Exposure visits and field demonstrations have been adopted to build functional capacities of farmers and improve their production.

Crop and Nutrient Management Demonstrated in 41.65 acres

Institutional strengthening has underlain operation and maintenance of wastewater channels, surface water bodies and crop management. Water User Groups forming the preferred local institution have been capacitated irrigation efficiency and economical use of ETP water.

The programme represents a combination of environmental management and livelihood generation. It represents the effectiveness of collaborations between Corporate and Civil Society Organizations in bringing development to tribal belts in Odisha.

Creating an Enabling Environment for Drinking Water Security

Name of Project	"Provision of safe & adequate Drinking water supply and promotion of Rural Livelihood through Farm sectors and allied Interventions (Jaljivika Pariyojana)"
Duration	August 2013 – March 2014
Location	4 Villages in Masturi Block, Bilaspur District, Chhattisgarh
Resource Support Agency	Lafarge India Pvt. Limited
Total beneficiaries	2735 Households

Access to drinking water is a fundamental human right. There are national guidelines which stipulate standards, both in terms of minimum quality and quantity of water suitable for drinking and domestic consumption. The Government of Chhattisgarh in compliance with such guidelines has made considerable efforts in the recent past to increase household coverage with access to drinking water. However, poor operation and maintenance of drinking water facilities has resulted in them either functioning below optimum capacities or their lying defunct. Also, the absence of source sustainability measures results in seasonal variations in water available for consumption, violating guidelines of complete security.

Four villages in Masturi block, Bilaspur district, Chhattisgarh depend on groundwater to meet their drinking water requirements with hand pumps providing the necessary access. However, these hand pumps are plagued by poor operation and maintenance with a large percentage of them requiring repair. Lafarge India Pvt Limited has come to the rescue of these predominantly tribal families through its programme 'Jaljivika Pariyojna'. Closely collaborating with Lafarge, we are working with tribal families in these villages to ensure that they are drinking water secure.

The route to Drinking Water Security is being reached through an approach of system sustainability - Operation and Maintenance of all drinking water sources in these villages (hand pumps). Based on detailed assessments, necessary repairs have been carried out, improving the functionality of repairable hand pumps. Storage mediums through cisterns are also extending support to the achievement of drinking water security in these villages.

Accessibility to safe water has been encouraged through repair/ construction of platforms. These platforms have provided additional protection to drinking water sources from unsanitary & unhygienic conditions surrounding them. Conjunctive use of water has been encouraged through renovation of existing community ponds, contributing to a reduction in dependence on groundwater for domestic purposes.

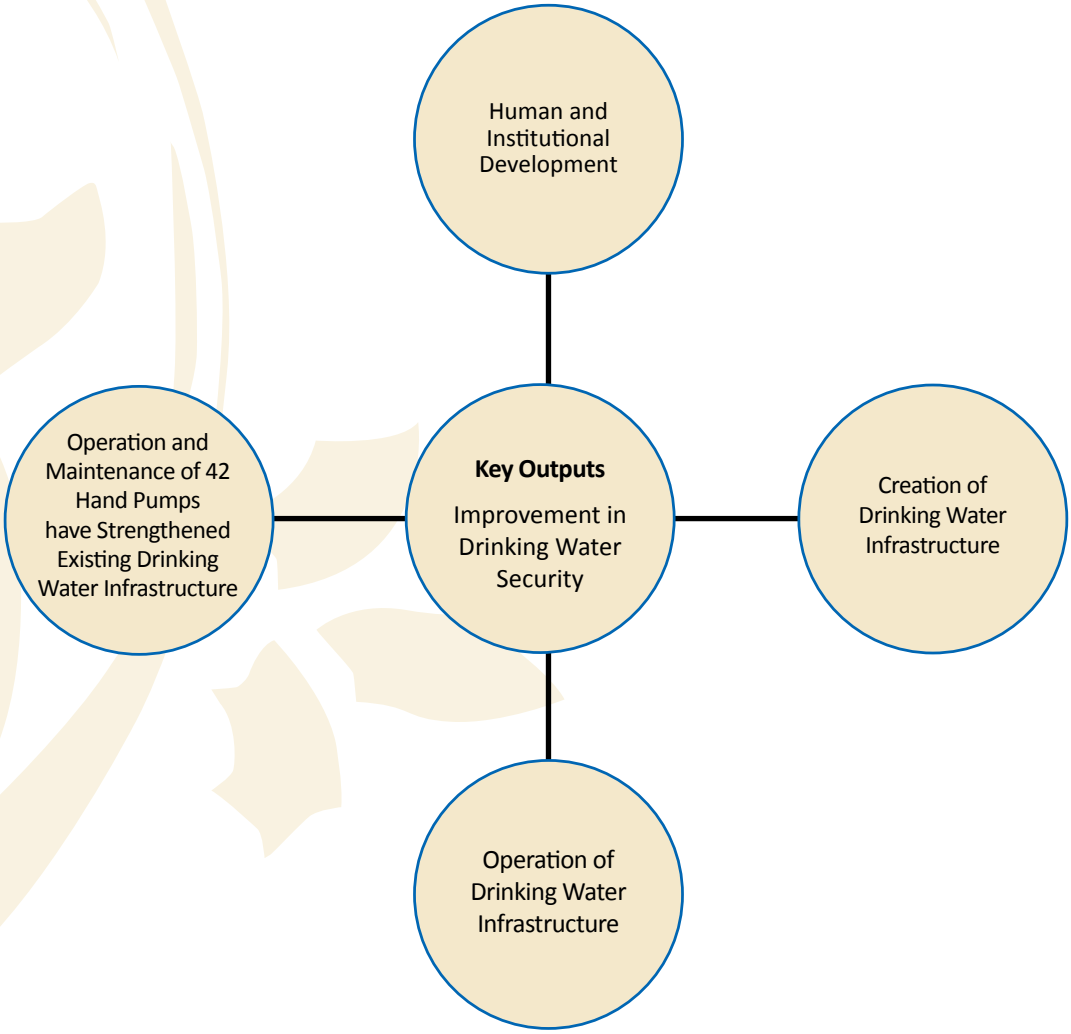
A special focus of the programme has been on promoting sustainability of drinking water sources. This has been addressed through construction of soak pits. Soak Pits are cost effective and technologically simple methods of promoting recharge. An additional benefit is the channelization of wastewater and reduction in stagnation. Recharge facilitated through these pits will help in reducing the seasonal variations in water security.

Human and Institutional development has been encouraged through strengthening capacities of our hand pump technicians. Technically qualified to identify necessary operation and maintenance requirements, they are equipped with necessary functional capacities to repair above and below surface defects. These technicians are valuable assets to local communities bridging the gap of technical service providers at the grassroots level.

Jaljivika is an effort to bridge the gap at the grassroots level for technical service providers to maintain existing sources of drinking water. It also represents the role of technology in promoting a more sustainable water use regime, thus creating an environment which enables the achievement of the national goal of drinking water security.

Activities during the reported year

- Creation of Drinking Water Infrastructure
- Operation of Drinking Water Infrastructure
- Source Sustainability
- Human and Institutional Development



Improving Quality of Life through Support to Water, Sanitation and Livelihoods

Access to 'Safe' Drinking Water and sanitation also play on important role in improving quality of lives. Even though National Rural Drinking Water Security Programme (NRDWSPP) emphasizes on the need to ensure every village is drinking water secure, availability of adequate and safe drinking water at the household level, community based management of these systems, and sustainability of sources that support them continue to be a challenge. The collaboration with Monsanto Fund represents an effort to improve quality of life through Integrated Development of Water Resources in 25 villages of Maharashtra.

Name of Project	Improving quality of lives of people with distress through adoption of integrated approach for Water, Sanitation and Women Empowerment in 25 villages of five Districts in Maharashtra
Duration	August 2013 – March 2014
Location	25 villages, 5 blocks, Maharashtra
Resource Support Agency	Monsanto, USA
Total beneficiaries	200 school children and 315 families

- **Access to 'safe' drinking water** is ensured through introduction of Water treatment plants. Reverse Osmosis (RO) water treatment plants, demonstrated in three pilot villages (Wagrul, Lakhalgaon and Mulaniwadgaon), have reduced concentration of Total Dissolved Solids (TDS) in water, making it 'safe' for human consumption. In order to encourage usage of treated water and mobilize the community to Operate and Maintain (O&M) the plant, awareness has been built, participation of community in construction (foundation, purchase of distribution cans etc) received, institutional set up (Gram Panchayat) involved in community mobilization, and user fees collected to meet out O&M expenses. However, consumption patterns and financial resource required to manage these plants need to be improved to ensure optimum water use and sustainability of the infrastructure.
- **Access to adequate drinking water** at the household level is addressed through extension of an existing piped water supply network; ensuring three pilot villages achieve complete household level drinking water supply. In addition, the gap in household level access to sanitation is also bridged through construction of toilets. However, ample scope exists to improve service delivery of drinking water including sustainability of sources. Convergence approaches (NBA and MNGREGA) were effective in increasing coverage; and community contribution in building an ownership.

- **An important issue of drinking water security** is sustainability of the source. Demonstrating its relevance, soil and water conservation measures in the form of a series of graded bunds and deepening and bunding of an existing nala, is recharging existing drinking water sources. Convergence with corporate (Bajaj Foundation) and government programmes (MGNREGA) is relied upon to demonstrate source sustainability measures, with and active participation, of the community witnessed in soil and water conservation work.
- **Limited financial resources** of small and marginal farmers to contribute to Operation and Maintenance (O&M) of drinking water and sanitation infrastructure are bridged through strengthening of livelihoods. Micro enterprise development (Goat rearing, mini dal mill, Grocery shop) through Self Help Groups (SHGs) is improving livelihoods, especially of women, enabling communities to contribute to management of their drinking water infrastructure.
- **Human and Institutional Development** initiatives targeted local communities including women, Village and Water Sanitation Committees (VWSC) and the Gram Panchayat. Thematic areas of capacity building included O&M of piped water supply monitoring of water quality, Operation of Reverse Osmosis plants and functioning of Self Help Groups.

Activities during the reported year

- Creation of Drinking Water Infrastructure.
- Operation and Maintenance of Drinking Water Infrastructure.
- Sustainable Sanitation and Hygiene.
- Human and Institutional Development.
- Women Empowerment through income generation.

Key Outputs during the reported year

- Introduction of Source Sustainabilty Measures in 5 Villages.
- Improved access to Drinking Water Infrastructure through Installation of 3 RO Plants.
- Improved access to Drinking Water Infrastructure through extension of existing piped water supply in 3 Villages.
- Women Empowerment through Income Generation.
- Operation and Maintenance of Drinking Water Infrastructure.
- Sustainable Sanitation and Hygiene through construction of 292 Toilets.
- Human and Institutional Development.

Integrated Group Pasture Management for Improved Livestock Adaptation

Name of Project	Integrated Group Pasture Management for Improved Livestock Adaptation
Duration	September 2012 - February 2014
Location	Udaipur District, Rajasthan
Resource Support Agency	GiZ - Germany
Total beneficiaries	100 Households

Climate Change Adaptation in Rural Areas of India (CCA-RAI) is an Indo-German development project aiming at enhancing adaptive capacities of vulnerable rural communities. CCA - RAI is jointly implemented by the Indian Ministry of Environment and Forest (MoEF) and the German development organization Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, focusing on different fields of work, pursuing a cross-sectoral, integrated approach in four states (Madhya Pradesh, Rajsthan, Tamilnadu and West Bengal) representing different agro-climatic zones of India.

Since livestock is an integral component of the farming system of Rajasthan, availability of fodder by appropriate pastureland management, especially during the stressed period, is the most crucial factor for livestock production and development. Frequent drought resulting from unpredictable monsoon pattern and land degradation because of sloping uplands with undulating topography of Girwa and Vallabh Nagar blocks of Udaipur district resulted in significant reduction of fodder production in these areas although livestock contributes 35% of livelihood. AFPRO hypothesized that integrated management practices of pastures can reduce such land degradation and increase fodder availability during both low and high rainfall years, reducing the vulnerability of livestock associated livelihoods of the poor communities in that region. As a project implementing agency, AFPRO selected two pastures in one village in Girwa block and three pastures in two villages in Vallabh Nagar block (the villages are: Alukhera, Ramela and Sulawas)

Goal

To evolve adaptations in livestock rearing and improve community resilience to changing climate for rural poor living in the semi-arid region of Rajasthan state.

Activities and outputs

Formation of Livelihood Adaptation Groups (LAGs)

- 100 families in all the 3 villages were grouped into 5 LAGs, who actively participated in the process of developing understanding on climate variability in the area and implement adaptation process.
- Selection and Finalization of 2 Adaptation Agents for enhance capacity of LAGs.

Situation analysis of local people through social vulnerability assessment

Conducted Participatory Technology Development Assessment (PTDA) exercise with the LAG and also conducted technical survey in all the four pasture lands for designing and estimating of different activities

Community involvement

Awareness/Capacity building on climate change and pasture production

- 100 families were trained on various aspects of specific fodder and feed management with reference to climate variability
- Awareness creation on climate change through monthly meetings with individual LAGs.

Promotion of agro forestry for improved fodder cultivation in arable lands (plantation of pasture crops)

Soil and Water conservation measures (Construction of gully plugs, CCTs etc.)

Conducted systematization exercise for pasture land and adaptation

Duration of the exercise was for 10 days including field exercise for 4 days and analysis, data compilation and report preparation for 6 days followed by preparation of final exercise report for sharing with different stake holders under facilitation of GIZ consultants and staff.

Key outcomes

- 81 farmers in 3 villages were organized in the form of 5 LAG
- Natural regeneration of root stock was visible
- Enhanced fodder productivity
- Reduced fodder wastage due to improved feeding practices
- Increased assets- both large and small ruminants
- Agro-forestry adapted by the farmers lead to increased availability of tree based fodder

Issues and challenges

- Community mobilization and involvement of community is very difficult
- To make the villagers adapt with climate change adaptation practice will take time
- Management of pastureland requires intensive motivation among the villagers and therefore required much more time for social mobilization.

Ensuring village level drinking water security: About 1200 households call Kallinayakanahalli their home. Located in close proximity to Monsanto R&D division, this sole bore well in the village was falling considerably short of meeting the drinking water requirements of its residents. Facing a parched future, there was an urgent need to develop an additional source of water in the village.

Approached to facilitate the development of drinking water resources in the village, our technical support was extended through a technical feasibility, and implementation of recommendations. Sound hydro-geological surveys facilitated the identification of a bore well. Combining with an existing drinking water source, the village is water secure, generating the required 86, 400 litres per day.

Bridging the drinking water and sanitation divide: Blessed with abundant rainfall, several states in North East India face acute shortage of drinking water due to seasonal variations in discharge from their primary source – springs. Also, poor operation and maintenance of diversion based irrigation systems designed decades ago either have high conveyance losses or are lying defunct. Following a close next in terms of local needs of these communities is access to hygienic sanitation models.

Supporting Navajbai Ratan Tata Trust (NRTT) in its North East Initiative (NEI), we extended our technical services through preparation of Detailed Technical Reports – Sanitation and Gravity based Water supply and Roof Rain Water Harvesting. Key outcomes of technical field surveys have been the identification of low cost sustainable designs, preferences of which were given to the use of locally available materials.

Implementation of technical recommendations will bring 8 remote villages in Tuengsang district of Nagaland closer to the national goals of village level drinking water security and open free defecation.

Concurrent Evaluation of Nirmal Gram Puruskar: Nirmal Gram Puruskar's have for long been associated with recognition of substantial strides made in sanitation and hygiene practices. They have served as drivers, motivating local communities including schools, etc to construct and use sanitation facilities; and adopt both individual and community level hygienic practices.

Supporting the Ministry of Drinking Water and Sanitation through UNICEF in its endeavor to assess achievement of NGP worthy targets, AFPRO extended it technical support to a concurrent evaluation of NGP surveys conducted by state appointed surveyors. Technical support was extended to assess the accuracy with which survey data was collected; and compliances with procedural requirements for conducting the survey.

Such third party evaluations reflect strengthening of monitoring protocols in operation amongst state and district level machinery, as well as greater accountability between service providers and service receivers. They also represent the need to ensure greater compliances in adoption of procedural requirements of the survey; and it adoption of scientific techniques of data collection and compilation.

Supporting Water Aid in preparation of Water Security Plans: Drinking Water Security has been widely accepted as an approach to the sustainable management of water resources. Integrated approaches, address requirements of both domestic and agricultural consumption; bringing sanitation and hygiene practices in its purview.

Supporting Water Aid India in its endeavor of propagating drinking water security at the village level, we extended technical support to one of its local partners. Detailed technical surveys were conducted to assess the water availability vis-à-vis water demand at the GP level.Conscious efforts were made to identify measures to augment water availability by tapping potentials of both surface and ground water. Also, necessary guidance was extended to improve sanitary conditions around all drinking water sources, ensuring greater access to 'safe' drinking water.

As an organization offering sound technical support in sectors of water and sanitation; our services enable non government organizations actively engaged in implementing visions of Rural Drinking Water Security at the grassroots level into realities.

Backward Regions Grant Fund (BRGF): The Backward Region Grant Fund (BRGF) is an effort to bridge the development divide through decentralization of planning processes. Participatory in nature, local communities and the institutional mechanism at the bottom rung of the Panchayati Raj system are assigned central roles in the Programme.

As Technical Support Institution to the Ministry of Panchayati Raj and the Planning Commission, we supported and guided District Planning Committees (DPCs)/Zilla Parishads in preparation of District Plans (Perspective and Annual Plans) for Yavatmal district.

The vision of The Backward Region Grants Fund (BRGF) is noteworthy; however, there is a need to change the perspective of line departments on the program. Active convergence is required if planning is to translate into action.

Partnership with World Vision India for Area Development Programme (ADP)

ARO - Bangalore	**Location:** 27 villages, Bijapur Taluk, Bijapur District, Karnataka **Technical services rendered:** • Bunding and land leveling in 27 villages with 652 beneficiaries selected by the respective VDC members and then approved by WVI ADP Bijapur • The bunding activity was done in 2106 acres and land leveling activities were carried out in 1144 acres • The interventions are made to enhance the crop production by upgrading the land. It is presumed that an addition of 338.31 acres of land will be brought under cultivation
ARO - Udaipur	**Location:** 10 villages of Tonk district in Rajasthan **Technical services rendered:** • Construction of New Anicut • Renovation of existing Anicut with strengthening of embankment and deepening of pond • Earthen Fielding Bund • Renovation of Embankment at Left Side at existing masonry structure
ARO - Ranchi	**Location:** 24 villages of Chakai Block of Jamui district, Bihar; Poraiyahat block of ADP-Godda; Kathikund Block of Dumka district, Jharkhand **Technical services rendered:** • Hydrogeological investigation was conducted at total 74 sites in different project villages in the area of ADPs • Total 64 Hand Pumps were installed by ADP at recommended sites. More than 1850 families and 1500 students are getting safe drinking water from the installed hand pumps • Awareness generated in the community for water saving, sanitation and repair & maintenance of the hand pumps
ARO - Ranchi	**Location:** Giriak Block of Nalanda district **Technical services rendered:** • Hydrogeological Investigation for selection of feasible sites for drilling • The present project is basically to provide drinking water facilities through installation of Hand Pumps in the area • Recommended the feasible sites for drilling and installation of Tube wells • Total 83 nos. of Hand pumps installed in the project area and more than 2700 families utilizing the drinking water • The community will take benefit from installed hand pumps for drinking / domestic uses
ARO - Ranchi	**Location:** Borio Block of Sahebganj district, Jharkhand **Technical services rendered:** • Hydrogeological investigation at total 29 sites in different project villages in the area of ADPs • More than 900 families and 300 students will be getting safe drinking water from the installed hand pumps • Awareness generated in the community for water saving, sanitation and repair & maintenance of the hand pumps and ownership was developed for these Hand Pumps
ARO - Gwalior	**Location:** 12 villages of Nindura block, District – Barabanki **Technical services rendered :** • Conducted feasibility study for recharge pit and soak pit at existing hand pumps and ponds • 22 ponds and 35 hand pumps
ARO - Gwalior	**Location:** 27 villages of Baran, Lalitpur and Alwar **Technical Services rendered :** • Pond renovation, canal renovation, Roof water harvesting in 14 villages • Infrastructure development, Land reclamation and field bunding in 11 villages • Construction of Check dam in 2 villages

FINANCIAL STATEMENT

Income And Expenditure Account For The Year Ended 31st March 2014

Particulars	31st March 2014 (INR)
INCOME	
Programme Contributions	3,245,319.00
Miscellaneous Receipts	518,698.58
Sale / Disposal of Assets / Old Items	337,700.00
Interest - Savings & Deposits	1,429,114.63
Total	5,530,832.21
EXPENDITURE	
Core Integrated Development Programme	
Human and Institutional Development	215,354.00
Socio - Technical Personnel Cost	25,267,666.48
Outreach Support	1,381,380.87
Information Services	342,800.34
Administrative Cost	
Admn. - Personnel Cost (F & A)	5,646,294.87
Outreach Support	122,083.00
Office Exepenses	3,230,313.80
Hired Services	1,652,147.35
Capital Expenses	89,750.00
ED's Discretionary Fund	14,000.00
Total	37,961,790.71
Excess of Expenditure over Income Transferred to :	
Programme Fund	(21,916,717.64)
General Reserve	(10,514,240.86)
Total	5,530,832.21

As per Books of Account, explanations & information provided to us

Cyriac Mathew
Manager - Adm & Finance

D. K. Manavalan IAS (Retd.)
Executive Director

(Martin P. Pinto F.C.A.)
(Membership No. 085006)
for Pinto M. P. & Associates
Chartered Accountants
Firm Regn.No.006002N

Place: New Delhi
Date: 09.09.2014

Balance Sheet As At 31st March 2014

Particulars	31st March 2014 (INR)
SOURCES OF FUNDS	
Funds and Reserve	59,720,072.05
Programme Balances	8,112,552.04
Total	67,832,624.09
APPLICATION OF FUNDS	
A) Fixed Assets	
i) Gross Block	64,143,360.26
ii) Less: Depreciation	52,181,135.62
iii) Net Block	11,962,224.63
iv) Capital Work in Progress	-
	11,962,224.63
B) Investments	30,600,198.62
C) Current Assets	
i) Interest Accrued on Deposits	1,447,161.73
ii) Recoverables & Prepaid Expenses	4,931,751.23
iii) Cash & Bank Balances	24,135,971.50
	30,514,884.46
D) Less: Current Liabilities & Provisions	5,244,683.62
Net Current Assets	25,270,200.84
Total	67,832,624.09

As per Books of Account, explanations & information provided to us

Cyriac Mathew
Manager - Adm & Finance

D. K. Manavalan IAS (Retd.)
Executive Director

(Martin P. Pinto F.C.A.)
(Membership No. 085006)
for Pinto M. P. & Associates
Chartered Accountants
Firm Regn.No.006002N

Place: New Delhi
Date: 09.09.2014

Significant Accounting Policies & Notes To Accounts

1. Significant Accounting Policies:

(i) Basis of Accounting:

The financial statements have been drawn up under historical cost conventions, on accrual basis of accounting.

(ii) Revenue Recognition

a) Contribution received towards the core programme are recognized as income to the extent of the expenditure incurred on this programme. Contributions, grants, donations and receipts received without any specific direction are recognized as income.

b) Funds received for a particular programme/project (other than the core programme) are recognized as Programme Contributions in the Balance Sheet and expenditure incurred against such funds is reflected against the particular fund. The unutilized portion of such contributions, grants, donations are retained as part of Programme Balances for utilization as per the donors' directions. Where AFPRO meets the stipulations provided for accessing particular funds for its own use, such income is transferred to a Programme Fund forming part of Funds and Reserve in the Balance Sheet.

c) Interest earned on savings bank accounts is reflected in the income and expenditure account after allocation of such interest derived on unutilised donor funds, which is allocated to the relevant programme balance accounts and in the case of the core contributions it is recognized as income and forms part of such core contributions.

d) Interest earned on investments allocated for a particular fund is credited directly to that particular fund. Interest earned on other investments i.e. fixed deposits is credited directly to the general reserve.

e) Foreign Contributions are accounted for on the basis of the credit advice received from the bank.

(iii) Fixed Assets:

Fixed Assets are stated in the Balance Sheet net of depreciation, with a corresponding credit to the Capital Fund Account. Assets received as donation in kind, are incorporated at a value stated by the donor and adjusted for depreciation.

The cost of assets is charged in full to the relevant programme in the year of acquisition. Cost of acquisition is inclusive of freight, duties, levies and any directly attributable cost of bringing the assets to their working condition for intended use.

(iv) Depreciation:

Depreciation on fixed assets are charged on the Written Down Value (WDV) method at the rates prescribed under the Income Tax Rules with a credit of the assets account and correspondingly reflected in the Capital Fund Account.

(v) Investments:

Investments include long term fixed deposits having a maturity period exceeding one year at the time of placing the deposit and reflects principal amount placed as deposit. Mutual funds reflect the amount invested.

(vi) Retirement Benefits:

Contribution to Provident Fund is charged to the relevant programme as attributable to the concerned staff.

Encashment of leave at the time of retirement is permissible and in special cases at the discretion of the management during the tenure of employment. A Group Leave Encashment Scheme insurance policy to cover the liability has been taken with Life Insurance Corporation of India (LIC). The amount paid to LIC is charged to the revenue.

Gratuity payments are covered under the Group Gratuity Scheme of Life Insurance Corporation of India (LIC). The premium paid during the year is charged to revenue.

2. Notes to Accounts

i) Action for Food Production has been notified by the Government of India as an organization of national importance under Section 10(10C)(viic) of the Income Tax Act 1961 (43 of 1961).

ii) No provision for taxation has been made as the Society is registered under Section 12A of the Income Tax Act 1961 and claims exemption under Section 11 of the Income Tax Act 1961.

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