



CONTENTS

EXECUTIVE DIRECTOR'S NOTE	02
1. FOOD SECURITY AND LIVELIHOODS	
Better Management Practices in Cotton	04
Live Better With the Floods	05
Partnership for Innovation and Knowledge in Agriculture	07
Ensuring Food Security Through Community Participation	08
Sustainable Livelihoods for Tribal Communities	09
Backward Regions Grant Fund	11
Diversion Based Irrigation Systems	12
Livelihood Development with Ultra Tech Limited	14
2. WATERSHED MANAGEMENT	
NABARD SUPPORTED WATERSHED PROGRAMMES	15
NABARD Supported Holistic Watershed Development Programme (NHWDP)	15
Indo-German Watershed Development Programme (Phase III)	17
Supporting Mega Watershed Development With NABARD	17
Sunehara Kal Integrated Watershed Development Project	18
PARTNERSHIP WITH WORLD VISION INDIA	19
3. WATER AND SANITATION	
Verification of PRI applications for Nirmal Gram Puraskar	22
Rural Water Supply & Sanitation (Aaple Pani) Project	23
Rain Water Harvesting with Indian Oil Corporation Limited	23
WATER QUALITY SURVEILLANCE	24
Water Quality Surveillance & Mitigation	24
Water Safety Plan	25
4. HUMAN AND INSTITUTIONAL DEVELOPMENT	
United Nations Climate Change Conference in Copenhagen	27
CII Seminar on E-enabled Development : E-Agriculture in India's Current Progress Canvas	28
TRAININGS CONDUCTED BY AFPRO	30
Training on "Land-use Planning & On-site Soil & Water Conservation"	30
BUILDING LINKAGES	32
Freshwater Action Network – South Asia	32
Road Side Tree Plantation Project	32
Study on Restoration of Dying Lakes - A Case Study on Balsamand Lake in Jodhpur	33
5. FINANCIAL STATEMENTS	
Balance Sheet as at 31st March 2010	34
Income & Expenditure Account for the year ended 31st March 2010	35
Expenditure on AFPRO Projects	36
Significant Accounting Policies & Notes to Accounts	37
LIST OF GOVERNING BODY MEMBERS	38
ABBREVIATIONS USED	39

Front Cover

An example of convergence with government programmes. Bhasku Mahto from village Kowad in District Hazaribagh, Jharkhand uses a weeder on his fields resplendent with a paddy crop grown using SRI techniques. While the inputs for SRI activities have been provided under a NABARD programme, water from a neighboring pond revitalized by AFPRO under the Diversion Based Irrigation Systems Project served to irrigate the crop. The accompanying cut-out shows a family with a sapling, distributed under the project Ensuring Food Security Through Community Participation.

EXECUTIVE DIRECTOR'S NOTE

Farmer distress has increased in India over the past one-and-half decades. A great number of farmers are stated to have committed suicide, most of these farmers belonging to poor and marginal communities. Such figures reveal the spread of distress amongst the farming community. These drastic steps are being taken because of high levels of indebtedness and inability to repay due to crop failure. Today marginal smallholder farmers are feeling compelled to invest heavily in modern high-cost input agriculture and in identifying borewells for irrigation, which is becoming increasingly difficult and costly due to a general fall in groundwater levels.

Lack of knowledge of sustainable agricultural options and inefficient management of natural resources such as water and land, leads to inefficient agricultural practices, less than optimal production and degradation of the natural resource base. At the same time, increased competitiveness in agriculture due to large scale growth in commercial and export oriented agriculture has created conditions where such farmers feel the need to invest beyond their capacity.

Government of India is keen to promote financial and economic inclusiveness. AFPRO's experience indicates that for achieving this objective, the Government and Civil Society need to support poor smallholder farmers by introducing processes for reducing their vulnerability in securing livelihoods. This vulnerability has resulted both out of inefficient practices of such smallholders as well as increased costs involved in cultivating a crop as mentioned above.

Financial and economic measures need to be introduced for protection of marginal smallholder farmers and landless agricultural labour from these effects of modern day agriculture, ensuring that they get sufficient space to adjust and make knowledgeable choices. India's large population, the majority dependent on agriculture for livelihoods, and the great proportion of poor, make a demand for such action.

This apart, equal emphasis has to be laid on capacity building of such farmers on improved sustainable agricultural practices and

associated aspects including financial planning, and programmes for natural resource management. This will increase their knowledge and resource base leading to improved agricultural practices, strengthening their competitive ability and markets. Further, when agricultural components are well-managed, confidence of banks will increase so as to divert greater shares of agricultural sector lending to smallholder farmers at reasonable interest rates, so that after a successful agricultural season farmers will be able to return the capital borrowed to banks.

AFPRO's programme experiences have repeatedly pointed to the need for strengthening poor and marginal rural communities with appropriate knowledge and skills for water and land management and sustainable agricultural practices. Over the years, AFPRO has evolved into a theme-based socio-technical support agency, identifying appropriate strategies and interventions based on regional needs and opportunities.

Better Management Practices in Cotton, a project where AFPRO worked in Vidarbha, Maharashtra with cotton farmers has generated a lot of success. Cotton produced by more than 12000 farmers under the project is being sold to ginning mills and earning them a good return. The project, Partnership for Innovation and Knowledge in Agriculture being implemented in 5 districts of Uttar Pradesh has provided AFPRO the opportunity to work in a consortium approach with other expert agencies on developing a comprehensive strategy from capacity building to market linkages for strengthening the smallholder farmer.

Under the project, Live Better with the Floods promoted under the National Agriculture Innovation Project, AFPRO is implementing Integrated Farming System approaches with marginal communities living in seasonally flooded regions. They are being capacitated to adjust cropping patterns according to the flooding season. Homestead Cultivation as promoted in the project, Ensuring Food Security Through Community Participation, has enabled us to provide opportunities for women to grow vegetables at home. This is providing additional nutrition for their families, as well as additional incomes from sale of

surplus production. Diversion Based Irrigation Systems project addresses irrigation requirements of tribal communities that live on hilly terrains in 6 districts. These communities which belong to the states of Meghalaya, Tripura, Assam, Jharkhand and Orissa, are being mobilized for self-reliance through improved land and water resource management and agricultural practices.

Though the programmatic aspects of Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Regions of India were almost concluded last year, AFPRO continued to advocate its learnings with the Government and on civil society forums. Though the National Action Plan on Climate Change has laid out a framework for action, line departments of the government have not been able to register progress on the issue. Concrete steps need to be taken quickly so that appropriate measures to deal with climate change can be identified and integrated into national and state level response mechanisms.

Watershed development programmes though implemented on a large scale at the national level have been criticized by many for not achieving intended outcomes. National level figures indicate that groundwater resources continue to fall and soil erosion too has increased inspite of these programmes. AFPRO is of the opinion that watershed approaches provide a sound framework for strengthening natural resource management at the grassroots. Through the principles of environmental conservation, low-cost soil and water conservation structures, efficient and sustainable use of natural resources, and participatory management, watershed development approaches have potential to create a space and culture for regeneration of the environment. This is a basic pre-requisite, especially for poor rural communities, for adapting to climate change.

AFPRO has diverse experiences under Corporate Social Responsibility projects implemented during the reporting period. In particular, the project with Ultra Tech Limited, which desired the restoration of land and water resources affected by its mining activities at Hirni in Chhattisgarh. AFPRO submitted a Detailed Project Report in this regard and implementation of activities have been initiated. Community members have expressed disappointment at the degradation of their natural resources and a lot of efforts need to be put in to strengthen their livelihoods.

Water quality surveillance is another theme that has provided valuable field experiences and has resulted in a model for ensuring quality of water at rural drinking water sources through community level surveillance. Focus of the project is on prevention of and remedy for non-chemical contamination, a major hazard in drinking water sources in rural areas. Surveillance of sanitary conditions of drinking water sources, verified with both field

and laboratory tests, are followed by targeted response plans for each site on need-basis. Actual remedial measures would include improvement of functional aspects, drainage, sanitation and waste disposal, and treatment of water sources. Community volunteers, including women and community youth are being trained on sanitary surveillance.

In conclusion, AFPRO expresses its gratitude to its Governing Body members for their valuable guidance, insights and strategic inputs provided to AFPRO's programme and institutional processes. AFPRO is thankful to all its resource support agencies for various projects, bilateral and multilateral agencies, and all civil society agencies with whom it has interacted on different platforms, sharing a common passion for rural development. Partner agencies with whom AFPRO has the opportunity to implement projects need special acknowledgement as they accept our vision, enrich our knowledge with their inputs, and make our mutual goals a shared reality. Finally, AFPRO is very grateful to the rural communities it has had opportunity to work with, who are its inspiration, sharing with AFPRO a wide array of learnings and experiences, strengthening its knowledge base so as to serve for human betterment and progress.

D K Manavalan, Executive Director

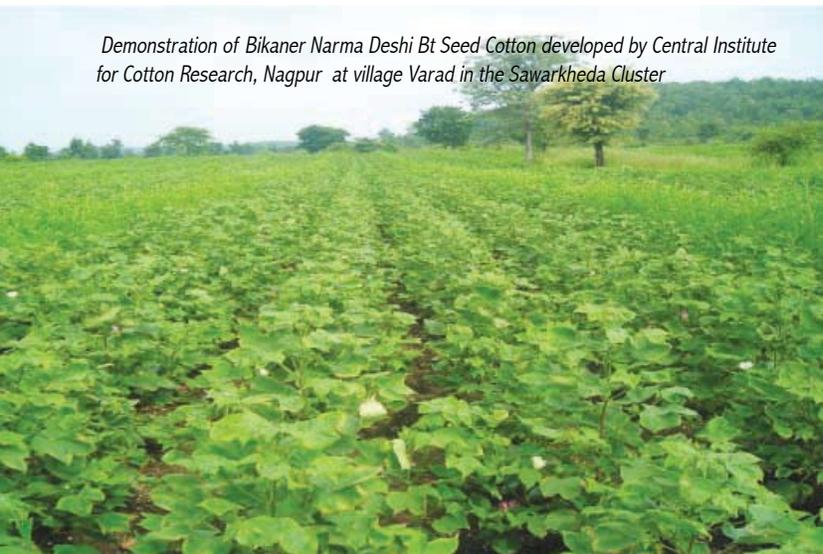
Food Security and Livelihoods

Better Management Practices in Cotton

State	Maharashtra
Location	Yavatmal District
Collaborating Agency	IKEA, Sweden

The Better Management Practices (BMP) in Cotton project had been launched during 2008-2009 in Yavatmal district, Maharashtra on an initiative of IKEA, Sweden which had approached AFPRO through its office at Gurgaon, Haryana. Interested in AFPRO's success with IPM in Cotton cultivation in Maharashtra earlier during the decade, IKEA wanted to promote better cotton cultivation practices among small and marginal farmers in India. While this will help farmers in growing dependable yet environmentally sustainable crop, reduction of input costs has direct effect on net returns. This involved the integration of AFPRO's approach to sustainable agriculture that integrated soil and water conservation, natural resource management, optimum use of external inputs and community-based approaches, with IKEA's ideation of BMP. IKEA further wanted the project to be characterized by farmer empowerment and wide knowledge dissemination. For this it found AFPRO's network approach to project implementation through NGO partners, based on capacity building and facilitation, an appropriate base.

Demonstration of Bikaner Narma Deshi Bt Seed Cotton developed by Central Institute for Cotton Research, Nagpur at village Varad in the Sawarkheda Cluster



By addressing the issue of procurement of BMP cotton, the project has broken new ground in terms of rural development interventions supported by CSR funds. Part of the cotton produced this year has been procured by a ginning mill. IKEA, who had offered to develop market options for procurement of cotton produced under the project, developed linkages with Dayal Ginning Mills (DGM). Arrangement were made for DGM to procure cotton from farmers at two locations, Kalamb, which served the Babhulgaon, Pimpalgaon & Ralegaon clusters and Wani, which served the Shirpur and Botoni clusters. Pricing discussions were held between the ginning mill managers and representatives of farmer's groups. Farmers were provided daily updates regarding prevailing market prices of cotton as well as prices offered by DGM.

This reporting year, the area covered under the project has risen to 56,930.69 hectares from 14,270.60 in the first year. This is as much as a result of scaling up of the project by IKEA after a successful pilot phase, as well as due to large scale acceptance by farmers of the concept. Target production was raised from 1 lakh quintals seed cotton in the first year to 3 lakh quintals this year. Farmers who voluntarily registered for the project have gone up to 12,298 in 92 villages from 6,393 in 77 villages last year. 4 new clusters were thus added, while existing clusters were re-grouped, adding up to 11 clusters.

AFPRO and NGO network partners identified under the project have undertaken extensive mobilization and awareness building exercises. 10 clusters of villages had been marked out for initial testing of the agricultural model. Farmer-friendly technology modules on BMP were developed by AFPRO in a participatory framework, involving the NGOs, academic institutions and village representatives. These were disseminated through capacity building of NGO staff and farmers, as well as through demonstration plots.

BMP in Cotton as promoted by AFPRO involves appropriate combination of IPM, INM and organic farming principles for application to cotton cultivation. These include use of amrutpani (organic manure), 5 % Neem seed kernel extract, bio-pesticides

Live Better with the Floods

State	Assam
Location	Dhemaji District
Collaborating Agency	Indian Council of Agricultural Research (ICAR)

Initiated under component 3 of the ICAR's World Bank supported National Agricultural Innovation Project (NAIP), this project is being implemented by AFPRO in 38 villages of Dhemaji District of Assam. Dhemaji lies near the confluence of three big rivers Dihing, Dibang and Lohit, and the eastern-most corner of the district faces the huge force generated, which at peak run-off leads to annual flooding in the district. Water accumulates to depths of 1 to 5 meters and recedes only after a period of 4-5 months, thus having severe impact on the lives of inhabitants. For the rest of the year, a big challenge faced by them is the large sand and silt deposit left behind by the flood, which leaves the land unsuitable for cultivation.

Situations such as these are very difficult to influence through mitigation-centred approaches, and would require a broad-based long term plan with intense coordination between government departments, civil society and technical institutions. As a more immediate intervention to support affected inhabitants of the flood prone district, there is need to address the actual strategy adopted by the community to adapt with floods for survival. Communities have to be capacitated so as to prepare them



A pheromone trap amidst the cotton crop in village Awadgaon, District Yavatmal, Maharashtra.

and bio-fertilizers, scouting for identification of pests and natural enemies, and use of pheromone and yellow sticky traps. In addition, clean harvesting and storage of cotton has been specifically addressed.

There is direct emphasis on the damaging side-effects of heavy chemical inputs and farmers have been made aware of the potential of organic farming practices. Efforts have gone into strengthening farmers' linkages with government, academic and technical institutions for recommendations regarding dosages. However, in order to address acute soil and crop health issues affecting immediate farmer livelihoods, rather than totally negating the use of chemical inputs, specific need-based dosage as compared to broad-based application of chemical inputs has been advocated. About 2343 soil samples have been tested this year for INM, and the dosage of inputs have been decided on the basis of such data which reflect actual level of nutrients in soil, so as to prevent nutrient deficiency in plants.

With the establishment of the procurement system, there is ample scope for a business model to emerge in the area. What has been core learning through these two years of project implementation is that with appropriate market linkages, BMP Cotton and sustainable agriculture have good potential in terms of marketability of produced cotton, not just in India but on a global scale.

Cabbage crop grown at village Darmapur in Sisiborgaon block, District Dhemaji



Bolin Bordoloi, a beneficiary under the project stands amidst his potato crop in village Bahokotika of Bordoloni Block, District Dhemaji



to accept floods and shift focus to optimal livelihood options, promoting the concept of living better in consonance with their flood-prone reality. Innovative agricultural and allied land-based livelihoods provide scope for identifying alternative approaches. AFPRO is promoting the Integrated Farming Systems in selected habitations in the district. Through proper seasonal planning of IFS and appropriate choice of IFS combinations, communities will be strengthened with greater food and livelihood security.

The IFS modules promoted by AFPRO during the year of reporting among tribal farmers in the district are:

- Rice-Fish-Horticulture (RFH) – 65 ha
- Livestock-Fish-Vegetables (LFV) – 95 ha
- Dairy-Fish-Horticulture (DFH) - 26 ha
- Sericulture-Pig-Horticulture (SPH) – 40 ha
- Ten varieties of vegetables have been planted.
- Livestock promoted under LFV include poultry, ducks, piglets and goats.

Activities were initiated through baseline surveys and drawing-up of location specific plans after conducting PRAs, and assessment of existing knowledge and skills among the communities for incorporation into the modules. Vermi-compost units, rice processing units with mills, poultry units, drip irrigation units with horticultural plants, irrigation systems based on shallow tube-wells and pump sets, and power tillers have been set-up during the year. Renovation of fish ponds as well as de-siltation of a couple of existing ponds was also taken up. Weaving and tailoring units have been promoted among women's SHGs.

At the human and institutional development level, after a participatory training need assessment, different trainings have been given on IFS modules, sustainable agricultural practices, IPM, INM, animal husbandry, pisciculture and other various activities related to the project. Village level committees have been formed in each village and bank accounts have been opened. All the major equipments distributed under the project are kept under the VLC's control and maintenance funds have been promoted. In the case of power tillers, each user has to pay Rs. 50/- per bigha for use, part of which will be kept in the maintenance fund and the remaining will be used to pay wages of the operator. An innovative mode of farmer's extension services has also been promoted under the project - the use of free mobile SMS for dissemination of up-to-date information related to farming.

An interesting success story is of a group IGP in poultry (broiler) breeding in un-electrified Arney village. Here country-made improved kerosene lamps are being used for maintaining temperature while rearing 'one-day old' chicks on scientific basis. A survival rate of 95% has been recorded which makes the experiment a viable technical option.



A broiler production unit at village Arney-1 in Sisiborgaon block, District Dhemaji, run using improved country-made kerosene lamps

Partnership for Innovation and Knowledge in Agriculture

State	Uttar Pradesh
Location	5 districts, viz., Barabanki, Sitapur, Unnao, Hardoi and Fatehpur of Uttar Pradesh
Collaborating Agency	World Vision India

Marginal smallholder farmers often do not possess the knowledge and resource base to ensure a good return from their agricultural occupation. Strengthening them with inputs on appropriate agricultural practices, land and water management, based on the principles of environmental sustainability, is a widespread requirement, especially in underdeveloped regions. Such capacity building seems apparently miniscule in value addition and not in any way comparable with mainstream economic growth. For poor and marginal farmers, natural resources are very critical for livelihoods, and can be perceived as their 'wealth'.

By optimally and sustainably tapping natural resources at their disposal, this rather significant portion of the population will be making a contribution to Gross Domestic Product. Thus there is also a great need for strengthening of such smallholders on marketing of produce, especially on account of their weaker bargaining position. Developing alternate smallholder-led marketing models is the right direction for giving them greater bargaining power, especially in the present Indian context where retail trade businesses are showing increased interest in direct procurement of farm produce.

AFPRO, World Vision India, ACDI/VOCA, (enterprise development specialists), and Rice-Wheat Consortium (an extended arm of IRRI) are currently implementing a community based project, Partnership for Innovation and Knowledge in Agriculture (PIKA) in the five districts of Uttar Pradesh namely Barabanki, Sitapur, Hardoi, Unnao and Fatehpur with the financial support of USAID.

AFPRO is promoting soil and water conservation measures such as farm bunding, check dams, ponds, drainage development etc. Water level monitoring as well as water quality testing is undertaken at regular intervals in about 30 observation sites in the 5 districts. Existing ponds are being taken up for renovation during the reporting year. 13 ponds have been renovated so far while work is in progress in another 14. With renovation of ponds, the groundwater levels have started increasing and small farmers are once more able to access these through pre-existing tubewells that are sunk near these ponds.

Improved farming practices such as SRI – System of Rice Intensification are being promoted through trainings. This year 17 training events have been conducted and 1917 farmers have been trained on various aspects of soil & water conservation, water & crop management and soil fertility management. These trainings are conducted by various means such as workshops, on-farm trainings, awareness and information through cultural programmes, exposure visits etc.

PIKA project is unique that it will link smallholder farmer organizations to major regional markets benefiting at least 15,000 farm households by conserving the natural resources needed for agriculture namely soil and water, reducing cultivation and finance costs, raising yields, improving post-harvest practices, facilitating efficiencies in value chains in mango, rice and wheat, increasing farmer skills, mitigating risk and, ultimately, increasing incomes.



A pond renovated at village Patakapur, District Unnao, Uttar Pradesh

Ensuring Food Security through Community Participation

State	Maharashtra, Gujarat, Andhra Pradesh
Location	Maharashtra 38 villages of Maregaon and Zari Zamni Blocks, Yavatmal Gujarat 10 villages of Rapar block of Kutch District Andhra Pradesh 12 villages of Shabad Mandal, Ranga Reddy District
Collaborating Agency	United Way, Mumbai

Homestead gardens, due to their proximity to households, have great potential in impacting the lifestyle and habits of families. This is especially true in rural areas, where women and children experience greater freedom of action while undertaking domestic chores. Thus, homestead cultivation promoted under this project has become the channel for improved nutritional intake and livelihoods of targeted poor and a marginal communities. It's success also means that the health related capacity building activities which were taken up to empower women and children have greater effect. Thus the combination of homestead based livelihoods and health education has created a new dynamism amongst the communities.

About 3500 households across the states of Maharashtra, Andhra Pradesh and Gujarat are being addressed through this project.



Homestead vegetable cultivation at village Nagpar in Rapar block, District Kutch

The project promotes homestead or kitchen gardens amongst womenfolk in the community, and supports them with capacity building on appropriate cropping practices. In combination with this awareness on health and hygiene is being promoted among women and adolescents.

The strategy has been successful and the crops have been good. Vegetables are available not just for home consumption, but in many cases surplus stocks are being sold in the market for additional household income. Strategies adopted in the project for promoting homestead cultivation are enumerated below:

- Vegetable cultivation, interspersed with horticultural plants, have been the primary cropping patterns adopted for homestead cultivation under the project.
- Womenfolk have been trained on management of kitchen gardens including pest and disease management based on organic farming principles. Application of organic compost as well as adoption of mulching to reduce evaporation losses are examples.
- Vegetable seeds were provided under the project, and in some cases basic agricultural implements as well.
- Demonstration plots and activities were an essential part of project strategy.
- Importance was placed on appropriate soil and water conservation measures.
- Limited numbers of low-cost drip irrigation systems have been provided to communities for shared usage.
- Water scarcity and soil quality being the pre-dominant problem in areas selected for intervention, the project also extended training to farmers from the target community on crop planning, improved agricultural techniques and organic farming.
- One such system, the "Pata System" based on mixed cropping, has been promoted in four different models in Maregaon cluster in Maharashtra.

Health and hygiene promotion activities too have borne fruit. A very important impact is the increase in number of pregnant women from target communities reporting to PHCs for delivery. Training events on health of pregnant women, children and adolescents, the importance of nutritional diets, and sanitation and hygiene have been conducted. Linkages with PHCs have been strengthened and PHC staff have been invited to create awareness about government schemes and services. This

Sustainable Livelihoods for Tribal Communities

State	Chhattisgarh
Location	7 villages across Chhattisgarh
Resource Support	Lutheran World Relief (LWR)

Impact of soil and water conservation measures accompanied by sustainable agricultural practices is seen in terms of increased water retention, soil moisture, vegetative cover and agricultural productivity. The inherent creative potential of nature, when given respect and space, regenerates and flourishes. These environmentally sound, low-cost measures have a specific and direct impact on food security of poor and marginal communities. Tribal communities need to be provided with adequate capacity building on appropriate knowledge and skills for improving their potential of generating livelihoods from their natural resources. This knowledge empowerment factor adds the value of dignity to the entire process.

AFPRO and LWR have been implementing the project “Sustainable Livelihoods for Tribal Communities” in 7 villages across Chhattisgarh which is based on the objective of empowerment of farmers, women and local NGOs on concepts and practice of soil and water conservation and improved agricultural techniques, as well as group activities. The project follows an earlier project implemented by LWR with AFPRO and its NGO partners in 15 villages across Chhattisgarh.

During the year of reporting more than 400 farmers were made aware about the benefits of soil and water conservation and improved agricultural practices. As a result, a significant number of them (150) adopted sustainable farming techniques such as System of Rice Intensification, Vermi-composting, Nadep composting, usage of improved and treated seeds, line sowing with controlled plant population, among others. Together with the soil and water conservation measures implemented under the project, these adopted practices have resulted in increases of yield by 20% - 50%.

Plenty of small soil and water conservation measures were implemented and have left their mark already.

- 40 small ponds constructed in six villages secured the kharif crop over 320 acres of more than 200 families in a drought affected year.
- Renovation of three further small farm ponds supported a kharif crop over 65 acres.



KB drip irrigation system installed at a kitchen garden raised at a school in village Mudhati in Zari-Zamni block, DistrictYavatmal

has brought about a large increase in awareness of these communities, where a significant number was not aware of the emergency number to be dialled for accessing ambulance services provided by government.

Thus this socio-technical model including better nutritional access, improved agricultural practices, knowledge on health and hygiene, planned on the basis of community organizations and alternative livelihood support through SHGs, presents a combination of supportive capacity building activities that need to be allied with large scale rural development programmes.



A beneficiary at village Bobbilligaon in Shabad mandal, Ranga Reddy District

- Farm bunding has been taken up in over 150 acres representing land holdings of 100 families, improving cropping potential through soil and moisture conservation.
- An abandoned bore well renovated in the month of October 2009, secured a Kharif crop in over 10 acres and provided irrigation in the Rabi season for 23 acres of wheat crop.
- Again two wells renovated earlier provided 4 families cultivating 10 acres of land with irrigation in both cropping seasons.
- In terms of expected potential, a masonry check dam constructed in October 2009 is expected to provide protective irrigation over 45 acres.
- 5 new wells are supporting irrigation requirements for both seasons for 15 families.
- 2 small gabions constructed are protecting 15 acres of cropland and benefitting 10 families.
- 2 lift irrigation schemes which have been constructed and are awaiting power supply resolution pending local government elections, will be benefitting 223 families, irrigating 120 acres of Rabi Crop and 450 acres of Kharif crop.
- Lastly, income generation activities have also been promoted and 116 women at present are earning supplemental income for their households.

Natural resource management and its role in land-based livelihoods has to be given high level of importance and active commitment in international policy, especially in a globalized world. This will provide all countries freedom to securely adopt nature-inclusive policies, the need of the hour for addressing climate change concerns and its anticipated impact on food security of poor and marginal communities.

A pond renovated at village Bitpuli, District Bilaspur, increasing the catchment area, and diverting a stream from the neighboring hills. At the bottom of the picture is a outlet for controlled release of water to agricultural fields.



Backward Regions Grant Fund

States	Maharashtra, Karnataka, Andhra Pradesh, Orissa, Jharkhand, Chhattisgarh, Meghalaya, Assam, Uttar Pradesh
Location	16 Districts
Collaborating Agency	Ministry of Panchayati Raj & the Planning Commission, Government of India

Functioning of Indian democracy and effectiveness of its governmental systems has been the subject of many debates. Democratic values have to be reflected in effective and contiguous mechanisms for service delivery. No country can claim to be fully developed unless it adopts its marginalized groups are brought into mainstream economic development, with access to equal opportunity. Absence of a common perspective regarding social justice and equity across the country's diverse fabric and a large population to serve are challenges that need to be gradually, but constructively addressed.

On India's learning curve, the BRGF programme will definitely find its place of merit as a reform effort which seeks to promote social justice and equity. It will help to identify knowledge and perspective gaps by marking out responses to the programme as symbolic of development process orientation and approach across the districts. Doing so, it will serve to peg these responses against a progressive development framework to enable working forward on two mutually-related goals. First of these is a common development vision across various levels of government and society, and second is adoption of common standards for improved governance. This knowledge and governance model, if addressed as such, could serve as a model for the rest of the districts, as well as democratic systems all over the developing world.

AFPRO had the opportunity to serve as Technical Support Institution under BRGF in 16 districts across 9 states. Accordingly, AFPRO provided facilitation and capacity building support for preparation of District Plans, that would serve the preparation of the Eleventh Five Year Plan.

A few reflections regarding impact of BRGF on planning processes are laid out below.

- BRGF has had its desired impact in terms of catalysing planning activity in selected districts, involving all levels of government – district, state and block. This planning exercise has also, in general, created a broad impression about the objectives and goals of the programme. However, the extent to which these planning activities

A session in progress at Ahmednagar block, Maharashtra



have actually reflected objectives and goals, and thus moved in the direction of achieving them, differ in proportions.

- Momentum for beginning the BRGF planning exercises have initially depended on clarity regarding various aspects of the BRGF model. Doubts regarding the need of bottom-up approach, the involvement of TSIs and in general, the vision regarding control over processes, have been aspects that had to be specially addressed. States like Maharashtra, that have already experienced participatory reform programmes implemented by the State Government, were much quicker to adopt the programme.
- The implementation of the bottom-up approach needs to be seen against the level of participation achieved. Even after initiation, there have been reservations regarding the bottom-up approach.
- In extreme cases, there has been demand from DPCs to drop bottom-up plans received from the GPs and adoption of alternative plans.
- Planning exercises have been guided on the basis of

broad overall guidelines of budgetary allocation that were determined at various levels of government. Therefore, achievement of social justice and equity has direct linkages with this budgetary proportion, and hence the efficacy of policy decisions and value judgments regarding these proportions.

- Capacity building promoted under BRGF as a strategic programme component and allocated specific funds has had very good impact in widening the knowledge base of all stakeholders and is appreciated.

Diversion Based Irrigation Systems

State	Jharkhand, Meghalaya, Tripura, Assam, Orissa
Location	145 villages across 6 districts Hazaribagh District, Jharkhand, Ri Bhoi District, Meghalaya, South Tripura District, Tripura, Karbi Anglong District in Assam, Ganjam and Gajapati Districts in Orissa
Resource Support	Sir Dorabji Tata Trust, Mumbai

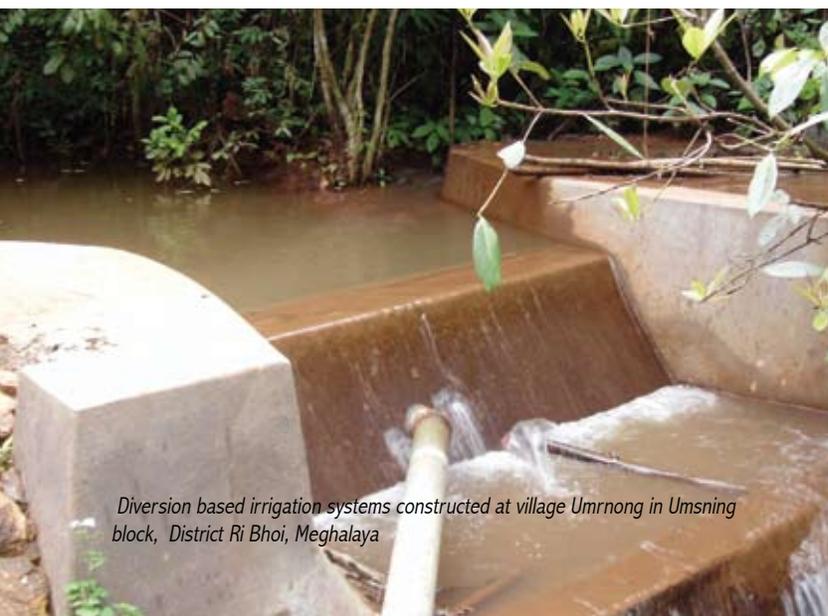
Tribal communities abound on the hills of eastern and north-eastern India. A greater majority of tribal groups in India are dependent on natural resources such as forests for their livelihoods. For most of them, subsistence living is the way of life, eking their daily food requirements from nature's larder. They are primarily first-generation farmers without knowledge or skills on improved farming techniques. Being marginalized communities, their access or ownership of land is generally limited to degraded and poorly irrigated plots of land, primarily falling in rainfed zones. It is important therefore, to build their capacities for improved livelihoods through access to irrigation and knowledge of efficient agricultural practices.



Paddy field grown using System of Rice Intensification techniques promoted under the project at village Karimati, District Hazaribagh, Jharkhand. This field is being irrigated using the water harvested by an earthen dam, shown on the opposite page.

Developing low-cost irrigation facilities in such regions would require tapping natural springs and streams that are present across the hilly terrain. AFPRO and SDTT have initiated this project to empower tribal communities in 145 villages in Eastern and North-eastern India. Hilly districts across 5 states have been identified for support under the project. These are (i) Hazaribagh in Jharkhand, (ii) Ri Bhoi in Meghalaya, (iii) South Tripura in Tripura, (iv) Karbi Anglong in Assam, and (v) Ganjam and Gajapati in Orissa. The selected areas are inhabited by tribal and marginalized communities. They are dependent on a single rainfed crop and non-timber forest products for food. Food security among these households would be for 5-6 months a year or lesser. In Jharkhand, rainfall is scarce, while in the North-eastern states and Orissa, lack of infrastructural development would be the chief reason for hardship of these communities.

By identifying the right water sources and connecting these to the farmers fields through gravity based distribution channels to enable irrigation, both kharif and paddy crops can be provided protective irrigation. Diversion-based irrigation systems are much more simpler to operate and maintain than other systems such as Lift Irrigation Systems. The structures constructed under this project would lead to the increase in the irrigated area – kharif as well as rabi season, which will result in the overall increase in crop production. Together with this, training to farmers on appropriate agricultural skills such as SRI, mixed farming, organic farming, crop rotation, and dryland farming will enable them to grow successful crops for food security. By ensuring long-term sustainability of such delivery systems, agricultural dependent livelihoods are significantly strengthened.



Diversion based irrigation systems constructed at village Umrnong in Umsning block, District Ri Bhoi, Meghalaya

During the year of reporting, the following activities have been taken up:

- 6 structures have been constructed in the North-eastern states while 22 more have been planned and will be constructed in the second year.
- 10 structures are being implemented in Orissa, and 20 have been planned for the second year.
- In Jharkhand construction will be completed on 6 structures before the rainy season, while 9 have already been completed and a further 20 are planned.

- Training on agricultural practices have also been imparted to communities.

Livelihood rights of tribal communities need to be protected, a fact that strengthens their claim to natural resources they depend on i.e. forests and accompanying lands inhabited by them. Since natural resources form an inter-linked eco-system, extreme care and planning has to be put in while planning large scale development interventions. AFPRO hopes to offer the experiences from this project as a simple small scale alternative for low cost development in tribal inhabited lands.



Earthen dam constructed at village Karimati, District Hazaribagh, Jharkhand

Livelihood Development with Ultra Tech Limited

State	Chhattisgarh
Location	Raipur District
Resource Support	Ultra Tech Limited

Interaction with rural communities in the vicinity of the Ultra-Tech cement plant has provided new learning for AFPRO. Ultra-Tech Cement had as part of its CSR initiative, entered into agreement with AFPRO for promoting sustainable land and water resource development activities in rural areas affected by its mining activity at Hirmi in 2008. After a detailed technical feasibility study, AFPRO recommended a rural livelihood oriented watershed development plan for both the region surrounding the plant, as well as the plant area itself. However, AFPRO has sensed that the community has reservations regarding the mining activities undertaken in the region, and implementation of project activities in the villages would require participatory and capacity building outreach to enlist their cooperation.

Mining activities are the backbone of industrial development and economic growth. However these have a serious impact on water resources. In most cases, geological formations need to be broken through in order to access mines. Aquifers, nature's underground storage reservoirs, are located between such geological formations. Such water sources have to be inevitably emptied in the process of reaching mines. Besides, pollution of both groundwater and surface water sources is imminent as the raw material is exposed while being mined, collected and transported.

Faced with the reality of climate change, though late, it is an appropriate time for the country to work out a scientific approach to environmentally sustainable mining. This has imperatively to be supported by:

- Transparent participatory process focused on sustainable livelihoods, involving local people, right from initiation of mining activity till much after completion.

- Leadership taken both by the state in policy and law, but also by corporates under R&D.
- Intense technological preparation and planning for ensuring environmental sustainability in the broad region where the mines are located. Special focus has to be placed on protecting land and water resources of the region.

Mining activity, a required national common good, should not be allowed to leave the region degraded and inhospitable, unfit for human beings and bio-diversity to survive.

- A detailed survey has been conducted for soil & water conservation of the 1032 ha area of plant, mines, Township of UltraTech Plant and 1500 ha area of 4 project villages.
- Several activities have been proposed and targeted to recharge/harvest around 200 ha-m water in an average rainy season, and increase the irrigation potential over more than 500 acres of land. These measures include recharge shafts and trenches, contour bunds, boulder checks, dugout ponds, head regulators, renovation of canals and dams, among others.
- These interventions will be helpful in enhancing livelihoods security in the project villages by increasing irrigated area. Besides these will increase the sustainability of water resources in the region through groundwater recharge, reducing soil erosion and regulating release of water for irrigation. This will eventually help in assuaging the need for distress migration.
- In addition, these measures lead to enhanced availability of water for cattle, and enrichment of bio mass cover thus increasing fodder availability as well.

Contour bunding in the mining area at Hirmi, District Raipur, Chhattisgarh



Watershed Management

NABARD SUPPORTED WATERSHED PROGRAMMES

The importance of watershed as a unit of land, water and resource management has increased in the context of climate change. IPCC's Fourth Assessment Report states that climate change is expected to impact water resources significantly through changes in components and systems of the hydrological cycle. These include (i) changes in precipitation in terms of intensity and extremes, (ii) widespread melting of snow and ice, (iii) increasing atmospheric water vapour, (iv) increasing evaporation, and (v) changes in soil moisture and runoff. These changes will impact agriculture and food security in various combinations.

Majority of rural communities will face increased frequency of extreme weather events and change in climatic patterns resulting in uncertainties in weather prediction for farmers who depend on favorable seasonal cycles for cultivation. Increase in precipitation and inconsistent seasons would result in failure of crops. Increase in temperatures, one of the chief characteristics of climate change, will reduce crop productivity on one hand and promote weed and pest proliferation on the other.

The impact of these effects of climate change on water resources and agriculture will be most severe on poor and marginal households in rural areas. These communities earn their livelihoods from degraded land and water resource base either as smallholder farmers, pastoralists or through other rural livelihood options. Any chance of mitigating such impact at the local level would lie with strong community managed resource systems.

Watershed provides a natural unit for ecological conservation and resource management as it governs the drainage of water and provides maximum scope for nature-friendly intervention. Interventions at the watershed level will provide a framework for negotiating impacts of climate change through the promotion of mitigative and adaptive practices, holistically addressing the livelihoods of inhabitants based on sustainable and equitable

management of land and water resources and use of appropriate technology and practices.

During the year of reporting, AFPRO has been involved in the implementation of four projects with NABARD. Three of these have been in Maharashtra where AFPRO Field Unit I, Ahmednagar, was the nodal unit. The fourth was in Rajasthan, where AFPRO Field Unit III, Udaipur and AFPRO Field Unit V, Gwalior were the supporting offices. This project was jointly funded by ITC Ltd and NABARD, and AFPRO was associated with ITC Ltd in the project. The list of projects is presented below:

- 1) NABARD Supported Holistic Watershed Development Programme
- 2) Indo-German Watershed Development Programme (Phase III)
- 3) Supporting Mega Watershed Development
- 4) Sunehara Kal Integrated Watershed Development Programme supported by ITC Ltd and NABARD

NABARD Supported Holistic Watershed Development Programme

State	Maharashtra
Location	Two watershed clusters in Karanja taluka, Washim District
Collaborating Agency	NABARD

Vidarbha, comprising more than 30% of the state of Maharashtra, is predominantly known for its cotton and orange cultivation, a minerals base which makes up two-thirds of the State's reserves, three-fourths of the State's forest resources and is also a net producer of power. In spite of its resource base, Vidarbha does not record much economic growth. Poverty and malnutrition are spread across the region which has recorded 70% of the farmer suicides in Maharashtra.

Severity of the conditions resulted in a visit by the Prime Minister in 2006, who announced a significant number of measures for

the district. Presently in Phase II, NABARD Holistic Watershed Development Programme was launched as an offshoot of these measures, and is addressing watershed development over 90000 hectares across 6 districts in Vidarbha, viz. Akola, Amravati, Buldhana, Wardha, Washim and Yavatmal. The project is being implemented on a cluster basis, each cluster being 2500 – 3000 hectares.

AFPRO is one of the Project Implementation Agencies in Washim District under Phase II of the programme. It was initially assigned two clusters comprising three villages (Poha, Dhamni and Manabha) and covering an area of 4700 hectares. However, since October 2009, AFPRO has been assigned to complete unfinished activities from a cluster under Phase I of NHWDP, comprising 6 villages and having an area of 2500 ha.

Project activities taken up during the reporting period are presented below:

- Activities in the two clusters from Phase II are in the Capacity Building Phase (CBP).
- In village Poha, 80 hectares have been treated out of the 188.59 hectares planned. Similarly, in village Dhamni, 58 of 146.02 hectares and in village Manabha, 40 out of 161.33 hectares have been treated.
- In the third cluster assigned to AFPRO from Phase I of NHWDP, CBP has already been completed by the PIA that was earlier assigned the cluster. AFPRO is therefore directly undertaking the Full Implementation Phase.
- Accordingly, initial rapport building exercises had to be conducted with the community as AFPRO was the new PIA. This was supported by necessary regulatory changes at the village institutional level. Following this, an interim phase proposal has been developed by AFPRO and submitted to NABARD; work on this proposal is expected to start from June 2010.



Shramdaan being initiated at village Manabha, District Washim under the Capacity Building Phase of the project

Indo-German Watershed Development Programme (Phase III)

State	Maharashtra
Location	Three tribal villages of Beed District
Collaborating Agency	NABARD

AFPRO is supporting the Indo-German Watershed Development Programme (IGWDP) Phase III as Project Implementation Agency (PIA) for one of its projects in Beed District, Maharashtra. IGWDP, now in its third phase, is being implemented in India since 1992, and is a bilateral programme of the Governments of India and Germany. IGWDP projects in the present phase are being implemented in 1.60 lakh hectares across 25 districts of Maharashtra. AFPRO is PIA for watershed development activities in three tribal villages in Beed having a total area of 1250 hectares. This engagement as implementation agency will help AFPRO enhance its learning and innovative capacity.

Success of watershed development projects depend to a great extent on the level of participation of benefiting communities. Lack of meaningful participation by the community for creating a sense of ownership that forms the true spirit of participatory approach, leads to many watershed projects not achieving long-term sustainability.

IGWDP has inbuilt mechanisms which enables it to promote ownership and participation by the communities. These are presented below:

- A test of “self-selection” for community members to get themselves included in the programme, where they are asked to volunteer few days of free labour for initial activities, so as to demonstrate their commitment to undertake the programme.
- An initial Capacity Building Phase (CBP), before the Final Implementation Phase (FIP), prepares communities with skills for implementation activities, which will also come in handy for sustainability of the programme.
- Community has to contribute voluntary labour once a week for implementation activities which is planned for meeting 16% of the project cost.
- Further, 50% of the value of this voluntary labour

is set apart to create a Maintenance Fund for post implementation use.

- Women’s representation is ensured through (a) participation in Village Watershed Committees that form the institutional framework at the community level, (b) a Women’s Development Fund, and (c) Self-Help Group activities for promoting income generation activities and the habit of thrift & fund management.

Activities undertaken by AFPRO as PIA together with the community during the reporting period include

- Completion of CBP over 92.32 hectares of area and preparation of the Detailed Project Report (DPR) for the FIP over the remaining 1170.69 hectares.
- 162 hectares have already been treated in the FIP after the DPR was sanctioned by NABARD.
- Villagers were taken on an exposure tour to a completed watershed project for a first-hand experience.
- Three training events on project planning and management have been conducted for newly formed community level institutions

Supporting Mega Watershed Development With NABARD

State	Maharashtra
Location	Satara District
Collaborating Agency	NABARD

Rural poverty is invariably linked to poor resource access, further defined to refer to the degraded landholdings or landless status of poor and marginalized communities. Strengthening this resource base and providing alternate livelihood options will have direct benefits in terms of improving livelihood opportunities of these communities. While this forms one of the key objectives of rural development, promoting a culture of efficient and sustainable resource use also needs to be addressed. Focus on watershed as a unit to promote rural development based on natural resource management helps to address both the issues of rural poverty and sustainable natural resource management. From this base, key livelihood elements such as self-employment, self-help groups and value addition for market linkages can be built up.

AFPRO has provided NABARD with socio-technical support for Mega Watershed Development in Maharashtra during the year of reporting. AFPRO's experience in integrated watershed development both in terms of technical facilitation for implementation as well as monitoring and evaluation has enabled it to have strong institutional knowledge and understanding on the watershed approach. This mega watershed project is being funded out of the Rural Infrastructure Development Fund (RIDF), a Government of India fund with NABARD for sustainable rural infrastructural development. RIDF has been created out of deficit priority sector lending of public sector banks.

Overall objective of the Mega Watershed Development Programme is restoration of ecological balance in the region and improving the standards of living of the community. The specific objectives of the programme are:

- To strengthen the indigenous resource base, mainly primary resources of land, water and human beings, for increasing their productivity.
- To increase the earning capacity of people in order to reduce their migration from villages.
- To regenerate the ecology by increasing vegetative cover for drought proofing and creation of sustainable livelihood opportunities for all.
- To increase the availability of biomass for consumption and market purposes (food, fodder, fiber and fertilizer).
- To ensure year round availability of employment avenues, particularly for women and labour.
- To avoid silting of ponds and reservoirs.
- To enable people manage and maintain their assets.

A Detailed Project Report has been submitted to NABARD. The Mega watershed assigned to AFPRO is spread over 38177 hectares in Man block of District Satara and inhabited by 37 villages with 14706 households and a total population of 73476. Implementation activities will be done by the State Agriculture Department. The process adopted included a socio-economic survey of 10% sample households from the project villages, conducting net planning exercises, well inventories and drainage line surveys of selected sites.

Sunehara Kal Integrated Watershed Development Project

State	Rajasthan
Location	Jhalawar District
Collaborating Agency	ITC Ltd. & NABARD

AFPRO is implementing the “Sunehara Kal” Integrated Watershed Development Project Jhalawar District of Rajasthan. “Sunehara Kal” which the project ascribes to mean “Intensifying hopes for a better future to live in” is a Public-Private Partnership with resource support being shared by NABARD and ITC Limited. This project draws an interesting linkage with the corporate sector as ITC Limited has already created a name for its commitment in CSR to environmental conservation. Such CSR interventions ratify the sound principles of watershed management and the important role it has to play in food security.

The project area is representative of many other rural regions having significant populations of poor and marginal farmers. It comprises two micro-watersheds named Nayagaon I and II that spread across 10 villages in Jhalra Patan Tehsil. 29% of the population of the falls in the Below Poverty Line category, and 46% of the households belong to SC or ST categories. Farming and rearing livestock are the main sources of livelihood. Average land holding is 0.5 to 0.8 hectares. The poorest landless families who form about 10% of the total number depend on agricultural labour for income. The local seasonal migration is around 5% of the total population.

Undulating topography characterizes the area, and its upper reaches are occupied by forest land. Rainfed farming is practiced in the region, with most farmers growing only a single crop. Quality of soil is generally good, and its depth is between 0.5m and 1m. The soil has capacity to support a wide range of crops as well as a second crop, provided adequate water is available. Those farmers who have wells do grow a second crop. Annual crop production fluctuates depending on the annual rainfall received. Pre-dominant crops grown in the region are soya bean, coriander, garlic, and wheat; oranges are also cultivated while minor millets are grown in isolated areas.

Water shortage is felt in spite of an average annual rainfall about 1025 mm. It provides a clear indicator that lack of knowledge, technology and skills on soil and water conservation results in inefficient use of natural resources and lowering of agricultural potential. Watershed based approach for natural resource management in such an area, as being promoted in the project,

will result in improved water availability as well as improved land conditions.

Activities undertaken during the project reporting period are presented below:

- Only the Capacity Building Phase has been taken up thus far, with focus on demonstration of soil and water conservation measures – about 140 hectares have been treated.
- Implemented activities include construction of stop dams, earthen farm bunds, cattle protection trenches, water absorption trenches, water ways, boulder gully plugs, horticulture plantation, and renovation of percolation tanks. The percolation tanks and stop dams will irrigate about 159 hectares.
- Capacity building activities on sustainable agricultural practices have been carried out, including on factors such as organic farming and advice on cropping patterns. 20 demonstration units on vermi-compost have been set up amongst the community.
- For those dependent on livestock, trainings on breed improvement have been organized.
- In addition awareness generation and village institutional capacity building activities have also been conducted.
- More than 400 people have been trained under the project in 13 training events.
- Watershed Development Committee has been formed and registered.

- 10 Water Users Associations (WUA) have been formed and capacitated on community managed irrigation systems, while 32 WUAs have been further strengthened with participatory training inputs.
- 3 women SHGs have also been set up during the reporting period.

PARTNERSHIP WITH WORLD VISION INDIA

AFPRO and World Vision India are working in partnership in many Area Development Programmes (ADPs) of World Vision across the country. Almost all AFPRO's field units and task forces have made significant interventions with World Vision India for the improvement of livelihoods of poor and marginalized communities over the past 5-6 years. Since May 2008, AFPRO and World Vision India have entered into strategic partnership where AFPRO has agreed to provide socio-technical services for improved land and water resource management for promotion of sustainable livelihoods. World Vision India on the other hand has strong social, health and economic components planned together with special focus on women and children.

AFPRO's convictions regarding the betterment of food security and livelihoods among rural communities through low-cost measures for natural resource management and facilitation of local capacity enhancement have borne fruit in many interventions recorded with World Vision ADPs. These contribute in a large way to improvement in socio-economic status through enhanced local resource base, supporting livelihoods based on agriculture, livestock, fishery and allied activities, leading to better levels of food security and quality of life. Combined effectiveness of World Vision India's interventions with AFPRO's socio-technical inputs provides a model for all-round integrated rural development.



A pond constructed at village Kalimati, ADP Singhbhum, East Singhbhum District, Jharkhand

SERVICES PROVIDED TO VARIOUS ADPS OF WORLD VISION INDIA DURING 2009-10

SR.	FIELD UNIT	LOCATION	SOCIO-TECHNICAL SERVICE RENDERED
1)	AFU III	1 village of ADP Udaipur, Rajasthan	Evaluation of interventions being implemented for benefit of more than 200 ST households: open well deepening and renovation, anicut renovation, construction of sub-surface dams with kundis, roof rainwater harvesting systems, recharge measures near hand pumps
2)	AFU III	3 villages of ADP Baroda, Gujarat	Socio-technical support for construction on 2 water harvesting structures, pipeline irrigation.
3)	AFU III	5 villages of ADP Banswara, Rajasthan	Socio-technical support for installation of Lift Irrigation Systems connected to open wells, local streams and a river to benefit 201 households
4)	AFU IV	1 village of ADP Bhojpur, Jharkhand	Technical support for provision of irrigation facilities through bore wells for 100 marginal households
5)	AFU IV	25 villages of ADP Singhbhum, East Singhbhum District, Jharkhand	Technical support for provision of drinking water facilities for 200 households through installation of bore wells
6)	AFU IV	25 villages of ADP Dumka, East Singhbhum District, Jharkhand	Technical support for provision of drinking water facilities for 200 households through installation of bore wells
7)	AFU IV	8 Gram Panchayats of ADP Singhbhum, East Singhbhum District, Jharkhand	Socio-technical support for meeting drinking water and irrigation requirements, including construction of 18 wells for drinking water, 9 ponds, 5 irrigation canals, and 12 lift irrigation systems to benefit more than 450 households
8)	AFU IV	12 villages of ADP Duars, Jalpaiguri District, West Bengal	Socio-technical support for developing the irrigation potential, including construction of 2 ponds, 47 irrigation wells, 7 irrigation channels, and 1 diversion irrigation system to benefit more than 1150 households
9)	AFU IV	16 villages of ADP Godda, Jharkhand	Socio-technical support for developing the irrigation potential, including construction of 12 irrigation wells, 5 ponds, 3 check dams with irrigation channels.
10)	AFU V	ADP Unnao, Uttar Pradesh	Technical support for installation of group tube wells for groups of 10-15 small farmers
11)	AFU V	ADP Sitapur, Uttar Pradesh	Technical support for installation of group tube wells for groups of 10-15 small farmers
12)	AFU V	34 villages of ADP Ratlam, Madhya Pradesh	Planning and implementation support for soil and water conservation (SWC) measures and development of village infrastructure. SWC measures include construction of field bunds, deepening of ponds; construction and renovation of stop dams and culverts, construction and deepening of wells, construction of tube wells, ponds, drinking water tanks, irrigation channels. Other infrastructures being promoted are WBM & CC Roads, additional class rooms, anganwadi, school boundary wall, farmer learning schools.
13)	AFU V	12 villages of ADP Ratlam, Madhya Pradesh under the project titled Ratlam Watershed Project supported by New Zealand Govt.	Planning and implementation support for SWC measures and promotion of participatory approaches. Among the measures being facilitated are masonry stop dams, check weir, continuous contour trenches(CCT), loose boulder check dam (LB CD), stop dams and culverts, wells for drinking water and irrigation, drip/sprinkler and lift irrigation systems, pond renovation, field bunds, nala bunds, tree plantation on bunds, promotion of seed banks, and improved farm equipment.

14)	AFU V	16 villages of ADP Aparajita, Lalitpur District, Uttar Pradesh	Socio-technical support for planning and implementation of land reclamation, field bunds, water harvesting structures
15)	AFU V	11 villages of ADP Hoshangabad, Madhya Pradesh	Planning the renovation of a culverts, earthen & masonry dams, farm bunding, nala bunding, borewells and hand pumps, recharge of wells, scheme for UNICEF promoted wise-water management, promotion of livelihood activities
16)	AFU V	11 villages of ADP Dewas, Madhya Pradesh	Planning drinking water tanks, drainage channels, culverts, construction and deepening of ponds, construction of toilets in schools, as well as additional class rooms, school boundary walls, community hall and park, and CC Road.
17)	AFU V	12 villages of ADP Baran, Rajasthan	Socio-technical support for planning and construction of masonry stop dam, deepening and renovation of ponds, construction of masonry diversion dams, irrigation channels and murrum roads
18)	AFU V	10 villages of ADP Betul, Madhya Pradesh	Planning a masonry stop dam, loose boulder check dam, stone bunding and cleaning of land.
19)	ATF R	14 villages of ADP Mahasamund, Chhattisgarh	Planning and facilitation of construction of 3 Lift irrigation Schemes, 2 Check Dams, 1 Pond, 9 siphons and construction and renovation of 9 Canals for the benefit of approximately 400 households.
20)	ATF R	9 villages of ADP Rajnandgaon, Chhattisgarh	8 check dams, 2 boulder check dams, 1 stop dam and 1 head regulator in a pond for the benefit of 265 farmers
21)	ATF R	12 villages of ADP Durg, Chhattisgarh	Planning and facilitating 16 check dams, 1 stop dam and 1 siphon structure for the benefit of approximately 500 households.

Mansingh Hansda at a farm pond constructed on his field at village Sakri in ADP Godda, Jharkhand



Water and Sanitation

Verification of PRI applications for Nirmal Gram Puraskar

State	Andhra Pradesh
Location	174 Gram Panchayats in 9 districts
Collaborating Agency	Ministry of Rural Development, Government of India

Nirmal Gram Puraskar (NGP) launched by Government of India (GoI) in 2005 created a platform for motivating grassroots level stakeholders in promoting and adopting sanitation and hygiene practices. It was initiated to strengthen the efforts of Total Sanitation Campaign (TSC), India's flagship sanitation programme. Till date, NGP continues to be unique internationally as it attempts to influence sanitary habits through democratic channels. By focusing on Gram Panchayat (GP), the smallest unit of Indian democratic setup, NGP has created a prevailing sense of consciousness among GP leaders and community members regarding sanitary habits. This it is hoped will stimulate a permanent change in sanitation behaviour among rural communities across the country.

AFPRO has been supporting NGP verification process since 2006. In the year of reporting, AFPRO undertook verification exercises in 174 GPs across 9 districts of Andhra Pradesh. Out of these, 90 GPs were recommended for the NGP.

However, there are reports from different regions that NGP awardees are slipping back from their open defecation free status, which was mandatory for the recognition. While the actual statistics regarding these instances need to be enumerated, their occurrence within such a short time gap points to the fact that actual behavioural change has not taken place. In fact GoI recognized this factor and introduced additional norms for NGP. These norms are as under

- The applicant GP should have adopted a resolution in Gram Sabha to ban open defecation within the area of GP. The resolution must include provision of imposing suitable penalty on the offenders and system to prevent open defecation.
- All public water sources to have proper platform and drainages around them.
- The Panchayati Raj Institution (PRI) must have functional mechanism for household garbage disposal and a functional drainage system and cleanliness should be maintained in inhabited areas.
- The PRI should not have applied, and been disqualified for NGP thrice during the previous years.
- Only 50% Panchayats can be recommended for NGP from any level by the verifying agency

Health psychology theory propagates the Transtheoretical Model which looks at behavioral change as a long term process over five stages - Pre-contemplation, Contemplation, Preparation, Action and Maintenance. If applied to sanitation promotion programmes this would mean sufficient time and repeated efforts need to be planned in order to make communities adopt new sanitary habits permanently. In the case of NGP verification methodology, it would not be possible to observe and measure such permanent change in one visit and periodical revisits may be required. 'Nirmal Gram' is a concept of long-term quality of life rather than quantitative targets, which may sometimes take an entire generation to fructify.



Communication modules demonstrated on the walls of a toilet complex at village Nadargul, Ranga Reddy District. Good models at villages demonstrate an overall appreciation of the sanitation campaign.

Rural Water Supply & Sanitation (Aaple Pani) Project

State	Maharashtra
Location	District Ahmednagar
Collaborating Agency	Government of Maharashtra under a project with KfW, Germany

Government of Maharashtra has been promoting reform in the state's water supply and sanitation sector through the last decade. This reform has been aimed at increasing access of rural communities to improved water and sanitation facilities and ensuring decentralization of the management of such facilities to village level institutions and PRIs. In effect, the planning, implementing and management of water and sanitation infrastructure is now being addressed at the community level, after appropriate capacity building is extended to them. Aaple Pani Project is another project on the same lines and is being implemented in three districts, Pune, Aurangabad and Ahmednagar.

AFPRO Field Unit I is participating in the Aaple Pani Project as capacity development partner for the district of Ahmednagar. The project is being implemented in 75 villages across 12 blocks of the district. In its role, AFPRO has developed specific capacity building modules and training materials to improve functional competencies among local government institutions and other project stakeholders. AFPRO is also facilitating project stakeholders in the development of capacity building plans for villages.



A training session in progress in Shrigonda block, District Ahmednagar

AFPRO is addressing both these objectives by drawing from its long-standing experience and knowledge in the promotion of sustainable socio-technical interventions for water resource management in rural areas through the capacity building of community based institutions and local support NGOs. While the project initially required AFPRO to provide inputs at the district level, capacity building events were conducted at block level. This decision was based on a request of District Project Management Unit (DPMU), for enhancing participation levels as well as effectiveness of capacity building events.

During the year of reporting 21 trainings programmes have been conducted for district and block officials, support organizations and technical support providers. Themes for training have included issues like water conservation & management, women's development, technical aspects like repair & maintenance of hand pumps, and institutional matters like financial management and exit policy at the end of the project.

Rain Water Harvesting with Indian Oil Corporation Limited

State	Assam
Location	Guwahati Refinery & Refinery Township Sector-II
Collaborating Agency	Indian Oil Corporation Limited (IOCL), Guwahati

Depleting aquifers near industrial complexes indicate the need for urgent action to promote groundwater recharge on large scale. Rainwater harvesting (RWH) has great potential in contributing to the restoration of these natural underground water banks. Land-based water conservation activities have already picked up great momentum in rural areas through various watershed development techniques over the past 2-3 decades. However, urban areas and industries also need attention as both the large populations inhabiting cities as well as industrial set ups are heavily dependent on groundwater resources. In many cases such groundwater resources are already severely depleted. In urban areas, this situation is further hampered by the fact that greater proportion of land in cities is 'covered' leaving limited scope for natural rainwater recharge.

Taking a lead on the issue, Indian Oil Corporation Limited (IOCL), Guwahati requested AFPRO to provide technical support for RWH in its plant area and storm water harvesting in its township. AFPRO will also be providing technical supervision and monitoring support for implementation of the project. AFPRO has submitted a DPR recommending appropriate RWH structures suggesting that rainwater harvested be partially directed for recharge and

partially for domestic use or supply to water scarce localities nearby.

Increased depletion of surface and groundwater sources within cities means a corresponding increase in dependence on water sources from neighboring regions. Therefore, it makes a compelling argument that city inhabitants use their covered spaces and large populations as a RWH advantage in order to replenish water to nature through recharge to groundwater. This necessitates policy on urban RWH to complement efforts across the country and create a sense of accountability regarding water use. Chennai's experiment with RWH, though it had to be imposed by State Government with punitive threats, has had the desired impacts on increasing water tables. Making RWH mandatory in official and residential complexes with proper geo-hydrological planning has definite rewards in the form of groundwater recharge.

WATER QUALITY SURVEILLANCE

AFPRO's involvement in Water Quality management has developed into a thematic model after its experience with the UNICEF promoted "Multi - District Assessment of Water Safety (M-DAWS) Project in Chhattisgarh from October 2006 to September 2007. This year AFPRO undertook two projects on these lines that are enumerated below.

Water Quality Surveillance & Mitigation

State	Chhattisgarh
Location	District Dantewada
Collaborating Agency	UNICEF

Continuing with partnership initiated under the M-DAWS programme and subsequent projects, AFPRO and UNICEF Raipur are implementing the water quality strategy in 4 relief camps in Konta block and 28 villages of Sukma and Chhindgarh blocks in Dantewada District, Chhattisgarh. These villages and relief camps suffer from acute drinking water distress, and depend on hand pumps for drinking water.

By first generating data regarding quality of drinking water sources, and then linking it back to stakeholders for increasing their levels of awareness, desire for improvement and enhanced capacity, and finally implementing a detailed response plan, the project strategy provides a community centred location-specific model. Sanitary Surveillance concept used in this partnership, with particular reference to factors that harm water quality and can be rectified or mitigated with due diligence, promotes the notion of

pro-active individual ownership and responsibility for sanitation.

Activities implemented during the reporting period have had a good impact on the communities involved. Sanitary surveillance of drinking water sources which included field level water quality checks, further substantiated by laboratory tests, in required cases have been carried out. Awareness generation, and feedback of water quality data to communities, followed by capacity building of volunteers and community functionaries has also been carried out. Detailed response plan has been drawn out based on the water quality scores and shared with the community.

Impact of these interventions is clearly seen in the conviction regarding water quality that is noticed amongst community members and their acute concern regarding remedial action. An important tactic that helped promote the issue was highlighting the direct linkages between health of children, the quality of water they consume and sanitation in the vicinity.

During the year of reporting, the following activities were undertaken by AFPRO

- 518 hand pumps from the three blocks Sukma, Chhindgarh & Konta have been studied for sanitary conditions and water quality.
- 32 local youths have been trained on operation and maintenance of drinking water sources, with special training on handpump repair and maintenance, and



Training of locals on hand pump repair and maintenance at village Sukma, District Dantewada



Fencing provided at a hand pump to protect it from animal intrusion at village Ratinaikras, Chhindgarh block, District Dantewada

well-equipped technicians have been developed at the grassroots level.

- Water user's groups have been formed for the same purpose.
- 200 Anganwadi workers and helpers have been trained on water, sanitation and hygiene.
- UNICEF is also promoting usage of toilets among children and aims to ensure that at least 50% school children use toilets. AFPRO supported the implementation of 69 sanitation units in Dornapal camp by overseeing the completion of civil works, water supply, and appointment of cleaning staff.
- Considering the water distress during the summer season, AFPRO has also suggested water recharge measures in open areas around the schools near the four relief camps.

Water Safety Plan

State	Chhattisgarh
Location	District Rajnandgaon
Collaborating Agency	UNICEF

World Health Organization (WHO) in its "Guidelines for Drinking-Water Quality" has suggested developing processes for ensuring drinking water quality through comprehensive risk assessment and risk management approach at all steps in water supply under a "Water Safety Plan". AFPRO Task Force, Raipur is implementing project on the lines of these WHO guidelines, promoted by UNICEF Raipur and PHED – Rajnandgaon. Lessons from the M-DAWS project are being taken forward under this project. These learnings included –

- a necessity to undertake sanitary surveillance of drinking water sources for verifying water quality,
- planning specific response plans for remedial action,

- training local technicians on repair and maintenance of water supply infrastructure like hand pumps and piped water supply schemes, etc,
- capacity building of local communities and all stakeholders at block and GP levels on water quality, sanitation and hygiene.
- special focus on capacity building of women, anganwadi workers and youth on maintenance of sanitation around hand pumps and piped water supply schemes
- promoting institutionalization of the process of sanitary surveillance.

Water quality needs to be considered as a value of water right from its source, to its collection, storage, handling, distribution and usage. Thus water quality should be preserved at each of these stages from “catchment to consumer” and is essentially a continuum of surveillance.

Hence the project objectives have been identified as minimization of source contamination, reduction or removal of contamination and prevention of contamination at each of the stages.

WSP modules, if adopted widely, will bring many more water sources that have bacteriological contamination under the potable category, directly benefiting the health of all those that are dependant on them. The project documents state “WSP moves away from sole reliance on results from end product testing of water and towards a process of quality assurance and preventative risk assessment and risk management founded on health based risk targets.”

Looking at water quality from the perspective of project cycle, WSP involves monitoring as the first step, identification of the sanitary risk as well as corrective action as the second step, and verification as the final step.

For purposes of the WSP project, the processes were planned on similar patterns as recommended by the initial M-DAWS project. Activities carried out in the reporting period are given below:

- 52 villages were surveyed from 20 GPs in Rajnandgaon district- 33 villages of 14 GPs in Chowki block, and 19 villages of 6 GPs in Mohala block.
- Of the 461 hand pump (HP) sources, 30 were non-functional, while total number of piped water supply (PWS) schemes were 23 of which 6 were non-functional.

Based on the Sanitary Risk Scores and H₂S vial tests, it has been found that 69% of the HPs fall in the medium risk category, and 22% in the high risk category, hence needing remedial action. In the PWS systems, the proportions are reversed with 35% in the medium risk category, and 59% in the low risk category.

Majority of HPs need corrective measures in terms of repair and maintenance of the apron or drainage channels, developing waste water and solid waste management systems, measures for preventing animal intrusion, and other sources of pollution. About 33% of the HPs platforms and 23% HP drainage lines need to be either repaired or replaced.

Similar is the case of HP assembly components in a majority of the cases, with action needed for rectification either through repair or replacement. Components above the ground level that showed higher incidence for replacement were bearing, third plate, flange bolt, handle and axle. Below the ground level riser pipes, connecting rods, cylinder checking and cup washers, were major components needing remedial action.

In PWS schemes, remedial action needs to focus on the head and intermediate stages only.

Attention needs to be paid to setting up bathing & washing platforms, soak-pits or kitchen gardens for drainage, and sanitary seals so as to prevent contamination of drinking water sources.

These faults, if not rectified, can cause microbial contamination of water sources and lead to the spread of water borne health issues, especially during the rainy season.

Awareness building activities, on the importance of sanitary conditions around the sources, were also carried out at the community level, while conducting sanitary surveillance and assessment of HPs at different GPs.

In fact, in many cases, impact of awareness building measures that accompanied sanitary surveillance processes have been instantaneous, and resulted in cooperation for on-the-spot corrective action. With a little mobilization, the community came forward to undertake tasks such as cleaning and excavation of drainage line, cleaning the area around the sources, and ensuring proper disposal of water.

Human and Institutional Development

United Nations Climate Change Conference in Copenhagen

The United Nations Climate Change Conference held in Copenhagen, Denmark from 7 – 19 December 2009 was the biggest global conference on the theme up till now. 120 Heads of State and Government, 10500 delegates, 13500 observers participated in the conference, and 3000 media representatives covered the event. Difficult decisions need to be taken by all countries to respond to climate change and this conference has been a giant platform for global cooperation and resolution towards that end. Political heads of many countries registered their presence at the time of finalizing the accord, making it a historic UN conference.

Main sessions of the conference were the Fifteenth Conference of Parties (COP 15), the Fifth Conference of Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 5), and sessions of Subsidiary Bodies and Working Groups under both the UNFCCC and Kyoto Protocol. More than 1000 official, informal and group meetings were conducted among Parties to negotiate and agree on international resolutions and national responsibilities. Observers at the conference recorded more than 400 meetings where they discussed climate change and its international ramifications, and 200 side events were also on offer. Over 300 press conferences were conducted during the 13 day event. Besides 220 exhibits were organized by the UN, Parties, international agencies and civil society.

COP is UNFCCC's highest body comprising environmental ministers of the Parties that meets annually. COP 15 faced the urgency to establish a consensus based global climate agreement for the period beginning with 2012, when the first commitment period under the Kyoto Protocol was to expire.

AFPRO participated in the conference under the group representing Forum for Collective Forms of Cooperation, one

of the networks where AFPRO is a member. Mr. Pradip Kumar, Principal Specialist Cum Coordinator, AFPRO Head Office, was deputed to participate in the Conference as delegate in order to gain more insight into the policy level processes and current knowledge on climate change, as well as to share its experiences and build linkages with international stakeholders.

Opinions regarding the success of the conference are varied. The Copenhagen Accord has been adopted by 112 Parties (111 countries and the European Union). Most developed countries, including the new global powers, India, China, have agreed on the provisions laid down in the Accord. However, many developing and under-developed countries are of the view that the Accord is not sufficient and does not promote equity and justice in economic arrangements and emission reduction trade-offs.

A total of 23 decisions were adopted by the COP and the CMP. COP 15 had special focus on greenhouse gas emission reduction targets in terms of gaining commitment to existing targets and identifying new targets and commitment periods. Further discussions were held on strengthening the rules governing the Clean Development Mechanism for environmental integrity and avoiding greenhouse gas emissions. Inclusion of Carbon Capture and Storage Technology, which has not been proved, under the Clean Development Mechanism was also discussed. Reducing Emissions from Deforestation and Degradation (REDD), where measures to curb the rate of deforestation, especially of tropical rainforests in developing countries, are being encouraged, were also further discussed. Draft decisions were also taken on other aspects of adaptation, technology and capacity-building. However, negotiations on the Bali Roadmap could not be concluded.

Benefits accrued to AFPRO from participating in the conference are summarized below:

- Experience at the conference will help in developing an enhanced socio-technological perspective and vision

for the future through innovative models for policy advocacy, including identifying the scope for renewable energy options in rural India.

- AFPRO was able to develop linkages with agencies working in similar fields and share its experiences from the program Vulnerability Assessment and Enhancing Adaptive Capacities to Climate Change in Semi-Arid Regions of India, apart from its vast experience in natural resource management.
- Many documents regarding adaptive technology and processes have been collected from various agencies and exhibits at the conferences, and will help AFPRO in developing its programme strategies and proposals.
- An important meeting AFPRO participated in was on the promotion of renewable energy organized by International Renewable Energy Agency (IRENA). Established on 26 January 2009, 137 states have signed the Statute of IRENA, giving it the mandate for promotion of rapid global adoption of renewable energy. IRENA aims to provide practical advice and support for improved frameworks and capacities, as well as facilitating access to reliable information on best practices, effective financial mechanisms, and state-of-the-art technological expertise. AFPRO shared its experiences at the meeting and is in touch with IRENA regarding opportunities for working together.

CII Seminar on E-enabled Development : E-Agriculture in India's Current Progress Canvas

Information Technology (IT) benefits need to be extended to rural areas that are separated from urban locations by what is known as the digital divide. In this context, there is a huge potential for knowledge and technology transfer via information technology to vast majority of India's rural population.

E-agriculture refers to the use of IT facilities, especially the power of internet for information dissemination and sharing with farmers in rural areas through information kiosks. ICT and Capacity building are recognized as key HID techniques for building knowledge of poor and marginal farmers. These HID techniques need to be integrated with rural community centric IT models for effective e-agriculture systems.

Rural communities need to be empowered with information for each stage of their occupation, from the time of cultivation to marketing and sale of produce.

- Technological inputs and advice are required for determining land-use, cropping patterns, management of water resources, irrigation, pest and disease management, crop-weather linkages, and even appropriate breeds of livestock suitable to local situations.
- At the harvesting, threshing and storage stage, farmers need information not just about proper methods and practices, but also appropriate technology and innovations being practiced across the world which would help them innovate on their own. This apart they will be in touch with updated learning and best practices, and gain from scientific advances regarding crop specific approaches.
- At the marketing stage, farmers are further benefitted by information regarding prevailing price of the crop in various markets for improved negotiation, linkages with the market, and even online transactions, empowering farmer with the choice to transact.

Developing e-Agriculture will require extensive collaboration between all stakeholders – government agencies, private sector, NGOs and rural communities themselves. E-agriculture is in a formational stage in India; however the success of ITC e-choupal in providing information to farmers, including pricing information, and procuring their produce, has been recognized. Interest is



Ms. Helene Pelosse, Director-General of the International Renewable Energy Agency (front row - third from right) poses with representatives of NGOs after the meeting on 15th December 2009.

visible at various levels, including the Confederation of Indian Industry, which hosted a Seminar on “E-enabled Development : E-Agriculture in India’s Current Progress Canvas” in July 2009 at New Delhi.

Mr. S. C. Jain, Programme Coordinator, AFPRO was invited as a speaker at the Seminar, and spoke on the theme “Community Organisation & Capacity Building Through ICT for Ensuring Food Security” based on AFPRO’s recent experiences in the use of ICT. Among the important dignitaries who graced the occasion were Shri Sachin Pilot, Hon’ble Minister of State for Communication & IT, Gol who made the keynote address; Mr. Ganesh Natarajan, Chairman, CII National Committee on IT, ITeS & e-Commerce; Mr. Rakesh Bharti Mittal, Chairman, CII National Council for Agriculture; Mr. T Nand Kumar , Secretary, Department of Agriculture & Cooperation, Ministry of Agriculture, Gol; and Mr. Chandrajit Banerjee, Director General, Confederation of Indian Industry.

AFPRO built its case around the challenges of Indian agriculture seen as opportunities for growth among marginal farmers through the looking glass of ICT for community organization and capacity building.

- With more than 60% of the Indian population being dependent on agricultural livelihoods, the majority of them illiterate, holding 1-3 acres of land, engaging in subsistence farming based on traditionally inherited practices and earning an average income of Rs. 50-100/- per day, India faces a big challenge.
- However the constraints that hold them back - acknowledged as lack of farmer’s organization, fresh produce supply chains, access to improved production and postharvest technology, lack of effective farmer market information systems - can easily be overcome through ICT for capacity and knowledge development.
- The rewards of these efforts will be reaped through the wide net of opportunities available. For one, there is a gigantic demand for reliable supplies of fresh quality produce. Secondly, there is growing demand by consumers for safe, hygienic vegetable and fruits. Thirdly, organized retailers are also turning more and more to small and marginal farmers for supplies.
- Hence the impact of e-agriculture based on ICT is transformative and needs to be planned for all stages of agricultural practice - demand forecasting, crop planning, input planning, farming operation, transport scheduling, post harvest operation and storage.

Learning gained by AFPRO in three projects - a) Better Management Practices in Cotton implemented in Maharashtra, b) Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Regions, c) Partnership for Innovation and Knowledge in Agriculture regarding an ICT-enabled mobile phone application called freshConnect – were placed before the audience. These depicted how information dissemination and capacity building efforts can have positive game-changing impact.

Local natural resource conditions have a strong say in the nature of agricultural practices suitable to poor and marginal farming communities, and need to be taken care of while planning e-agricultural systems. Such inputs would need to be planned with local farmers themselves incorporating lessons from local situations. There is need to integrate location specific inputs based on farmer participation and traditional knowledge on the one hand, and agricultural planning based on appropriate technology and linkages with regional resource centers for up-to-date information and best practices, on the other. This will ensure that farmers are equipped with the basket of information and knowledge support for improved decisions.

FreshConnect, the ICT-enabled mobile phone application referred to above, offers a wide array of information on technical aspects and supply chain management, with user friendly features, and can be accessed through Windows Mobile Smartphones and low-end mobile phones. Information can be made available to farmer’s cooperatives, input suppliers and buyers, field extension agents, and technical experts.

In conclusion, AFPRO made few concrete recommendations for planning e-agricultural systems in Indian context.

- First, the application has to be developed on a community-centric principle, based on participatory approaches, and primarily for promoting their food security and livelihoods
- Secondly, learning from the community is integral to recognizing and developing knowledge regarding local situations that are so diverse in geo-hydro-thermo regimes, and hence the need for introducing information technology into such areas based on this learning.
- Thirdly, advanced and up-to-date scientific knowledge needs to be integrated in demystified manner for understanding by illiterate and uneducated farmers, and with this crucial step alone e-agricultural system will be relevant for use by vast majority of India’s poor and marginal farmers.

TRAININGS CONDUCTED BY AFPRO

AFPRO's Capacity Building interventions are a very important component of its strategy for technology transfer. Capacity of rural communities is developed through training events focusing on demystifying knowledge and skills on various development aspects with regard to local level natural resource management for improved and sustainable livelihoods. Capacity building component is built into programme plans and scheduled according to the processes adopted.

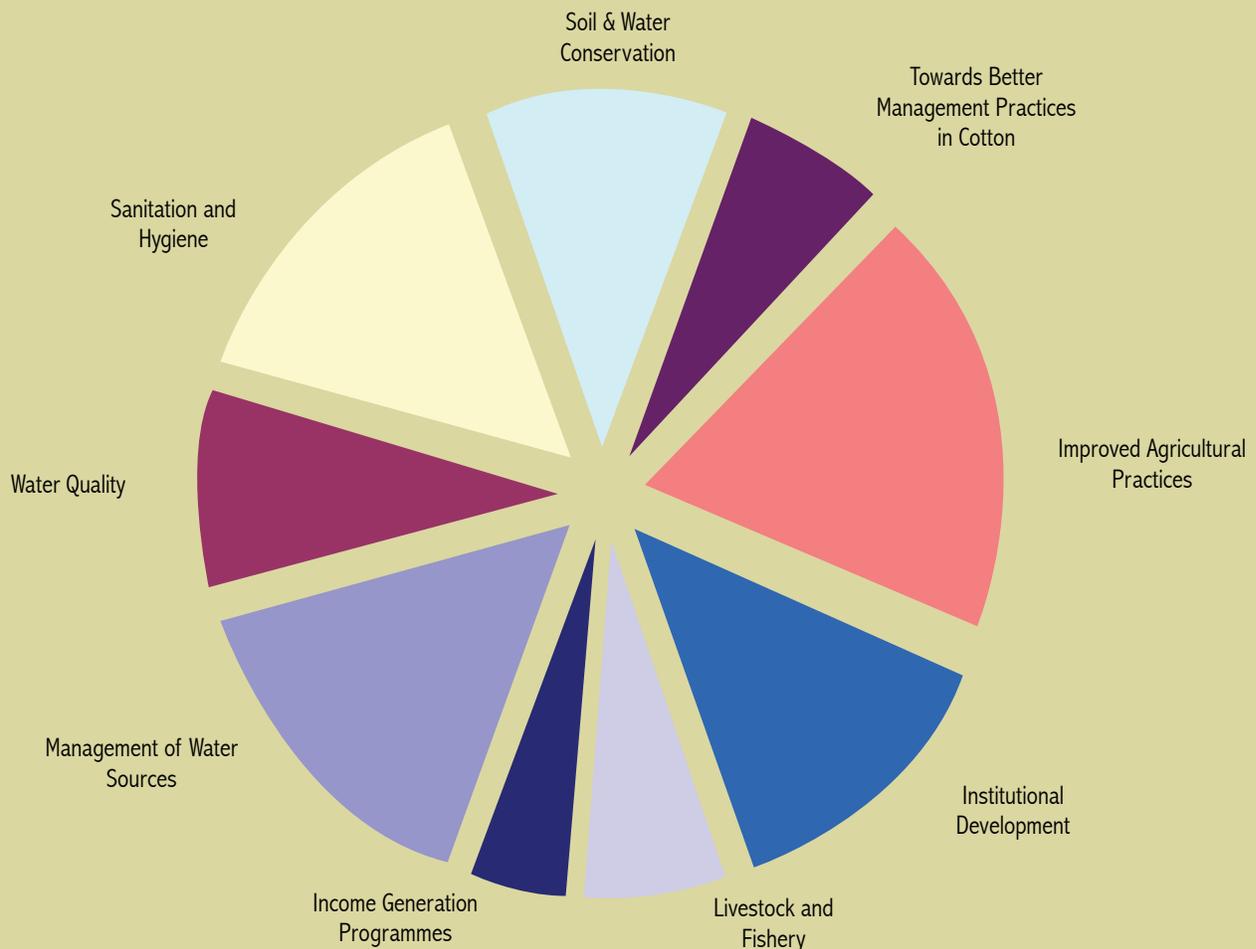
The following pie-graph demonstrates AFPRO's thematic focus in capacity building during the reporting period. This includes events under programmatic interventions as well as those where AFPRO staffs were resource persons for various training events. Following the pie-chart, a report is provided on a series of training events conducted under the Indo-German Watershed Development Programme, Rajasthan, as a model of AFPRO's wider grassroots capacity building approach.

Training on Land-Use Planning & On-Site Soil & Water Conservation

NABARD Jaipur is implementing the Indo-German Watershed Development Program (IGWDP) in tribal dominated areas in Rajasthan. 30- 40 watershed development projects are being implemented in the 5 districts of Banswara, Chittorgarh, Dungarpur, Pratapgarh & Udaipur by 15 NGOs working in the region.

AFPRO Field Unit III, Udaipur is working as a nodal agency in the project for capacity building of Village Watershed Committee (VWC) members and farmers under the project. The prime objective of the programme is to create awareness among community and farmers for judicious use of land and water resources, and effective watershed management by adopting low cost and simple technologies. The training was segmented in two themes: land-use planning and on-site soil & water conservation.

Theme-based Representation of AFPRO's Capacity Building Activities





The broad areas covered under both the themes are:

Land - Use Planning

- Factors affecting land classification, which are land slope, soil erosion, soil depth, soil type etc.
- Measurement of land slope, status of soil erosion, soil depth, soil type etc.
- Land-use as per land classification.
- Net returns from farm activities in long duration through proper land management.
- Possible land treatment to improve land class.
- Cropping pattern, crop rotations, mixed cropping, crop water requirement, and simple techniques of sloping cultivation, dryland farming, orchard development, pastureland development, irrigation systems etc.

On – Site Soil and Water Conservation

- Need and importance of watershed development.
- Community participation in watershed development.
- Benefits of soil and water conservation.

- Vegetative and mechanical measures of soil and water conservation.
- Site-specific treatment in the watershed with help of locally available resources.
- Low-cost and simple technologies in selecting appropriate measures.
- Sustainable agricultural production.

In the reporting period, 30 training events on 'Land-Use Planning' and 11 on 'On-Site Soil and Water Conservation' have been conducted for Village Development Committee (VDC) members. It was observed during the training events that illiteracy and lack of awareness about development programmes were major hurdles in building understanding amongst the beneficiaries on watershed and soil & water conservation issues.

International Training Programme at The Netherlands

Dr. Pranaya Parida, Fisheries Specialist was selected for NFP fellowship by the Netherlands Embassy. He attended a three weeks training programme on "Participatory Fisheries Governance" in Wageningen University, The Netherlands from 25th May 2009 to 12th June 2009.

BUILDING LINKAGES

Freshwater Action Network, South Asia

Freshwater Action Network (FAN) has recently established its South Asia Network, called FANSA. A major international network of civil society organizations, FAN works on issues related to water and sanitation policy and practices. It works to improve water governance by strengthening the role of civil society in decision-making, linking the environmental and developmental agenda, for realization of the right to water and sanitation for present and future generations.

FANSA is built upon chapters of member countries from South Asia namely Bangladesh, India, Nepal and Pakistan. In India the FANSA network is active in 9 states namely Andhra Pradesh, Tamil Nadu, Karnataka, Orissa, Jharkhand, Madhya Pradesh, Gujarat, Maharashtra and Uttar Pradesh. The convener organizations have been identified and the state level advocacy action plans have been already prepared for these states.

AFPRO Field Unit I, Ahmednagar participated in the National Meeting of FANSA at Hyderabad on 2 - 3 September 2009 and on the basis of the discussion held during the meeting a concept proposal was prepared on developing the State Level Chapter of FANSA. As an outcome of this, AFPRO has been identified as an anchor organization cum state convener for FANSA Maharashtra chapter. Since October, AFPRO is working as the lead agency for the state chapter after entering into a one-year agreement with Modern Architects for Rural India (MARI), the anchoring organization for FANSA India.

Interventions made by AFPRO under the project are:

1. A Regional meeting with NGO partners in Vidarbha region was organized during which representatives from 15 NGOs participated
2. Met with Department of Water Supply and Sanitation, Government of Maharashtra and held discussions with officials from Reform Support and Project management Unit (RSPMU), Mumbai regarding the FANSA network.
3. Facilitated a State Level Consultation on Right to Water & Sanitation at Ahmednagar in which 31 participants from 25 NGOs across the state participated.

Road Side Tree Plantation Project

AFPRO Field Unit I, Ahmednagar is working as the main implementing agency for a tree plantation project supported by corporate entity Sterlite Technologies under its CSR initiatives. The main objective was to plant trees along the highway from Aurangabad to Pune as

a corporate response on global environmental concerns. Sterlite Technologies provides transmission products & solutions for evolving applications in the global telecom and energy industries. AFU I is overseeing the three year project and also providing technical and capacity building support. AFPRO is supporting this primarily environmental venture in order to develop linkages in the Corporate Sector and promote the cause of supporting livelihoods for poor and marginal communities based on natural resource management

Activities were initiated with pilot activities on a 2 Km stretch about 10 kms away from Ahmednagar in the direction of Aurangabad in order to develop a model for road side plantation through adoption of low cost technologies. So far 600 trees have been planted and it is planned to complete the target of 1000 trees by end of June 2010. The beneficiaries are mostly farmers in the locality who have volunteered to plant and care for the trees. Mobilization, awareness building and capacity building of these farmers on planting and managing trees have been conducted. The process adopted for tree plantation is as follows:

- Time to time meetings and consultations with the beneficiary farmers to enhance their participation
- Adoption of pit size of 0.6 x 0.6 x 0.6 m (0.216 cu m) for the saplings of dry land horticulture species and general species.
- The general species used for plantation are Neem, Glyricidia, Kashid, Bamboo, Karanj, and for dryland horticulture the species like Amla, Custard Apple, Tamarind and Ber.
- Keeping a 4m distance from plant to plant.
- Use of loose good quality soil for refilling and 20% of farm yard organic manure to ensure proper aeration and growth of the plants.
- Need based use of fertilizers and pesticides over a period of three years.
- One weeding and one mulching per year over to ensure proper growth of the plants.
- Adoption of fencing with bamboo material/ vegetative fencing for protection of the plants.
- Installation of a sign boards at every 200 m interval in the plantation area.

- Two, four and eight waterings per month in the rainy, winter and summer season respectively by, engaging the services of private water suppliers through tankers.

Study on Restoration of Dying Lakes - A Case Study on Balsamand Lake in Jodhpur

In an effort to improve its knowledge on lake hydrology, a theme on which AFPRO has already worked on in the city of Coimbatore, AFPRO Field Unit III, Udaipur conducted a technical study for the restoration of the Balsamand Lake in Jodhpur Rajasthan. The study was conducted for an NGO, Sustainable Planet Institute. Lakes, as water bodies, are among the most neglected water bodies today. Due to increased urbanization, and dependance on piped water supply schemes and hand pumps, focus is either on groundwater sources or large rivers. Hence, attention is riveted on the care for such water supply oriented facilities. Watershed development programmes too have a focused mandate for promotion of land and water resource management interventions that are manageable by the community.

Many lakes are thus in a dying state, even though as mainly freshwater sources, they contribute in a significant manner to local ecosystems. Balsamand, which is slowly dying, has reached this stage not only due to neglect in its maintenance but also on account of large scale unplanned mining in its catchments.

AFU III Udaipur undertook a study focusing on causes behind degeneration of environment around Balsamand Lake and look for potential solution.

Accordingly, the technical aspects were considered based on a topographical survey, demarcation of catchments, study of satellite images, evaluation of old diversion canals, and analysis of other aspects such as run-off, silt and debris in the drainage, and water quality. Interestingly, after assessing the technical requirements for immediately checking the death of the lake, AFPRO perceived that the real cause was a lack of social ownership of the lake, without which full restoration would not be possible. Hence, as recommendations, AFPRO suggested developing a stake holder forum that would initiate the following activities.

- Lining of water course to reduce canal seepage in the mining area to immediately control loss of water.
- Designing and implementing “water-free” mining
- Regeneration of vegetative cover
- Developing a Desert Garden in the lake’s indirect catchments
- Initiate a long term perspective plan to evolve a programme that would help to find out a sustainable mechanism to restore the Lake to its full potential.

Water levels at the the Balsamand lake in Jodhpur are very low today. In olden times, the lake used to be full and was the main water source for the city.



Financial Statements

ACTION FOR FOOD PRODUCTION, NEW DELHI

Balance Sheet as at 31st March 2010

Particulars	31st March 2010 (Rs.)
SOURCES OF FUNDS	
Funds and Reserve	82,924,475.97
Programme Balances	4,477,282.68
TOTAL	<u>87,401,758.65</u>
APPLICATION OF FUNDS	
A) Fixed Assets	
i) Gross Block	67,179,288.87
ii) Less: Depreciation	51,492,283.55
iii) Net Block	15,687,005.32
iv) Capital Work in Progress	-
	<u>15,687,005.32</u>
B) Investments	38,614,929.00
C) Current Assets	
i) Interest Accrued on Deposits	3,649,312.60
ii) Recoverables & Prepaid Expenses	6,487,706.90
iii) Cash & Bank Balances	31,880,984.57
	<u>42,018,004.07</u>
D) Less: Current Liabilities & Provisions	8,918,179.74
Net Current Assets	<u>33,099,824.33</u>
TOTAL	<u>87,401,758.65</u>

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

Cyriac Mathew
 Manager - Administration & Finance

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

Fr. Varghese Mattamana
 Treasurer

Martin P. Pinto F.C.A
 for Pinto M. P. & Associates
 Chartered Accountants

Place: New Delhi
 Date: 14-09-2010

ACTION FOR FOOD PRODUCTION, NEW DELHI

Income & Expenditure Account for the year ended 31st March 2010

Particulars	31st March 2010 (Rs.)
INCOME	
Programme Contributions	4,206,569.00
Training Course Receipts	-
Miscellaneous Receipts	745,722.54
Sale / Disposal of Assets / Old Items	150,736.50
Interest - Savings & Deposits	341,765.43
TOTAL	<u>5,444,793.47</u>
EXPENDITURE	
Core Integrated Development Programme	
Human and Institutional Development	963,939.01
Socio - Technical Personnel Cost	25,812,813.57
Outreach Support	2,534,711.19
Information Services	237,509.80
Administrative Cost	
Admn. - Personnel Cost (F & A)	4,093,898.01
Outreach Support	293,538.91
Office Expenses	3,639,430.46
Hired Services	1,438,052.00
Capital Expenses	438,210.00
ED's Discretionary Fund	139,000.00
	<u>39,591,102.95</u>
Excess of Expenditure over Income Transferred to :	
Programme Fund	(31,440,174.47)
AFPRO Ruby Jubilee Fund	(2,706,135.01)
TOTAL	<u>5,444,793.47</u>

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

Cyriac Mathew
 Manager - Administration & Finance

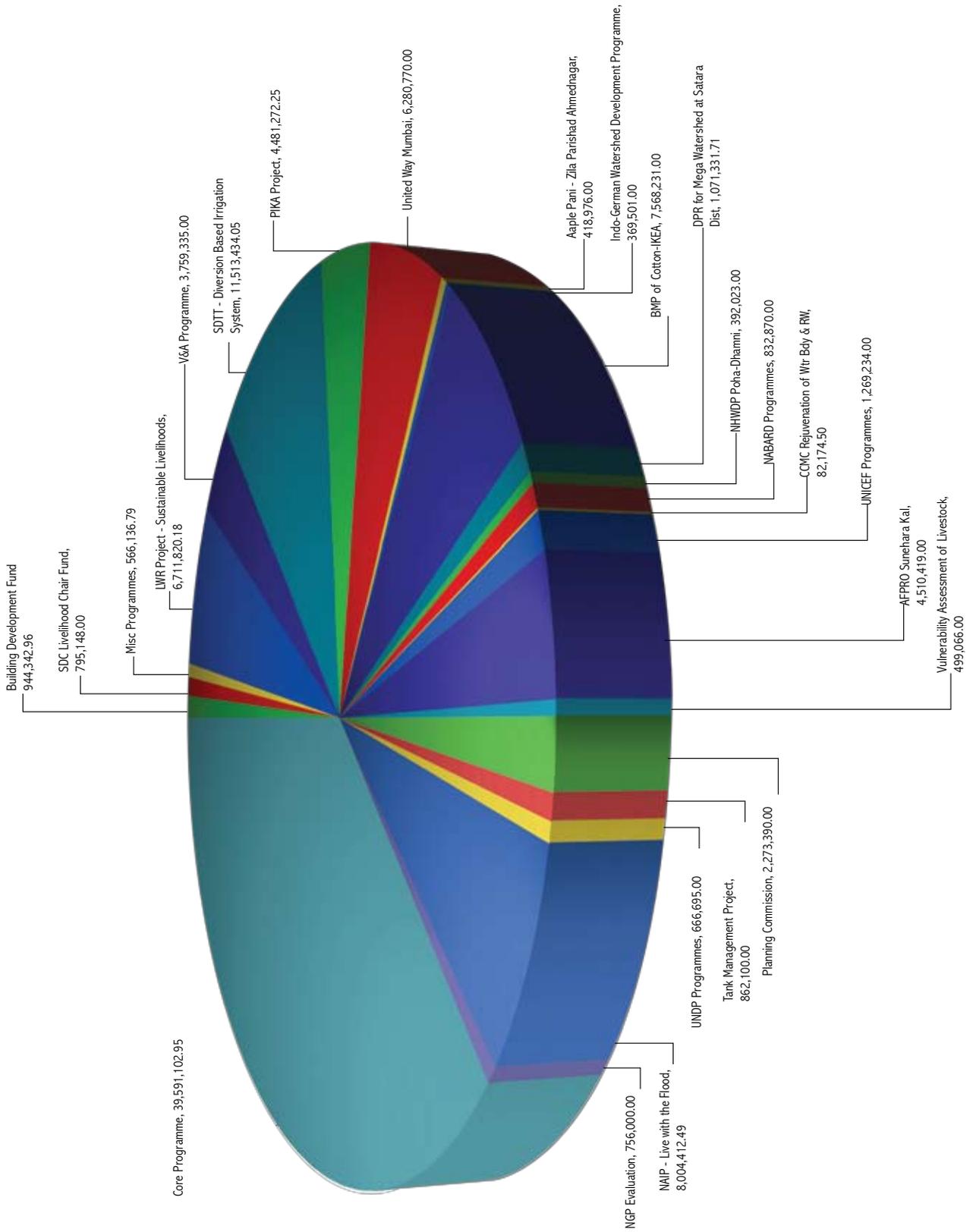
D. K. Manavalan IAS (Retd.)
 Executive Director

Fr. Varghese Mattamana
 Treasurer

Martin P. Pinto F.C.A
 for Pinto M. P. & Associates
 Chartered Accountants

Place: New Delhi
 Date: 14-09-2010

EXPENDITURE ON AFPRO PROJECTS



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 placed for more than one year, 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 reflects 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 institution of national importance in terms of Section 10(10C)(viic) of the Income Tax Act 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.

Governing Body

LIST OF GOVERNING BODY MEMBERS AS ON 31ST MARCH 2010

Mr. K.P Fabian IFS (Retd)

President
Institutional Member
Indo Global Social Service Society
28, Institutional Area,
Lodi Road,
New Delhi - 110 003

Rev. Fr. Varghese Mattamana

Treasurer
Institutional Member
Caritas India
CBCI Centre, Ashok Place
Gole Dakhana
New Delhi – 110001

Mr. John Varughese

Institutional Member
National Council of YMCAs of India
1, Jai Singh Road
New Delhi – 110001

Rev. Dr. Christopher Lakra

Institutional Member
Indian Social Institute
10, Institutional Area, Lodi Road,
New Delhi – 110003

Mr. N.C. Bose Croos

Institutional Member
Skills for Progress (SKIP)
SKIP House, 25/1,
Museum Road
Bangalore - 560 025, Karnataka

Mr. Sushant Agarwal

Institutional Member
CASA - Church's Auxiliary
for Social Action
Rachna Building, 2, Rajendra Place,
Pusa Road, New Delhi - 110008

Mr. Amitava Tripathi IFS (Retd)

Individual Member
29 DDA-SFS Apartments
Hauz Khas, Sri Aurobindo Marg
New Delhi 110016

Dr. (Ms) Jaya Peter

Individual Member
Peacevilla, Senior LIG – 2
Harshwardhan Nagar
Bhopal - 462003 Madhya Pradesh

Mrs. Nighat Shafi Pandit

Individual Member
16, Gogji Bagh,
Srinagar, 190008, Kashmir

Mr. Sanjeev Sanyal

Individual Member
D 602, Ambience Lagoon Apartments,
NH8, Gurgaon 122002, Haryana

Mr. D.K Manavalan IAS (Retd)

Secretary cum Ex-Officio Member
Executive Director, AFPRO
25/1A, Institutional Area, D Block,
Pankha Road, Janakpuri
New Delhi 110058

ABBREVIATIONS USED

ac	acres	LFV	Livestock-Fish-Vegetable
ACDI/VOCA	Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance	M-DAWS	Multi-District Assessment of Water Safety
ADP	Area Development Programme	MoRD	Ministry of Rural Development
AFPRO	Action for Food Production	NABARD	National Bank for Agriculture and Rural Development
BRGF	Backward Regions Grant Fund	NAIP	National Agricultural Innovation Project
BMP	Better Management Practices	NHWDP	NABARD Supported Holistic Watershed Development Programme
CBO	Community Based Organizations	NGO	Non-Governmental Organizations
CBP	Capacity Building Phase	NGP	Nirmal Gram Puruskar
CII	Confederation of Indian Industry	PHC	Primary Health Centres
CMF	Conference of Parties serving as the Meeting of Parties to the Kyoto Protocol	PHED	Public Health Engineering Department
COP	Conference of Parties	PIA	Project Implementation Agency
CSR	Corporate Social Responsibility	PIKA	Partnership for Innovation and Knowledge in Agriculture
cu m	cubic metres	PRI	Panchayati Raj Institutions
DBIS	Diversions Based Irrigation System	PWS	Public Water Supply
DFH	Dairy-Fish-Horticulture	R&D	Research and Design
DGM	Dayal Ginning Mill	RFH	Rice-Fish-Horticulture
DPC	District Planning Committee	RIDF	Rural Infrastructure Development Funds
DPMU	District Project Management Unit	RWH	Rainwater Harvesting
DPR	Detail Project Report	SC	Scheduled Caste
FIP	Full Implementation Phase	SDTT	Sir Dorabji Tata Trust
GP	Gram Panchayat	SHG	Self-Help Group
Gol	Government of India	SMC	Soil and Moisture Conservation
ha	hectares	SMS	Short Messaging Service
H ₂ S	Hydrogen Sulphide	SPH	Sericulture-Pig-Horticulture
HID	Human and Institutional Development	SRI	System of Rice Intensification
ICAR	Indian Council of Agricultural Research	ST	Scheduled Tribes
ICT	Information and Communications Technology	SWC	Soil and Water Conservation
IFS	Integrated Farming System	TSC	Total Sanitation Campaign
IGP	Income Generation Programmes	TSI	Technical Support Institution
IGWDP	Indo German Watershed Development Programme	UNICEF	United Nations Children's Fund
IKEA	Ingvar Kamprad Elmtaryd Agunnaryd	UP	Uttar Pradesh
INM	Integrated Nutrient Management	USAID	United States Agency for International Development
IPCC	Intergovernmental Panel on Climate Change	VLC	Village Level Committee
IPM	Integrated Pest Management	WBM	Water Bound Macadam
IOCL	Indian Oil Corporation Limited	WSP	Water Safety Plan
ITC	Indian Tobacco Company Ltd.	WUA	Water User's Associations
KW	Reconstruction Credit Institute, Germany	WVI	World Vision India
LWR	Lutheran World Relief		



Executive Director

Mr. D.K. Manavalan I.A.S. (Retd.)

Programme Coordinator

Mr. S.C. Jain

Manager - Administration & Finance

Mr. Cyriac Mathew

Unit Managers

Mr. S. Salunke, AFU-I

Mr. K. Sivakumar, Officiating, AFU-II

Mr. P. K. Dutta, AFU-III

Mr. Ajit Kumar, AFU-IV

Mr. V. D. Dubey, AFU-V

Mr. M. P. Goud, AFU-VI

Mr. Dhruvajit Sarma, ATF-G

Dr. S. Srivastava, ATF-R

Mr. Rupam Mandal, ATF-B

AFPRO Head Office

25/1-A, Institutional Area, Pankha Road
D-Block, Janakpuri, New Delhi-110058
Phone: 011-28525412, 28525452, Fax: 011-28520343
Email: afprodel@afpro.org,
ed@afpro.org, pd@afpro.org

AFPRO Field Unit – I

Rose Cottage, Station Road
Ahmednagar – 414001, Maharashtra
Phone: 0241-2451465
Fax: 0241-2451532
Email: afu01@afpro.org

AFPRO Field Unit – II

56, Hutchins Road, 6th Cross, St. Thomas Town
Bangalore – 560 084, Karnataka
Phone: 080-25461711, Fax: 080-25461712
Email: afu02@afpro.org

AFPRO Field Unit – III

1185, Opp. UIT Community Centre, Sector -11, Hiranmagri,
Udaipur – 313 002, Rajasthan
Phone: 0294-2583506, 2486008,
Fax: 0294-2489109
Email: afu03@afpro.org

AFPRO Field Unit – IV

1-C, 262, Ashok Nagar,
Ranchi - 834 002, Jharkhand
Phone: 0651-2241947 Fax: 0651- 2243178
Email: afu04@afpro.org

AFPRO Field Unit – V

314, Jiwaji Nagar, Thatipur
Gwalior – 474 011, Madhya Pradesh
Phone: 0751-2340646, 2340692,
Fax: 0751-2341151 (PP)
Email: afu05@afpro.org

AFPRO Field Unit VI

1-3-29/5, Nandanavan Colony
Street No. 4, Habsiguda
Hyderabad-500 007 Andhra Pradesh
Phone: 040-27150413, Fax: 040-27176021
Email: afu06@afpro.org

AFPRO Task Force Guwahati

Pub Sarania, Bye Lane No. 4 (West), House No. 8
Guwahati – 781 003, Assam
Phone: 0361-2527560, 2463373, Fax: 0361-2459003
Email: atfg@afpro.org

AFPRO Task Force Raipur

C-58, Tagore Nagar, Sector 5, PO Tagore Nagar
Raipur – 492 001 Chhattisgarh
Phone: 0771-4011439, 4070558
Fax: 0771-4010519
Email: atfr@afpro.org

AFPRO Task Force Bhubaneswar

Plot No. 215, Okilbaag, Netaji Subhas Marg, Cuttack Road,
Laxmisagar, Bhubaneswar, 751006 Orissa
Phone: 0674-6943937, 6571144 Fax: 0674-2571901
Email: atfb@afpro.org



Action For Food Production (AFPRO)

25/1A, Institutional Area, Pankha Road

D-Block, Janakpuri, New Delhi-110058

Phone: 91-11-28525412, 28525452, Fax: 91-11-28520343

Email: afprodel@afpro.org, ed@afpro.org, pd@afpro.org

www.afpro.org