



Towards A Sustainable Future

Annual Report **2014-15**

VIKSAT

Nehru Foundation for Development



Check dam at Delvada village, Sembaliya Watershed
Poshina, Sabarkantha

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Chairperson's Message

VIKSAT, over the last four decades, has become known for helping and strengthening the livelihood security of large number of rural families. Initiated as a think tank for development discourse, VIKSAT has gained a strong foothold in sustainable livelihoods and natural resource management through people's institutions.

Since the inception, VIKSAT has been working towards sustainable development and management of natural resources for the interest of poor and marginalized rural communities. With the passage of time of over four decades, requirements and priorities of these stakeholders have undergone several changes. VIKSAT has professionally responded suitably by innovative methods to meet the changes in the demands of poor relating to renewable energy use of biogas and biomass, capacity building of people's institutions; protection, management and development of forest, wasteland, water resources, watershed development and ravine area restoration. Today, these committed efforts have helped the tribal and poor families get well equipped to face the new challenges of climate changes.

Nearly two thirds of the population of India depends on agriculture for their livelihood. Therefore in the country like India, agriculture is not just a food producing machine but is the backbone of the livelihood security system of a vast majority of population. This is why the efforts to produce more food, fodder, fiber, fuel and other farm commodities should be based upon environmentally sustainable practices. This can be achieved both by organic agriculture and evergreen agriculture. Organic farming is more feasible if the farmer has adequate livestock population.

In this direction, new initiatives have been taken with support from the Tata Trusts for enhancing livelihood resilience and improving quality of life of all the families in selected tribal dominated villages of Khedbrahma and Poshina talukas of Sabarkantha district. With support from NABARD, financing natural resource based sustainable livelihoods and the Organic Wadi programmes continued successfully further. I am happy that VIKSAT has provided boost to organic farming by providing livestock loans and vermi compost units to the farmers with the support of NABARD under the UPNRM programme. It is very important that farmers are using this vermi compost in their own farms and also selling it to other farmers in the vicinity. The support from the John Deere Foundation for efficient use of water resources has contributed to changing the crop pattern and enhancing productivity.

Steps have been taken to help the potential donors gain more tax exemption for their contributions; this will help VIKSAT widen the scope for generating help for the future livelihood projects. The impact and outreach of VIKSAT has been increasing consistently. I congratulate the entire team of VIKSAT for their continued efforts in elevating VIKSAT to a greater respect from community and recognition from the stakeholders. VIKSAT has become flagship of sustainable development movements.

I am glad that VIKSAT is working on the various water conservation models in the tribal area through its Land and Water management programmes by implementing Watershed and watershed plus activities to enhance livelihood resilience and to improve the quality of the life of the community. Further work can be done to improve water efficiency and water budgeting in agriculture.

This Annual Report reflects the excellent work done by VIKSAT during the year 2014-15. The report highlights activities undertaken in different thrust areas and learnings gained for wider circulation. I acknowledge the role of Council of Management in guiding such vibrant institution and congratulate the Director and the entire team for the achievements made by organization during the year. I appreciate their dedication and hard work, which has enabled VIKSAT to achieve greater heights of excellence and social relevance. I wish all the best to the team of VIKSAT to continue the good work and reach out to the stakeholders more effectively.

M. S. Swaminathan
Chairperson
VIKSAT Council of Management



From the Director's Desk

We are happy to bring you Annual Report 2014-15, highlighting the activities undertaken by VIKSAT during the year. VIKSAT continued its focus on promoting and capacity building of the People's Institutions, participatory nature of governance, networking with the Government and Non-Government partners and strengthening of the relationship with and within the village level institutions.

This year VIKSAT continued its focus on issues of conservation oriented livelihood options for improving quality of life in the project villages. Mitigation and adaptation measures have been key areas of work in promoting sustainable management of the natural resources. The four watershed projects supported by NABARD have reached completion, successfully achieving their desired results. Outcomes of these are being complemented with the watershed plus activities supported by Tata Trusts and John Deere Foundation. The village watershed committees, primarily responsible for project measures implementation with VIKSAT's facilitation, are empowered to undertake post project activities. The People's Institutions in the watershed villages are federated to form apex institutions like AART and Farmers Producer Organizations. To take this further, the Tata Trusts have committed support for enhancing livelihood resilience and improving quality of life of over 6000 families in the 23 tribal dominated project villages. Also, we could successfully achieve the target of 1000 Wadis benefitting 1000 tribal farmers.

VIKSAT is proud to continue its role as the Regional Resource Agency (RRA) for the National Environment Awareness Campaign (NEAC) of Ministry of Environment, Forest & Climate Change (MoEFCC), GoI, for Gujarat, Daman and Diu. In 2014-15, we have 786 participating organizations implementing the awareness and action programmes under NEAC. This network is a great resource to implement local environment education and conservation activities, which needs to be nurtured and strengthened further.

We continued our efforts to link people with the means and options of sustainable livelihoods based on their local natural resources. The finance and technical support interventions in agriculture, animal husbandry and allied activities are helping relatively poor families to increase household income enabling them to invest adequately, appropriately and on time, increase crop production and break away from the debt cycle. Through the WASH Educators Training, with the support of Dept of Science & Technology, Govt of India, VIKSAT continued its efforts towards building a cadre of WaSH professionals amongst civil society organizations working on WaSH issues.

I would like to thank all the partners and supporters, who have provided financial and technical support, without which we would have been able to achieve all that has been reported here. At this stage, VIKSAT needs core institutional support so that it can leverage several resources from other sources and achieve convergence with ongoing Government programmes and schemes for greater impact. I urge our long standing supporters to further strengthen VIKSAT's core institutional capabilities and competence as a key resource institution.

The successful implementation of the activities is attributed to the dedicated staff members, who have been working very hard in their respective groups and field areas for timely completion of the activities, meeting the deadlines and reporting. I must compliment the team members for the excellent MIS and timely reporting to partners. VIKSAT's strength has been the technically qualified and professional team members. For scaling up the activities and reach, we need to invest more in further strengthening the core staff and institutional infrastructure.

I would like to thank our Chairperson, Prof. M.S. Swaminathan and all the members of the Council of Management for their continuous guidance and encouragement. We have been able to come this far with our partners, supporters, well-wishers, mentors, local communities, networks and dedicated team of colleagues. I am confident that we will continue this journey on the path of conservation and sustainable development and cross many milestones on way ahead.

Dilip Surkar
Director, VIKSAT

VIKSAT was set up in 1977 with an aim to strengthen the objectives set by Nehru Foundation for Development (NFD) to carry out environment improvement activities. At an early stage of its involvement VIKSAT realized the importance of amends required in its approach to meet the set objectives. Thus, VIKSAT has strived through its endeavor to set interactions with individuals and organizations in environment protection. VIKSAT set its mission as promoting and strengthening People's Institutions for development and management of natural resources. VIKSAT believes that goal of sustainable NRM can be achieved through decisive participation of the communities who constitute the primary stake holders of the resources.

Over the years VIKSAT has carved its own niche in forestry and water sectors through innovations in water harvesting and bio diversity conservation, joint forest management and community development.

Mission

VIKSAT aims at proactively promoting and strengthening Peoples' Institutions (PIs) through interaction between Government and Non-Government Organizations and people by means of active participation of men and women from all sections of the community for equitable, gender sensitive, sustainable development and management of natural resources.

Strategy and thematic intervention

VIKSAT addresses the issues pertaining to Natural Resource Management by promoting and strengthening participatory resource management systems. Local communities and concerned government agencies form the important stakeholders in the programmes. VIKSAT has four major thrust areas, namely Forestry and Environment, Land and Water, Sustainable Livelihoods and Institution and Capacity Building.

VIKSAT is pioneer in implementing the historic Joint Forest Management (JFM) programme in the state of Gujarat. VIKSAT's efforts changed the face of forest areas in more than hundred villages in Bhiloda, Satlasana and Khavda taluka. This includes both protection of forests and affirmation of economic activities from them. Appreciating and

empathizing the symbiotic relationship of people with forests, VIKSAT has groomed forest based PIs for sustainable livelihood through forest management.

Working towards securing food and nutrition security, VIKSAT has been making efforts for land and water management for sustainable productivity enhancement and drinking water security by, with and for the community.

VIKSAT has worked at grassroots level with communities in their local regions towards developing models which ensure sustainability of livelihoods through natural resource management. VIKSAT has mobilized financial resources to fund community initiated entrepreneurial actions. VIKSAT facilitates creation of a favorable economic environment by increasing access to customized, easy and cheaper loans to the community.

The core strategy in the sustainable development and management of natural resources is people's participation that cuts across all the thematic areas of interventions. Due to the persistent efforts, nurturing and capacity building of the PIs, they are capable of functioning independently with minimum external support. VIKSAT has touched the lives of 24609 people directly through the PIs formed and facilitated at the village level.

VIKSAT as a Resource Centre

VIKSAT has positioned itself as a Resource Centre in participatory natural resource management. Capacity building of NGOs, government agencies, communities on technical, social and institutional aspects of NRM is becoming forte. VIKSAT also engages in disseminating information through publications, newsletters and by participating in public forums. The organization also provides a learning platform for other agencies including educational institutions, thus facilitating sharing of experiences and best practices.

VIKSAT at the grassroots

VIKSAT believes in organizing people and building their capacities to take ownership and address issues related to NRM. VIKSAT equips people with information, making them aware of their role as a Over the last three decades, VIKSAT has

progressed from being a platform for intellectual discourse, to an agency advocating for people rights vis-à-vis the forests. In the initial years, VIKSAT worked on promotion of afforestation programme with Government and NGO participation. During the late eighties, VIKSAT was recognized as the nodal agency for the National Environment Awareness Campaign (NEAC) by the Ministry of Environment, Forests & Climate Change (MoEFCC). The educational material on drought and land degradation received high acclaim. VIKSAT also gained grounds in research, conducting seminars and workshops on various themes of forestry programme. During early nineties, VIKSAT set the benchmark for institution building and community mobilization. The Tree Growers Cooperative Societies (TGCSs) developed in Kubada village became a model for development practitioners.

The Joint Forest Management programme of the Govt. of India made the path for VIKSAT to reposition itself as an agency providing professional support to the Government of Gujarat. VIKSAT started developing training modules for NGOs and forest department. VIKSAT was gaining prominence for its community building work towards promotion and protection of the forests.

The pioneering work of institution building continued during the response of the organization to address natural calamities like drought and earthquake. Capacity building of the PIs for efficient and sustainable management of groundwater, physical interventions for soil treatment, land management and water conservation were initiated by developing rapport with the local communities. By the turn of the millennium, on one hand, VIKSAT was developing acumen in planning and installing Rain Water Harvesting Systems in urban locates, while on the other, the need to address issues related to sustaining NRM based livelihoods was increasingly gaining grounds. VIKSAT had already organized women into SHGs and operating revolving funds and financing micro enterprises in the villages. By the end of the first decade of the new millennium, VIKSAT had started a more structured system of facilitating access to livelihood based finance through peoples' institutions like SHGs and Farmers' Clubs (FCs).

With the ever increasing challenges faced in sustaining the natural resources and the livelihoods, VIKSAT is constantly in the process of change, adapting the strategies and interventions to help the communities help themselves in the best possible manner.



A. National Environment Awareness Campaign (NEAC)

National Environment Awareness Campaign is the campaign to bring the environment awareness on the identified theme at the National level. It was launched by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India in 1986. 34 Regional Resource agencies are appointed in the country for implementation and monitoring of the programme at the national level.

VIKSAT is a Regional Resource Agency for Gujarat, Diu and Daman since 1986 under MoEFCC conducts the National Environment Awareness Campaign (NEAC) every year. Non-Governmental organizations, schools, colleges, nature clubs, Education and Training Institutions actively involved in the field of environmental education and awareness participate in the campaign and spreads awareness through various programmes like seminars, workshops, rallies, padyatra, Jatha, competitions, street plays, puppet shows, meetings, folk media and folk dance.

The NEAC focuses on a specific theme every year so that the participating organizations from all over the country can spread environmental awareness on a particular theme.



India is recognized as one of the mega-diverse countries, rich in biodiversity and associated with traditional knowledge. India has a long history of conservation and sustainable use of natural resources and is a party to many international environmental conventions including UN Convention on Biological Diversity (CBD). The current decade (2011-2020) has been declared as



the 'United Nations Decade on Biodiversity' and India was the host for the eleventh meeting of the Conference of the Parties (CoP-11) to the Convention on Biological Diversity (CBD) which was held at Hyderabad in October 2012. Therefore, the NEAC Programme for 2012-13 and 2013-14 has a focus on conserving Biodiversity covering all dimensions.

The national theme for the year 2013 -14 was 'Biodiversity Conservation'. Various NGOs, organizations, trust, societies, schools, colleges nature clubs, JFMCs, govt. and non-govt. departments participated in the programme conducted by VIKSAT. In all 907 proposals were received from Gujarat, Diu and Daman; out of which 741 proposals were sanctioned by MoEFCC. As mentioned in the table, the participating organizations carried out various awareness programme at the local level to spread awareness on the theme.

Activities carried by the participating organization

Awareness Programme	Camps, Workshops, Skits & Drams, Exhibitions, Elocution, Essay Writing & Drawing competitions, Wall Slogans, Rallies, & Folk media
Action Programme	Seed bank, People's Biodiversity Register, Plantation, Nurseries, Mangroves Plantation, Vermicompost.
Resource material prepared	Handouts, flyers, leaflets, brochures, handbills, stickers, charts, posters, banners, booklets.

On the completion of the NEAC programme for 13-14, a new programme for the year 2014-15 was initiated. The theme for NEAC 2014-15 is 'Combating Desertification, Land Degradation and Drought'. These included various sub themes such as adopting sustainable land management practices, restoration of degraded lands, waste land development, soil pollution, prevention of varied types of soil erosion, rainwater harvesting, and organic farming; to prevent desertification through forestation and traditional ways for drought mitigation.

Pre-proposal workshops were conducted in the 33 districts of Gujarat, Diu and Daman wherein 1027 proposals have been received out of which 786

proposals are recommended by the western regional committee constituted by the MoEFCC.



Table: Details of NEAC 2014-15

Details		Gujarat	Diu	Daman	Total
Total proposals recommended by MoEFCC		780	5	1	786
Total grants sanctioned by MoEFCC	Awareness Programme	4989800	36000	8000	5033800
	Action Programme	3286200	27000	7000	3320200
Total grant sanctioned		8276000	63000	15000	8354000
Total Grant for Disbursement		8276000	63000	15000	8354000

B. Peoples Biodiversity Register (PBR)

The increasing concerns about dwindling biological resources led to the convention on Biological Diversity in 1992. The Convention on Biological Diversity (CBD) was negotiated and signed by 193 parties at the Earth Summit at Rio de Janeiro in Brazil in June 1992. India became a Party to the Convention in 1994. The main objective of the Convention is Conservation of biological diversity, sustainable use of the components of biodiversity, fair and equitable sharing of benefits arising out of the utilization of genetic resources.

To understand the provision of the CBD, and to deal with extensive pressure on our biological resources, Govt. of India has enacted Biological Diversity Act, 2002 and biological Diversity Rules, 2004. In accordance with the Biological Diversity Act, 2002, the National, State & Local level mechanisms have been provided for implementation of the act. At the national level, National Biodiversity Authority has been established by Govt. of India and at the state level, State Biodiversity Boards are established by the State Govt. Biodiversity Management Committees (BMCs) are constituted at the village level by the locals.

BMC are formed with the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breed of animals and micro-organisms and chronicling of knowledge relating to biological diversity. The preparation of People's Biodiversity Registers (PBRs) involved the active support and cooperation



of a large number of people who need to share their common as well as specialized knowledge. One of the first steps for preparing a PBR is to organize a group meeting to explain the objectives and purpose of PBR. Different social groups in the village need to be identified for purpose of data collection from those groups. In an urban situation, spots where biodiversity is found, need to be identified for the purpose of the study and documentation. The documentation process includes information gathered from individuals through detailed questionnaire, focused group discussion with persons having knowledge and published secondary information.



PBR are prepared by the BMCs with the support of Technical Support Group (TSG). The Group is appointed by the State Biodiversity Board so as to facilitate BMCs in preparing PBR of the village. VIKSAT has been appointed as TSG for facilitating BMCs in preparing 5 PBRs each in Satlasana taluka of Mehsana District and Bhiloda Taluka of Sabarkantha District. On completion, these 10 PBRs were submitted to Gujarat Biodiversity Board (GBB), Gandhinagar and new assignment for

Sr. No.	Name of Panchayat	
	Satlasana Block	Bhiloda Block
1	Bhalusana	Palla
2	Kubda	Bhatela
3	Umri	Budhrasan
4	Gothda	Bolundra
5	Dharoi	Ubsal
6	Bhimpur	Zab chitariya
7	Sartanpur	Taka Tuka
8	Hadol	Dhandhasan
9	Mumanvas	Khalvad
10	Moti Bhalu	Devnimori
11	Kotasana	Chorimala
12	Nani Bhalu	Jayla
13	-	Venpur

facilitating 25 BMCs was assigned to VIKSAT for the below mentioned villages of Satlasana Taluka of Mehsana District and Bhiloda Taluka of Aravalli District.

Research Study

1. A Study on Integrated Development of JFM villages through Convergence of schemes in Gujarat

Regional Centres for National Afforestation and Eco-Development Board (NAEB), Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India have been setup within the Head Office of Agricultural Finance Corporation India Limited, (AFC) at Mumbai and Northern Regional Office, New Delhi from 1996. These two are among the seven Regional Centres across the country established by MoEFCC. The Centres facilitates tree planting, ecological restoration and eco-development activities in the country, with special attention to degraded forest areas and lands adjoining the forest areas, national parks, sanctuaries and other protected areas as well as the ecologically fragile areas in the Western Region covering Maharashtra, Gujarat, Goa States and Union Territories of Daman, Diu and Dadra & Nagar Haveli.



During this reporting period NAEB offered VIKSAT to carry out "A Study on Integrated Development of Joint Forest Management (JFM) villages through Convergence of schemes in Gujarat".

The major purpose of the study is to document the efforts made by Forest Development Agency (FDA) and local village level Joint Forest Management Committees (JFMCs) for village development through linkages of various government schemes and programme. The study was carried in Aravalli, Chhota Udepur, Dang & Sabarkantha districts of Gujarat.

Circle	Division	Range	Villages
Gandhinagar	Sabarkantha-North Sabarkantha-South	Khedbrahma	Jadi Sembal
		Bhiloda	Vagheswari
Valsad	Dang-South	Chichinagavvtha	Dungarda
		Sakarpaal	Susharda
	Dang-North	Lauchali	Kotba
		Singala	Nishana
Vadodara	Chota Udepur	Nasvadi	Chausalpura
		Kawant	Aambadungar Manka
		Panwad	Umathi
Total Circle: 3	Division: 5	Range: 9	Villages: 10

The objective of the study were:

1. To fully document, where integrated development of JFM village has taken place through convergence of activities of various funding agencies.
2. To pin-point specific efforts made by FDAs to achieve such convergence.
3. To bring out the effect of overall development of JFM on the forest.

With these objectives the study was undertaken and its reports have been submitted to the NAEB, Mumbai. The major findings of the study are as follows:

- Fact revealed that at the local level no JFMCs have made efforts of developing village by linking govt. and non government schemes.
- Microplans have been prepared of each village; however due to lack of coordination between the government line departments developmental activities mentioned in the microplans have not been properly implemented.
- The committees formed at village level as the carrier of village developmental activities failed in performing its obligation. Their capacity should be strengthened for performing the better task.

2. A Study on Dependency on Gujarat's Forest Dwellers

Gujarat Forest Research Foundation, Gandhinagar (GFRF) is an autonomous body established by the Government of Gujarat. The Institute carries out various researches on Forestry. 14.9% Schedule Tribe population are living in the eastern tribal belt of Gujarat and they are dependent on the forests for meetings their needs like food, fuelwood, medicine, timer etc. To make the study of their dependence on

forest, GFRF assigned VIKSAT to carry out study on "Dependency of Gujarat's Forest Dwellers".

The main objectives of the study are as follows:

- To study the need of the forest dwellers from the forest resources
- To know the need of the forest dwellers on the basis of forest cover i.e Dense, Moderately Dense Forest, and Degraded / Open Forest.
- Assessing the socio-economic impact of forest dwellers due to forest resource.

As per the old demarcation, research work was carried in 25 districts of Gujarat State which covered 35 forest divisions. 200 villages were chosen for the sample survey of the study in which 1020 household were covered. Details of survey area are given in the following table:

Sr. No.	Households Surveyed	No of villages	Forest Category
1	448	64	Dense Forest
2	405	81	Moderately Dense Forest
3	165	55	Degraded / open Forest

During the survey work the fact was revealed that the total requirement of timber wood for village is received from the forest area. In South Gujarat people are residing near the dense forest area and they majorly depend on forests for satisfying their day to day need like fuelwood, fodder, timber and vegetables. Mahuda oil is extracted and is used for cooking purpose.

The detailed report of the project will be prepared on completion of the data feeding which will bring to light the Dependency of Gujarat's Forest Dwellers.

Joint Forest Management

With the intervention of the VIKSAT Bhiloda Field office the work of regeneration is being done through Tree Growers Cooperative Societies (TGCS) of Bhiloda Taluka in Sabarkantha District. A total of 77 TGCS were formed. 56 TGCs were registered under the Cooperative Society Act. A total of 15000 hectare area of Forest Land was protected. On regeneration of the degraded forests, people are getting Non Timber Forest Produce like fodder, fuel, Timru leaves, etc.



Swachh Bharat Abhiyan

Swachh Bharat Abhiyan is a national campaign by the Government of India. Mahatma Gandhi communicated a quintessential message to the nation through his efforts to educate people around him about cleanliness. He wished to see a "Clean India" where people work hand in hand to make the country clean. To work seriously towards this vision of Gandhiji, India's Prime Minister launched the campaign on 2 October 2014 at New Delhi. He said that "It is not just about cleaning surroundings but also seeking the participation of people in planting tree, creating trash-free environment, providing sanitation facilities and paving a way for Swachh



Bharat eventually. A Clean India is of utmost importance for promoting the nation as an ideal destination for tourists from across the world. Images of unclean India often become a matter of embarrassment for Indians therefore this is the right time and opportunity to participate towards Swachh Bharat. This campaign will not only help citizens adopt good habits of cleanliness but also boost our image as a nation, sincerely working towards cleanliness".

With this objective in collaboration with NABARD various activities like Awareness Programme, Rally, Vermicompost training and Cleanliness Drive was carried by VIKSAT at Bhanavas village of Satlasana taluka in Mehsana district on 26-27 February 2015. Local people and students participated in the programme. Around 200 students participated in the rally to create awareness among the villagers. Mrs. Anita Mayekar, DDM, NABARD, Mehsana; Mr. Ranjitsinh, General Manager, Gujarat Livelihood Promotion Company, Mehsana; Mr. J. C. Modi, Asst. TDO, Taluka Panchayat, Satlasana and many other district officials motivated the participants. Women of the SHG groups were given the vermicompost training. Vermicompost unit was set up in the village for managing the waste of the village and keep village clean and tidy.



Sr. No.	Activity	No of Participants
1	Awareness Meeting	335
2	Cleanliness Drive	215
3	Rally	210
4	Training on preparing of Vermicompost	43

For sustainable environment and better quality of human life, there needs to be a balance between the ecosystem and human system. In rural areas, livelihood and natural resources such as land, water, vegetation and livestock are inter-linked. However, the water resources are at particular risk due to the emerging threats of climate change. Rising temperatures and changing precipitation patterns have already reduced river flows, warmed surface waters and dried out wetlands. These impacts will likely continue, and other threats to environmental and public health is expected to materialize, including increased flooding and diminished quantity and quality of drinking water. Restoring ecological balance and increasing productivity in such regions necessitate undertaking all developmental activities on a watershed basis.

VIKSAT has been working in Khedbrahma tribal belt since 2005-06 especially in watershed, improved agriculture, institution building and livelihood sectors towards enhancing livelihood resilience of tribal community of Khedbrahma block of Sabarkantha district of Gujarat. The major programmes in project area towards to enhancing livelihood resilience and improving quality of life in 23 tribal dominated villages of Khedbrahma and Posina talukas of Sabarkantha district, through soil moisture conservation work, agriculture based intensive livelihoods promotion, agriculture development and building required institutional structure and systems. All the programmes are complementing each other and build over on watershed programmes.

I. Watershed Development Programme

In 2005, VIKSAT initiated watershed based interventions with Sembaliya Watershed Project in Poshina tribal area with support from NABARD under WDF programme and further extended it to three more watershed projects, with support of IGWDP-NABARD. The Project Area includes 17 villages of Khedbrahma block of Sabarkantha district in Gujarat and one village of Kotda block of Udaipur district in Rajasthan. The patient and consistent efforts by VIKSAT have resulted in completion of the several phases of projects and currently all projects are under Full Implementation Phase (FIP) stage.

During the year 2014-15, total 738.39 hectare land area was treated while cumulatively since project initiation, about 3207.47 hectare of land has been treated including CBP and FIP under the watershed development projects. The community members participated actively and offered Shramdaan (contribution of voluntary labour) worth Rs. 26.60 lakh under the watershed projects.



The Sembaliya Watershed Project was completed in this year. So far, treatment measures have been undertaken in 1217.23 ha of land, of which 78.34 ha was covered in the current year.



The Navamota watershed project has entered into fifth year of the FIP. So far, watershed treatment measures have been undertaken in 734.85 ha of land, of which 89.39 ha was covered in the current year.

The Ratanpur and Matarwada watershed project has entered into third year of the FIP. So far, watershed treatment measures have been undertaken in 463.33 ha and 455.14 ha of land of which 299.35 ha and 271.31 ha were covered in Ratanpur and Matarwada respectively in the current year.

Physical achievement in agriculture land under watershed development programme in 2014-15:

Sr. No.	Area Treatment Activities	Total
1	Farm Bund (FB)	336081.13 cu mt
2	Stone Outlets (SO)	596 No.
3	Stone Bund (SB)	14381.59 cu mt
4	Stone Gully Plugs (SGP)	2897.82 R mt
5	Earthen Gully Plugs (EGP)	21.10 R mt

Drainage Line Treatment (DLT): Under the watershed projects, 2 Gabions, 19 Nala plugs and 3 check dams were built as part of DLT work and 83.8 ha command area were developed through these structures in project villages. This structure helped in increasing water level in nearby wells and brings additional area under irrigation during Rabi and summer seasons.



Afforestation and Horticulture Work: 8500 plants of Eucalyptus, Bamboo, Teak, etc. and 2300 plants of Agave were planted on bunds and individual private land under watershed development programmes. Grass seeding on bund has been done in 16.30 ha area. The project has recorded 60 - 65 % of survival of the plants.

Watershed Development: Community Processes

Over the last few decades, research on community development has increasingly shown that involving community members in their own development through participatory approaches is crucial for sustainable development. The success of watershed development projects depend to a great extent on the level of participation of each



stakeholder. During the year 2014-15, 40 VWC (Village Watershed Committee) meetings and 7 general body meetings were conducted for involvement of the local community in planning and implementation of watershed project activities in relation to the peoples' development priorities. In these meetings, 1168 people (811 males and 357 females) from 18 villages participated.

Promotion of horticulture plants was carried out through creation of fruit orchards under the watershed development programme supported by IGWDP. 10 horticulture orchard (Pomegranate, sapota, Mango and Lemon), 20 Papaya orchards of 0.10 Ha (10 gunta) and 200 Ber budding were provided to farmers for developing the orchards. These orchard demonstrations were useful in promoting sustainable agriculture production.

During the reporting year, 40 low cost drip irrigation systems (Drum Kit Drip) were demonstrated in the project villages of Ratanpur & Matarwada watershed projects. Farmers from the villages under watershed project were motivated to adopt low cost drip irrigation system to cultivate vegetables. These initiatives have helped them to cultivate Chilly and Brinjal crops.

Livelihood Support and Drudgery Reduction

85% of rural families are dependent on the agriculture income for their livelihood. The large part of farming activities are still carried out by the womenfolk like harvesting, threshing, row maker, and seed drill etc manually. With the passage of time the main source of income has been dwindling steadily due to denudation of natural resources, bifurcation of land holdings and fluctuation in the climatic conditions. Therefore, livelihood support with reduction of drudgery for women has become an important and integral part of the programme related to sustainable livelihood.

Under the Livelihood Support Programme, one grocery shop and 28 vermicompost beds were provided to SHG members. Further 12 bund formers, 12 row makers and seed drills as well as 6 thresher for castor were purchased with support of the NABARD-IGWDP for drudgery and labour reduction and handed over to SHGs from Ratanpur and Matarwada villages. The SHGs would lend these equipments to needy farmers on rent to generate additional income.

II. Micro Irrigation System for Sustainable Agriculture Livelihood (MISSAL) Programme

The MISSAL Project aims to develop sustainable livelihood options through provision of micro irrigation technology and agronomy support services in Poshina tribal area of Khedbrahma taluka of Sabarkantha district. The MISSAL project will target more than 300 farmers and 110 ha land area under drip irrigation system in project villages. Irrigation solution created by this project would support farmers in diversifying from single cropping pattern to double cropping pattern since micro irrigation system would enable farmers to optimize usage of irrigation water. Micro irrigation system along with agronomical services, would support farmers in increasing productivity and sustain farming as livelihood option.



During 2014-15, 19 drip irrigation systems were installed in farms covering 17.37 ha land area and benefiting 51 farmers whereas since project beginning, cumulatively 32 Micro Irrigation Systems (MIS) were installed in 29.57 ha land area and benefiting 83 farmers. In this year, twenty one farmer groups of third and fourth year MIS beneficiaries have made a contribution of Rs. 2,20,000. Under MISSAL project each farmer group makes an average contribution of Rs. 15770 cash contribution & Rs. 12000 in kind for making trenches and platforms

for MIS installations. The MIS will be installed in next year for 7 more farmers who are ready with trenches and platforms. Further, 8 more farmer groups have been selected for providing drip irrigation system in the coming year.

Support was also provided under agronomy support to four beneficiaries of MIS by providing insecticide and pesticide (Imidacloprid- 250ml) to control the attack of sucking pest on chilly crop.

Three awareness training programmes and one exposure-cum-learning were organized for 80 farmers and the beneficiaries of MIS of project area to gain knowledge on vegetable cultivation. This exposure-cum learning visit had helped the farmers in learning about the MIS and its benefits, its operation and maintenance system, package of practices of agriculture and vegetable crops by interactions and exchange of knowledge shared with the progressive farmers.

One training programme was organized for development of Village Extension Workers (VEW) and programme staff on Micro Irrigation System. 29 programme staffs had participated. It helped in enhancing the knowledge of operation and maintenance of drip irrigation system, crop cultivation under the MIS and scheme of Gujarat Green Revolution Company (GGRC).

In the reporting year, a baseline survey of 32 farmer groups covering 76 beneficiaries was conducted. The study revealed that 60-66% practice cash crop as a mono crop; only 4 households (5%) cultivate vegetable in 0.05 - 0.10 ha land area and no one cultivates orchards. The average annual income per household from agriculture cultivation is Rs 44,940 and from all sources is Rs 63,306.

During the reporting year, 78 MIS beneficiaries cultivated cash crops like Cotton, cotton seed plot, vegetable cultivation and castor crop under drip irrigation system. 2 farmers have cultivated castor crop, 3 farmer cultivated onion, chilly and papaya crop and 1 farmer cultivated wheat and mustard crops under drip irrigation system. In summer 2015, 17 farmer cultivated crops under the drip irrigation system which include Papaya (1), Okra and cluster bean (4), 3 mix cropping with green gram and Maize (3), Green gram (2) and Maize (3) Due to less irrigation of water, most of farmers have not cultivated the crop in summer season.



The MIS programme has benefited families in several ways like bringing about increase in their consumption of nutritious food from their weekly food basket to daily, change in cropping pattern from pulses to vegetable cultivation, additional and assured summer crop, 8-10 person days reduction in weeding and irrigation, early sowing of cotton crop as compared to other farmers and increase in purchasing capacity.

Annual Review and Monitoring visits

2 annual review and monitoring visits were conducted by the representative of JDF and UWM,

Mumbai at the project area to review the progress of MISSAL and MARCH programmes which included evaluation of ongoing project implementation, progress made, timely execution of the programme with documentation, reporting, etc.

Exposure visit by JIVA's, Udaipur:

Representatives of JIVA, Udaipur organization visited MIS programme at Ratanpur village on 08 July 2014 to understand the implementation of group micro irrigation system, its operation and maintenance and first hand experience of the farmers in doing group cultivation.



Drip Irrigation system for small farmers: A Key to Alleviate Poverty

A Case Study

Makwana Kantibhai Sajabhai is a marginal tribal farmer of Ratanpur village from Khedbrahma block of Sabarkantha district.

With the help of drip irrigation system installed for his 1.35 ha of land, he could adopt shift in the cropping pattern from pulses to vegetable like Okra, Chilly and Cluster beans. In Kharif season, he got a production of 360 kg of Cluster bean, 340 kg of Okra and 150 kg of Chilly. He managed to sell the entire production of 850 kg at an average price of Rs. 20 per kg and made an income of Rs. 17,000.



As per guidance of VIKSAT, in the Rabi season he agreed to replace local variety of wheat with HI-1418 (Chandausi). He cultivated this new variety on 0.15 Ha of land with help of drip irrigation system and same variety was cultivated on 0.14 Ha with traditional practices. The improved cropping practices helped him get an increased production. From both areas of land, he harvested 6 quintal of wheat with drip irrigation system and 4 quintal of wheat with flood irrigation system and earned a net income of Rs. 24,789 which is an increase of two fold in production and nearly two fold net income over the local variety of wheat.

Thus, Kantibhai made a cumulative income of Rs. 41,789 from adopting drip irrigation system. The additional income earned by him is taking care of the nutritional and other needs of his family of eleven members.

III. Multipurpose Agriculture Resource Centre for Holistic Development (MARCH) Project

The MARCH project aims at enhancing productivity, food security and income through sustainable use of natural resources by making commercial and specialized services available to the project area. VIKSAT has formed Aravalli Agriculture Resource and Training Centre (AART) as core people institution for all the people institutions formed in the project area under MARCH programme. AART aims at filling the gap of continuous scientific interventions and accessibility of the farmers to agriculture related knowledge and providing inputs in over 20 surrounding villages and to more than 4000 farmers.

AART has been providing trainings, technical guidance and facilitates farmers' interactions with agriculture and animal husbandry scientists and provides agriculture inputs like seeds, bio culture, insecticide and pesticide as well as other inputs in time and at reasonable price. It strives to work as a useful linkage between government and the people so that tribal community can take best advantage of the government schemes promoted for their development and welfare.

AART has its own governing body to manage the activities of the Centre. The management committee has representatives from people institutions of project area.

Capacity building and empowerment of individuals/PIs

One training programme on Farmer Producer Organization (FPO) was organized for leaders of farmer clubs and management committee members of AART centre. In this programme, 33 leaders of farmer clubs and AART Management committee and 2 programme staff participated. The programme helped to understand the need and



importance of Farmer Producer Organisation (FPO); its rules and regulation of functioning and management, role and responsibilities of Board of Directors.

One Farmer Field School (FFS) was organized to provide practical knowledge on pest control and harvesting of chilly and Papaya crop. In the FFS, 16 female and 8 male participants were received. The programme helped to disseminate the knowledge on control of white fly, picking time and marketing of chilly crop and also gave information on control of mosaic diseases, picking time and marketing of papaya crop too.

Meeting of Management Committee

During the reporting year, 11 meetings of the management committee were organized at AART centre in Delwada and Kheroj. The meetings aimed at review, planning of the work, registration and future strategy of AART centre. In these meetings, total of 111 management committee members participated. It was decided that two farmer producer organizations (FPOs) should be formed to extend the benefits to all villages in the project area.



Information Education & Communication Material

During the reporting year, VIKSAT was able to take benefit of IFFCO Kisan Call service and RML service for the tribal people of project area. VIKSAT used this information to disseminate and advice farmers during meetings and farmers' field visit. The leaflets of package of practices of various crops were distributed among the farmers with support from Collectives for Integrated Livelihood Initiatives (CINI), Ahmedabad and KVK, Khedbrahma. AART centre continued to display the daily market rates of different agriculture produce at the Centre. The market rate information helped the farmers in taking appropriate decision regarding whether to sell or to store their produce for disposal at a future date.

Khokhariya Malabhai Vanabhai is a 45 year old farmer, living with his family including wife, two sons and daughters in law in Ratanpur village of Poshina tribal area of Khedbrahma taluka in Sabarkantha district. He owns 3.44 acre of agriculture land and this asset is the source of livelihood for his family. Malabhai uses this land to grow Maize, Cotton and Cotton seed plot in Kharif season, Wheat during the Rabi season and Green Gram in summer season if the rainfall is good enough.

The socio-economic conditions of the people from project area are marginal to poor. The literacy rate is around 40%. The region is characterized by semi-arid climate and average annual rainfall of Khedbrahma taluka is around 710.16 mm, which is uneven and highly erratic in nature. Agriculture was and is still at its rudimentary level. With fragmentation of land holdings among the population, the parcel held by any single household is small (less than 0.6 hectare). The major crops that are grown in the area are cereals (Maize) and pulses (Pigeon Pea and Black Gram). Those who have access to some irrigation facilities (open dug wells) have Cotton as the crop grown. Families from this area had been migrating out during the summer months to farms in the neighbouring districts.

VIKSAT devised a strategy to conserve the fertile soil and water through implementation of Watershed Programme in eighteen villages of Poshina tribal area since 2009 with support from NABARD. The watershed measures help to harness and store the water and augment the ground water resources. Build on the harvested water, with the support of John Deere Foundation, MISSAL programme is being implemented in project area to optimize and make efficient use of conserved water with the use of drip irrigation system. Before involvement in the programme, Malabhai used flood irrigation system to irrigate his crops, in which the wastage of water was more; labour required was more and production was less.

After involvement in MISSAL programme, drip irrigation system provided him with opportunity to cultivate assured crop in Rabi and Summer season. Malabhai cultivated Cotton, Cotton seed plot, Castor and Onion crop in 0.9 ha of land with the help of drip irrigation system during the year 2014-15. With drip irrigation system, he was able to bring more area under assured irrigation, there was reduction in cost of cultivation and labour saving. Malabhai earned a net income of Rs. 72,195 from the crops.



The production of cotton and castor crop with drip irrigation in the field

Impacts:

- Change in cropping pattern from pulses to vegetable cultivation
- 13% increase in crop production
- Average 154 % increase in Net Income
- Reduction in cost of cultivation
- Labour saving
- Increase in income helps improve the quality of life

Challenges:

- Less awareness of MIS among the farmers
- Less irrigation water at the end to irrigate crop
- Low price of vegetables

Agriculture Inputs at Affordable Rates

AART centre provided materials like seeds, bioculture, insecticide and pesticide to 4438 farmers of the project area at affordable rates. The farmers saved a total of Rs. 170,849 average Rs. 39 per farmer) in the current year and cumulatively Rs. 291,787 since 2012. AART centre has achieved a turnover of Rs. 21.11 lakh in this year for the services provided to farmers. AART centre provided saplings and seed for all seasons to more than 225 farmers. Under kharif season - Chilly and Brinjal, under Rabi season - Onion, and under summer season - Cluster bean, Okra and Chilly were provided. As a result, farmers have been able bring in more than 37 acre of area under the vegetable cultivation. The impact of the awareness created by AART centre is noticeable in the project areas. Farmers have increasingly raised the demand for seeds, saplings, insecticides, etc. Farmers have been benefited by utilizing the services provided by AART centre.

Lessons Learned

- Majority of people in the area are illiterate, so more focus is needed on exposure visit, video shows and conducting awareness programme.
- Awareness and capacity building programmes helps to adopt new technologies.
- Participatory training on-site and hand holding support by the field staff have led to increased acceptance of package of practices of crops and have saved the crops failure from pest attacks.
- Farmer prefers to use good quality seeds.
- Access to adequate and timely credit support system and market linkages are becoming crucial inputs.
- Farmer prefers to purchase input on credit basis.
- Local participation and involvement of community gives good results.

IV. Integrated Watershed Plus: Enhancing Livelihood Resilience of the Tribal Community (ELRT) Phase - II

This project is being implemented towards enhancing livelihood resilience and improving quality of life of 6953 families in 23 tribal dominated villages of Khedbrahma and Poshina talukas of Sabarkantha district under the Central India Initiative with the support of Navajbai Ratan Tata Trust (NRTT). The aim of project is the 'Upliftment and sustainable development of tribal community

through building community institutions, conservation, agriculture development and optimum utilization of the available natural resources'. The following activities were carried out under ELRT Phase-II project:

Awareness Meeting

During the reporting year, 104 awareness meetings were organized in project area under the ELRT project supported by NRTT and CInI to create awareness on project objectives, programme activities and process of implementation and good agriculture practices among the community. In these meeting, 3544 male and 1248 female participants had participated. The awareness meetings helped in participation and involvement of community in the project activities.



Technical Training programmes for farmers

a. Training programme on Package of Practices of Agriculture Crops

During the reporting year, 103 technical training programmes on package of practices (PoP) of agriculture crops (Kharif, Rabi and summer season) were organized at village level under ELRT programme with the support of NRTT, Sir Ratan Tata Trust (SRTT) and CInI. In these programmes, total of 3664 farmers including, 3258 male and 406 female had participated from the project villages.

The main purpose of the programme was to provide scientific knowledge on farming of various crops like Maize, Pigeon pea, Castor, Wheat, Gram and Fodder (Lucerne) and Green Gram to farmers. In POP training programs, VIKSAT program staff

advised the farmers in detail, the methodologies of farming viz., on land preparation, basal and supplementary dose of fertilizers, FYM, seed selection, seed rate, seed treatment, sowing distance, pest & diseases management, irrigation and harvesting of respective crops. In Kharif season, majority of the farmers in the project area

preferred intercropping of Maize with Pigeon pea or Cotton and therefore training was also imparted for intercropping crops. During the training programme, VIKSAT staff advised the farmers to cultivate Maize with pulses crop as intercrops with details like how and at what distance seeds to be planted.

Table: Detailed summary of various technical training programmes on PoP

Sr. No.	Title of the Training Programme	No. of Programmes conducted	No. of participants		
			Male	Female	Total
1	Agriculture crops	5	182	0	182
2	Maize	60	1859	314	2173
3	Castor	4	114	0	114
4	Wheat	23	793	32	825
5	Wheat and Gram	5	166	37	203
6	Green Gram	4	105	5	110
7	Fodder	2	39	18	57
	Total	103	3258	406	3664

b. Farmer Field School on Agriculture Crops

During the reporting year 2014-15, 203 Farmer Field Schools (FFS) were organized to discuss and guide them to tackle the issues faced by farmers, as regards treatment of seeds, application of basal dose of fertilizers, correct distance to be maintained between two rows, treatment of seeds, application of basal dose of fertilizer, spacing of plants, how to counter the attacks by pests, appropriate methods of harvesting and precautions to be exercised post harvesting as well as storage of seeds for grains like Maize, Castor, Wheat, Gram, Fennel and vegetables. In these FFS programmes, total of 7349 participants participated from the project villages for specific crops, as mentioned in the following table.



Table: Summary of crop-wise FFS organized and details of participants

Sr. No.	Name of the Crop	No. of FFS organized	No. of participants			
			Male Farmers	Female Farmers	VIKSAT Staff	Total
1	Maize	85	2967	328	153	3448
2	Castor	33	924	74	49	1047
3	Wheat	60	1702	402	108	2212
4	Gram	14	293	36	25	354
5	Vegetable	5	121	25	9	155
6	Fennel	6	94	31	8	133
	Total	203	6101	896	352	7349

Agriculture demonstration and scaling up of improved cropping practices

During the reporting year, with the support of NRTT, IGWDP-NABARD, SDAU and CInI improved agriculture practices have been implemented in for 3280 farmers in the project villages.

The programme included sharing of technical guidance on cropping patterns along with the critical inputs like seed treatment materials. It was observed that although most farmers had adopted seed treatment practice before sowing for almost all crops, but row spacing between two rows were not correctly implemented in some cases otherwise it could have still produced better results.

Results of improved cropping practices (Kharif and Rabi) Programme

2102 farmers were involved in Kharif season and 1070 farmers in Rabi season under the improved cropping practices. The details of crop with their yield and number of farmers is given as follows:

Sr. No.	Name of crop	No. of farmers	Yield (qtl/ha)		
			Average	Highest	Lowest
1	Maize	1783	25.29	41.6	16.34
2	Pigeon Pea	57	5.46	8	2
3	Black gram	15	7.76	13.85	4
4	Soyabean	9	2.78	NA	NA
5	Wheat	929	28.96	38.1	17.54
6	Gram	42	15.66	20.95	10.37
7	Lucerne	68	323.4	370.8	272.5

Results of Maize seed varietal trial plots

The International Maize and Wheat Improvement Centre (CIMMYT, Hyderabad) had provided 52 varieties of seeds which are drought and water logging tolerant types. In each variety approx. 30 grams of seeds were provided for trial purpose and 2 varieties of (GAYMH- 1 & GAWMH -2) of Maize from Anand Agriculture University were provided for two plots of 0.5 acres each in Navamota and Chhochar villages under the project area. The purpose of varietals trials was to find out which of the variety is more suitable to the conditions prevailing in the region. The top 10 varieties were selected on the basis of number of cobs, ear placement, and resistance to diseases, cob weight, grain colour, grain yield and shelling performance. The variety no. CAHTF1453 was the only common variety which was preferred in both trial plots. The second preference given was for CAHTF1441.



Table: Details of targeted v/s actual implementation of improved practices

Sr. No.	Improved practices implemented for the Crop	Targeted implementation		Actual implementation		Area (acre)	Resulted crop yield (qtl/acre)
		No. of Farmers	Area (acre)	Variety	No. of Farmers		
1	Maize	1550	775	13	1783	732.88	10.15
2	Wheat	670	335	8	929	450.5	11.6
3	Castor	170	85	5	176	83.81	6.82
4	Fennel	25	12.5	2	33	8.73	8.38
5	Pigeon Pea (Tuver)	0	0	3	57	24.18	1.57
6	Black Gram (Adad)	0	0	1	15	6.45	3.23
7	Gram	70	35	3	40	15.18	6.82
8	Green Gram	150	75	1	165	84	2.92
9	Cow pea	0	0	1	5	5	2.78
10	Soyabean	20	10	1	9	3.72	4.91
11	Lucerne	80	20	1	68	16.26	128.96
Total		2735	1348		3280	1431	

Vegetable Cluster Development & Kitchen Garden

The vegetable cultivation has been planned for implementation on cluster based approach (4-5 villages) which have road connectivity and awareness about the vegetable cultivation among the farmers. In each selected village, Farmer Clubs will be formed among vegetable cultivators. The farmers club will be used as platform for planning, training and joint activities. VIKSAT will facilitate the forward linkage with selected traders for marketing of their produce.



The purpose of this program was to provide scientific knowledge on farming of vegetable crops (Chilly Brinjal, Onion, Lady Finger and Cluster bean). In PoP programmes, VIKSAT programme staff advised the farmers on land preparation, basal and supplementary dose of fertilizers, FYM, seed selection, seed rate, seed treatment, sowing distance, pest & diseases management, irrigation and harvesting. The video presentation on vegetable cultivation was shown to participants to have clear understanding of vegetable crops.

Training programme on vegetable cultivation

During reporting year, 23 technical training programmes on package of practices (PoP) of vegetable crops (for Kharif, Rabi and Summer season), nursery raising, kitchen garden and vermicompost were organized at village level under ELRT and watershed programme with the support of NRTT, SRTT, CInI and IGWDP-NABARD. In these programmes, 844 farmers including 440 male and 404 female participants were received from the project villages. The nursery raising programme helped to understand the importance of raising nursery, appropriate management of it and do's and don'ts of raising nursery.



Table: Summary of technical training programme organized on PoP

Sr. No.	Title of Training Programme	No. of Programme conducted	Male participants	Female participants	Total participants
1	Vegetable cultivation	16	425	60	485
2	Nursery raising	01	15	20	35
3	Kitchen Garden	05	00	267	267
4	Vermi composting	01	00	57	57
	Total	23	440	404	844

Exposure visits on Vegetable cultivation

During the reporting year, 3 exposure visits were planned in the nearby districts at the successful models of vegetable cultivators. The visit was organized with the support of IGWDP-NABARD for 95 participants from fields along with 12 resource persons. The main purpose of the exposure visit was to orient and motivate farmers to adopt vegetable cultivation on commercial basis. The exposure visit and fruitful interactions with the successful farmers has helped the farmers in gaining first hand knowledge on practices and methodologies to be adopted while cultivating vegetables.



Result of Nursery raising programme

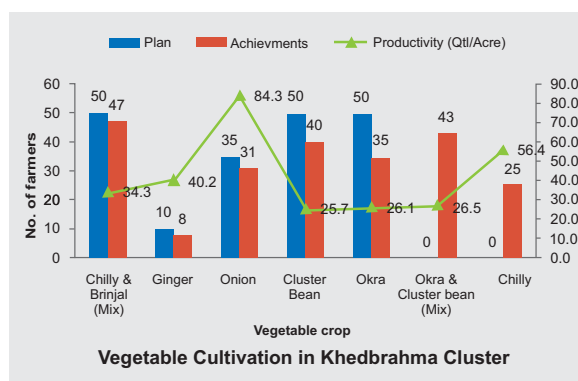
Eight nursery entrepreneurs supplied 31,230 saplings of Chilly and Brinjal to vegetable cultivators at reasonable rates under the vegetable cultivation activity of ELRT phase-II project. These numbers are over and above the sapling they used for themselves and relatives. The nursery entrepreneurs earned an average Rs. 3750 per head from the sale of saplings.



Implementation of Vegetable cultivation

During the year, 229 farmers cultivated vegetables in 38.39 acres of land under ELRT Project with the support of NRTT and SRTT, IGWDP-NABARD and SDAU, Dantiwada. These vegetables included Chilly and Brinjal in Kharif season; Onion in Rabi season and Cluster bean, Okra & Chilly in Summer.

For supply of quality sapling, 5 net houses were built with support of CInI under Rabi planning programme. This initiative has helped develop nursery entrepreneurs. Women were encouraged to develop kitchen garden to ensure that nutrient supplements were made available at the household level. Under the programme, 430 women cultivated vegetables in 4.30 hectare of land.



Results of Kharif vegetable cultivation programme

The vegetable crop promotion on commercial basis was started in project villages under ELRT project supported by SRTT & NRTT and under Watershed projects with support of IGWDP- NABARD. The vegetable cultivation was undertaken by 55 farmers including 47 farmers who cultivated Chilly and Brinjal as sole and mix cropping covering 0.01 ha (avg. 10 Gunta) in project villages.



The average yield of Chilly was 81.84 qtl/ha under sole crop. Under mix cropping, the average yield was 63.25 qtl/ha. The farmers' average net income from the Chilly crop was Rs. 105,839 per hectare in sole crop and Rs. 74,838 per hectare in mix cropping.

Results of Rabi vegetable cultivation programme

Onion crop was cultivated on commercial basis under Rabi Planning programme supported by CInI. In the first instances, 31 farmers cultivated N-53 variety of Onion covering 3.55 acre (avg. 10 gunta plot) area in project villages.



The average yield of onion was 212 qtl/ha and farmer got an average net income of Rs. 112,103 per hectare. The highest production of 246 qtl/ha was observed in Ratanpur village and the lowest production of 197 qtl/ha was observed in Matarwada village.

Visit of Expert Resource Person (ERP)

During the reporting year, 4 ERP visits were organized with the Technical Officers of CInI. The purpose of ERP visit was to provide technical support at the field level to the team involved in the



program implementation. It aimed at observing progress of adopted PoP and highlighting any gap in its implementation

Irrigation Resource Development

The farmer groups were selected for irrigation resource development activity through PIs of respective villages. Out of the total 82 applications received by the PIs, 54 applications were selected on the basis of technical feasibility. During the reporting year, 41 out of the 54 selected farmer groups completed the work like well deepening, well strengthening, under laying of pipe lines, etc. These irrigation resource development activities have improved water supply to 74.53 hectare of area, benefiting 237 households.

DPR on water resource activities

During the reporting year, the Detail Potential Reports (DPR) were prepared on water resource activities implementation in the area for each of project villages. The DPR exercise on water resource activities were conducted in each project village. The details collected were with regard to availability of existing water resources and potential improvements in it. Thus, the DPR revealed details like existing nals, wells, nals on rivers, drinking water status, scope for deepening of wells, implementing community irrigation schemes, digging new wells, etc.

Formation & Strengthening People's Institutions in Kheroj Project Area

People's Institution is the larger approach for which VIKSAT has broadly worked upon to identify, assemble, manage and disseminate strength of people for sustainable development. VIKSAT has formed three distinct forms of institutional spaces during interactions with the community for increasing



the participation and involvement of each stakeholder. 4 Village Watershed Committees (VWC) comprising 52 members, 92 SHGs comprising 1258 women members, 21 Farmers Clubs (FC) comprising 2014 members and 4 Women Federations including 92 SHGs have been formed.

During the year, 54 SHGs are newly formed covering 776 members under the SHGs. The books of accounts were introduced in 75 SHGs and cash box was introduced in 49 SHGs.



Name of PI	SHG	SHG Federation	Farmer Club
No. of PIs	92	4	21
No. of Members	1258	74	2014
Monthly Savings	50560	-	-
Cumulative saving of group	698014	-	-
Bank Linkages	27	-	-
Cumulative Loan received	2885451	-	761000

Meeting of PIs

During the reporting year 2014-15, 1753 meetings of SHGs, 48 meetings of SHG cluster and 234 meetings of Farmer Clubs were conducted by Village Extension Worker (VEW) and programme staff. During the meetings of SHGs, emphasis was given on recoveries of loans, improving saving habits, introduction of rules and regulation of running SHGs, introduction of cash boxes, increase the membership of farmer clubs, participation in technical training, farmer field school on agriculture crops, vegetables kitchen gardens and fodder crops.

Credit planning exercise with SHG

The credit planning exercise was carried out in 19 SHGs by VIKSAT programme staff. The credit planning exercise helps to understand the need of SHG members. The programme staff will try to fulfill their demand by linkage with bank and loan from UPNRM project.

Capacity Building of SHG members

35 training programmes were conducted on Planning and implementation of ELRT Phase-II project. Training was conducted with regards to record keeping, leadership skill development and orientations on SHG's roles and responsibility of general body and management. In these programmes, 1145 farmers including 126 males and 1019 females participated from project villages.

Exposure cum learning visit of SHGs leaders

During the year, 4 exposure visits were conducted on SHG management at PRADAN (Rajasthan), VIKSAT Bhiloda project and Kheroj project area with the support of NRTT and SRTT and NABARD.

Table: Summary of training programmes conducted

Sr. No.	Title of Training programme	No. of Programmes	No. of Participants		
			Male	Female	Total
1	Orientation training on Planning and implementation on ELRT Phase-II project for PIs leaders	1	29	6	35
2	Orientation training on SHG and it's management for SHGs	26	2	861	863
3	Record Keeping Training for SHGS	3	3	87	90
4	Refresher Training on Record keeping	1	0	26	26
5	Training programme on Leadership for SHGs	1	2	34	36
6	Training programme on Leadership for Farmer Club	1	17	0	17
7	Orientation training for Farmer's Club	3	73	5	78
Total		36	126	1019	1145

In these exposure visit programmes, 209 leaders of SHG and SHG cluster-federations, village extension worker and programme staff participated who gained knowledge on vermicompost, horticulture developments, etc. The main purpose of exposure visit was to motivate and orient SHG leader to learn and adopt suitable practices implemented by progressive farmers in the areas of visit. They were benefited by these visits in enhancing their knowledge on management process of SHGs, record keeping, designing bye-laws, conducting meetings at an appropriate interval and various options of generating income.



Monthly Planning and Review Meetings

During the reporting year, 11 meetings were organized for programme staff and 8 meetings were organized for the village extension workers. In all, 346 participants attended these meetings. The objectives of these meetings were to review the task fulfilled v/s task planned, understand and resolve the issues and challenges faced while implementations of planned activities, etc.

Demonstrations of improved SWC measures

Micro watershed block of 58.46 hectare land area of Tebda village near Navamota Watershed project area of Khedbramha taluka was selected as 'model' in the area. The model of micro watershed block would become a tool for guiding future projects in the area; and also to convince officials of NABARD and other agencies for higher unit costs for impact oriented works.

Staff Development Programme

During the reporting year, development programmes were undertaken for all inclusive staff for achieving higher level of efficiency and productivity.

- 11 programmes were organized for in-depth planning and implementations sharpen presentation skill of promotional activities and how to carry out on the field training for the beneficiaries. Cumulatively, 333 programme staff and VEW including project coordinator participated in various programmes.

- 24 programme staff along with VEW participated in trainings/workshops conducted by international, national and state-level premier institutes.

- Mr. Mahesh Patel participated in the international programme on 'Natural Resource Management & Sustainable Agriculture Practices in semi-arid Brazil' organized by NABARD and conducted during 18-24 August 2014 at Brazil.

Project Review Visits

17 project review visits were conducted by CInI team members and Agriculture Advisor of SRTT, Mumbai. One Impact assessment visit was conducted by staff members of Price Waterhouse Cooper, New Delhi for monitoring, follow up and review of Kharif crop programmes and on-going programmes under ELRT Phase-II in project area.



V. Convergence with Government

VIKSAT has been associated with Government not only as an implementing partner but also a responsible collaborator to carry forward the development process in the region. In this year, VIKSAT was able to converge some of the government programmes into project areas for economical upliftment of poor and tribal farmers.

Crop Demonstrations

50 crop demonstrations of Pigeon Pea, 15 crop demonstration of Black Gram, 15 crop demonstrations of Gram (Gujarat-3 variety), 15

crop demonstrations of Green Gram (Gujarat-4 variety), 5 demonstration of cow pea (Gujarat-5 variety) and 10 demonstrations of Cluster bean (Guvar) (Gujarat-2) by Sardarkrushinagar Dantiwada Agricultural University (SDAU), Dantiwada; 20 demonstrations of Maize provided by KVK, Khedbrahma and 24 demonstrations of Maize crop and 11 demonstrations of Tuber crop were provided to farmers of project area with support from CInI. Under the crop demonstration, seed, fertilizer-DAP and Urea, pesticide and insecticide & micro nutrient as per PoP of crops were provided to each farmer.

Micro Nutrient Project

Anand Agricultural University (AAU), Anand under the Micro Nutrient project (ICAR), tested 15 soil samples from field of 15 farmers of Ratanpur village. After soil testing analysis, 10 soil samples were found to have micro nutrient deficiency of iron (Fe), Manganese (Mn), Zinc (Zn), Copper (Cu) and Sulphur (S). AAU provided support to 10 farmers under the Micro nutrient project. The inputs like Zinc Sulphate, Ferrous, Magnesium, Gypsum, Imida and Akalesh were provided to farmers to apply in their field.

***Tikhu Marchu Banyu Madhur* (The spicy chilly became sweet for family)**

A Case Study

Panabhai Kalabhai Gamar is a marginal farmer from Changod village of Khedbrahma taluka of Sabarkantha District of Gujarat and head of seven-member family.

In the Project Area of Poshina tribal region, commercial vegetable cultivation is a distant dream. With this background, VIKSAT initiated the vegetable cluster development programme under the on-going improved agriculture enhancement programme with the support of NRTT & SRTT, CInI and IGWDP.



The vegetable cultivation started with a small number of farmers who did Kharif vegetable cultivation of Chilly and Brinjal. In the year 2014, 55 farmers cultivated Chilly and Brinjal crops on commercial basis in 7.27 acre area in seven project villages.

Panabhai and his family's sole source of livelihood is their 1.5 acres agricultural land. Panabhai showed interest and involved himself in the vegetable cultivation programme. Following the regional tradition of rainfed farming, Panabhai used to grow Maize, Cotton and Cotton seed plot crop in Kharif season. However, during the last Kharif season, he grew cotton seed plot in 0.1 hectare and was able to earn an income of Rs. 20,100.

Under the guidance of VIKSAT, he agreed to replace traditional crops with vegetable cultivation. He cultivated Chilly as sole crop and sowed VNR-507 variety on 0.05 Ha (5 Guntha) of land. The improved cropping practices, which included appropriate crop geometry, fertilizer application schedules and timely use of plant protection measures helped him get a good production of crop.

The cost of cultivation for Chilly crop was Rs. 4624. For the first time, he harvested 9.6 quintals of Chilly and within four-five months earned a net income of Rs. 14,029 after selling the vegetables in the village and nearby market. After experiencing the results of vegetable cultivation, he has decided to adopt the same practice next year on his own.



Jayantibhai Nanabhai Begadiya, a marginal farmer from Changod, a Village in Sabarkantha District of Gujarat, is the head of his six - member family.

VIKSAT initiated the vegetable cluster development programme in Poshina tribal region under the on-going improved agriculture enhancement programme with the support of NRTT & SRTT and CInI.

Agriculture land measuring about 0.40 hectares (Ha) is Jayantibhai and his family's sole source of livelihood. During the last Kharif season, he grew Cotton seed plot in 0.11 Ha and was able to get an income of Rs. 9800.

He replaced cereals crop with vegetable cultivation. He cultivated mix cropping of Chilly and Brinjal crop and sowed Sitara and Nilesh varieties respectively on 0.12 Ha of land. For the first time, he harvested 6.6 quintal of Chilly and 3.25 quintal of Brinjal. He earned a net income of Rs. 14,822 - an increase of one and half times in net income over what he earned by cultivating only cash crop.



Mr. M. Nagarajan, IAS, DDO, Sabarkantha at the launch of cluster development programme MISSION 2020 at Khedbrahma

I. Financing Agricultural Sustainability and Allied Livelihood (FASAL)

The project 'Financing Agricultural Sustainability and Allied Livelihood (FASAL)' is in the second phase of the UPNRM project which had started in the year 2012, with the support of NABARD.

The project has created a reliable and economical credit support for the poor especially those who have remained out of the financial inclusion. FASAL has been instrumental in safeguarding the interest of poor from the exploitation by the money lenders. The weaker sections of villagers have been saved from the vicious cycle of perennial poverty due to depleting farm production for want of appropriate and timely financial support. These phenomena led to increase in the under utilized or unutilized farming land with the passage of time; leading to poor becoming poorer year by year. FASAL aims to break these phenomena by extending financial support for NRM based livelihood activities to the needy one.

The immediate objectives of FASAL are:

- To provide easy and economical credits for the NRM based livelihood activities
- To improve opportunities for employment and increase in earning capabilities for the weaker section of the society.
- To improve production capabilities of land leading to increase in food supply.
- To expand the coverage area under the project to reach out to the remotest areas; which requires financial support for their survival.
- To introduce value addition concept for better realization of the farm produce.

Currently, the project is being implemented through formation of Self Help Groups (SHGs) and Farmers Clubs (FCs). The loan amount is distributed to these groups for further distribution among the members. Presently, there are 650 active SHGs and 85 Farmers Clubs having a 15000 member base.

During 2014-15, around 2534 members from the 431 SHGs and 19 Farmers Clubs have availed the benefit of financial services, leading to the benefit reaching to around 7000 people indirectly. Details of loan disbursed during the year 2014-15 is given in the following table.

Purpose of loan	No. of loan beneficiaries	Amount disbursed (Rs.)
Agro inputs	8	2200000
Biogas	73	1799000
Cattle feed	3	850000
Cattle shed	22	1930000
Crop loan	136	6851000
Fodder storage	6	430000

Biogas for efficient energy management

The past record of implementing this project is discouraging. Various govt. agencies had made several attempts to encourage the people of the region to opt for Biogas as an alternate energy source to traditional usage of jungle/fire wood.

In the year 2014-15, VIKSAT with its persistent efforts and after conducting series of group discussions have finally managed to convince them to opt for biogas for their daily energy needs. Initially, only few of the SHGs had opted for the programme, however, today more number of such groups have come forward to join the movement. The current trend is indicative of gradual shift towards the use of biogas in place of jungle wood in the entire region.



Vermi compost for promotion of organic farming

Today, a gradual shift of demand towards organically grown farm produce is becoming evident. The ever increasing demand for organic produce has generated corresponding increase in demand for appropriate natural fertilizers. VIKSAT has visualized the importance this change in demand. To meet the future demand for natural compost SHG have been encouraged and trained to prepare vermicompost. This initiative has produced instant



result for SHG by producing and selling more vermicompost at a premium rate. It is visualized to be an important source of supplementary income for the womenfolk.

Dairy- Contributing to white revolution

FASAL project is primarily implemented in North Gujarat. This has helped the region to emerge as very large producer of the milk products. Today, Mehsana District Cooperative Milk Producers Union Ltd. alone contributes per day 10 lakh liters of milk as part of Gujarat Cooperative Milk Marketing Federation (GCMMF). In Gujarat, the entire dairy activity is primarily handled by womenfolk.



Presently, SHGs in the region are seeking help from FASAL project for buying milch animals and allied activities like production of fodder, cattle sheds, etc. Under the project, Rs. 38.97 lakh has been disbursed as loan amount for buying milch animal and Rs. 19.30 lakh for development of cattle sheds.

Managing water for sustainable agriculture

An efficient irrigation system is an integral part for the success of any agricultural activity. The scope of irrigation activity is not restricted to only lifting water from ground level; but it also extends to deepening of wells, dug wells, installation of Micro Irrigation System, efficient use and conservation of

water resources. In this project, Rs. 12.48 lakh was disbursed on loan basis to 21 beneficiaries.



Agriculture area through land development

Land development is a major NRM activity for improvement of production, productivity and soil fertility of lands. Since land development do not provide direct income and payback period is long, banks are not keen to finance such activities and the farmers are also not interested much for the same. However, capacity building activities helped the women farmers in understanding importance of land development and its long run benefits. A total amount of Rs. 5.88 lakh was disbursed for land development activities which includes land leveling, removal of babul from the land, gypsum coating, etc.



New initiative -Vegetable Nursery

The project is not only making it easier to access finance for rural livelihood but also helping in building confidence in the community to take up new NRM based livelihood initiatives. Among such initiatives two recent steps of SHG members are remarkable. SHGs have shown interest in raising nursery for vegetable seedling like onion, chilly, and tomato. SHGs has grown 3 lakh seedling for onion, 1.5 lakh and 5 thousand seedlings for tomato. Women earned substantial amount as they sold saplings to WADI project area.



II. Facilitating Organic Orchard for Tribal Development - Project FOOD

Project FOOD is implemented under Wadi Programme of NABARD. In Gujarati language, Wadi means 'a small fruit orchard'. The Wadi is an alternative arrangement for enhancing agriculture based economy in tribal areas. Due to very low landholding and fast division of lands year by year, it has been becoming difficult for tribal families to get food from agriculture lands for the entire year. This has been forcing tribal population to migrate to other areas. Wadi is a concept of diversifying from low yielding cereal crops to high value fruit and vegetable crops. The recurring investment in fruit crop is less and it involves lesser risk of crop failure. The increase in income from wadi is at least three times more than the cereal crops in the same area of land.

Wadi is a proven model and has been implemented for more than two decades in Maharashtra and southern part of Gujarat. NABARD has been promoting the model with financial and technical assistance. The model has successfully brought thousands of tribal families out of poverty and has remained successful in reducing migration. In the last few years the model was revised, with organic farming process in the place of conventional chemical input based farming.

In 2013, VIKSAT took up a project for developing wadis in 1000 acres of land in 23 villages viz. in Vijaynagar and Bhiloda blocks of Sabarkantha district. It aims to support the tribal farmers for seven years, right from plantation to market linkage, value addition and achieving the stable period production and income. In the first year of the project, 75 farmers from 7 project villages enrolled in wadi project. The success of 7 modular villages encouraged other farmers from the surrounding

areas to join the project. In 2014-15, VIKSAT successfully enrolled additional 428 farmers from 23 villages, comprising 4 villages from Bhiloda and 19 villages from Vijaynagar districts. Thus, VIKSAT achieved the objective of developing around 500 wadis in the first two years of operation.

The Wadi Model

The Wadi Model is based on the economics of fruit and vegetable crops and income generation over a period of time. The wadi model is largely dependant on the suitability of the soil and climatic condition in a given area. The model has five components, details of which are given as follows:

a. Fruit Crops: Out of one acre of land, fruit crop is to be grown on 0.75 acre of the land with a recommended spacing. The recommended spacing suggests that in 10 m x 10 m space, 20 Mango trees should be planted. Similarly, in 6 m x 6 m space, 5 Lemon plants and 20 Pomegranate plants should be planted. The topography, climatic conditions and soil conditions are ideally suitable for the production of above mentioned fruits in the Bhiloda and Vijaynagar areas. Lemon production starts from the second year, Pomegranates production from the third year and that of Mango from the fourth year. Thus, the production commences from the second year onwards and every successive year adds additional production from other crop. Thus, the model reduces the usual gestation period of 2 to 3 years required in an orchard development.



b. Intercrop: As mentioned earlier spacing between two fruit plants leaves enough space for farmers to grow inter crop of staple food as well; which ensures their food security. The intercrops can be cultivated till the time when a fruit crop matures and starts

Table: Details of Wadis covered under Wadi Poject during 2014-15

Sr. No.	Block	Name of Village	No. of Wadis Covered		
			2013-14	2014-15	Total
1	Vijaynagar	Vankada	0	9	9
2		Baleta	0	34	34
3		Dadhvav	0	9	9
4		Kodiyavada	0	3	3
5		Bildiya	0	2	2
6		Dandod	0	1	1
7		Jushavada	0	11	11
8		Movatpura	0	13	13
9		Masoata	0	28	28
10		Parvath	0	19	19
11		Chithoda	0	14	14
12		Bhagorapada	9	15	24
13		Limda	0	24	24
14		Chamthan	8	23	31
15		Chitrodi	0	34	34
16		Kanadar	20	66	86
17		Laxmanpura	0	0	0
18		Samiya	0	0	0
19		Bogapada	0	0	0
Total			37	305	342
20	Bhiloda	Jehejudi	14	47	61
21		Chorimala	10	22	32
22		Raysingpur	4	29	33
23		Virpur	10	25	35
Total			38	123	161
Grand Total			75	428	503

yielding optimum production. Even after maturity of the fruit crops, some limited quantity of production can be gained from intercrops. The intercrops are generally of pulses and vegetables which do not affect the growth of fruit crops. During the kharif season, pulses like black and green grams are grown; which helps in adding nitrogen in soil through nitrogen fixation activities. Similarly, vegetables like Brinjals, Okra, Chilly, Tomatoes, Onions, Garlic, Cluster beans are cultivated during the summer season to optimize the earning capabilities of farmers. Generally, yield from vegetable crop starts from 45 to 60 days depending on the crop selected. This enables the farmers to earn around Rs. 10,000-20,000 per annum.

c. Vegetable crops: In this technique, out of 1 acre of land, vegetable is grown in 0.15 acre. Vegetables like Brinjal, Chilly, etc. yield production for 3-5 months and production can be obtained for 2-3 years without replanting the crop. During 2014-15, beneficiaries of 10-15 Gunthas were encouraged to

adopt the intercrop pattern on trial basis. As part of this initiative, they were provided with good quality saplings of Chilly (Variety-Pennar), Tomato (Variety-1389), Garlic (Variety-Deshi) and Onion (Variety-N-53).

d. Creeper and tuber crops: A double vegetable farming is promoted under the project. Ginger and turmeric are grown on the ground as these crops can grow under shade. Creeper vegetables are grown between the rows of ginger and turmeric. A structure called mandap is prepared at height of 2-3 m so that creeper vegetables can easily spread across the mandap. The creeper vegetables provided under the project includes low value but high yielding and highly consumed Gourd and Valore as well as high value, high yielding but less consumed bitter gourd, etc. The creeper vegetables have longer shelf life and can be sold easily in the local market. Through cultivation of creeper vegetables, a farmer can easily earn Rs. 10,000-15,000 per month for a period of 3-4 months



during the crop period. The ginger and turmeric needs longer time for maturation and only one harvest can be had in a year. A farmer can earn Rs. 8,000-12,000 from these crops.

e. Forest plants: Forest plants are grown along the borders of an orchard to create a live barrier to check wild and domestic animals from entering it. Further, to protect the orchard, fencing can be easily created within 2-3 years by filling the gaps between the forest plants with dry branches, bamboo or babool branches. In the long run, these wood yielding forest plants can also give good economic return.



Supplementary Interventions

The project supports the farmers at individual level for crop diversification and improved income. It also supports in improving the natural resource base to do so and some interventions in social issues in order to create a conducive and environment. The supplementary interventions of the project include :

Water resources development: Pot drip irrigation is provided for fruit plants in initial 3 years of plantation as protective irrigation. Facilities required for irrigating the orchard like pump set and pipelines are also provided to needy farmers if so required.

Soil conservation measures: To increase access to water in the project area, necessary soil conservation activities are undertaken which include bunding, tree platforms, combination of the two and trench-cum-bund based on field level requirements.

Health Programme: Some basic problems faced by tribal families are related to malnutrition, illness and inaccessibility to health care. Under the project, the community health programme focuses on Maternal and Child Health Care (MCH) as well as primary and preventive health care. The participants are educated on sanitation and hygiene. The local youth, especially women, who are called Village Health Guides (VHG) are trained in diagnosis and treatment of common illnesses whereas serious cases are referred to appropriate facilities.



Women Development: There has been an increased emphasis on women's participation in the programme. As part of the programme major activities taken up are the promotion of SHGs, income generating activities and reduction in drudgery. In order to reduce the drudgery for women, three main initiatives have been taken i.e. introduction of smokeless stove, use of bearing in the traditional grinding stone and in pedal thrasher for paddy. The income generating activities includes cultivation of fruit, vegetable & forest plant nurseries, produce collection, vermicomposting, biopesticide preparation, etc. As part of the programme, Jagruti Swa Sahay Juth of Vejpur village and Vikas Swa Sahay Juth of Virpur village had availed loans from NABARD under UPNRM program to raise saplings of Chilly, Onions, Tomatoes and other vegetables. Their investment of Rs. 20,000 through loan amount helped them in earning Rs. 3 lakh by selling these saplings to Wadi beneficiaries during the Rabi season.

Success Stories: Wadi Bringing Prosperity and Fragrance Among The Tribal Households

Details of Incremental income generated by adopting Intercrop pattern in Wadi project as compared to the traditional crop pattern

Ramkishor Alkhaji Damor (Village: Masota, Ta: Vijaynagar, Wadi : 1 acre, Batch: 2, Year: 2014-15)

Details of traditional crop pattern in absence of Wadi project					Details of Intercrop pattern as part of the Wadi project					
Season	Crop	Production (kg)	Rate (Rs/kg)	Income (Rs)	Season	Crop	Area (guntha)	Produ. (kg)	Rate (Rs/kg)	Income (Rs)
Kharif	Maize	700	10	7000	Kharif	Turmeric (Salem)	5	400	50	20000
Rabi	Wheat	600	13	7800	Rabi	Ginger	5	150	40	6000
						Chilli (Pennar Green)		5	200	1000
						Onion (N-53)	5	200	15	3000
						Garlic (Deshi)	5	140	70	9800
					Summer	Moong	20	180	50	9000
			Total	14800					Total	48800

Chandubhai Bhankji Kharadi (Village: Jhejhudi, Ta: Bhiloda, Wadi: 1 acre, Batch: 1, Year: 2013-14)

Details of traditional crop pattern in absence of Wadi project						Details of Intercrop pattern as part of the Wadi project					
Season	Crop	Area (guntha)	Produ. (kg)	Rate (Rs/kg)	Income (Rs)	Season	Crop	Area (guntha)	Produ. (kg)	Rate (Rs/kg)	Income (Rs)
Kharif	Maize	20	400	12	4800	Kharif	Turmeric (Salem)	7	400	50	20000
	Cotton	20	200	40	8000		Ginger	1	60	100	6000
Rabi	Wheat	40	800	15	12000	Rabi	Chilli (Pennar Green)	5	100	70	7000
							Onion (N-53)	5	500	20	10000
							Garlic (Deshi)	4	140	80	11200
						Summer	Moong	20	300	40	12000
				Total	24800					Total	66200

Pravinbhai Ramjibhai Padvala (Village: Kanadar, Ta: Vijaynagar, Wadi: 1acre, Batch: 2, Year: 2014-15)

Details of traditional crop pattern in absence of Wadi project						After wadi (2 nd year wadi income from Intercrop) Details of Intercrop pattern as part of the Wadi project					
Season	Crop	Area (guntha)	Produ. (kg)	Rate (Rs/kg)	Income (Rs)	Season	Crop	Area (guntha)	Produ. (kg)	Rate (Rs/kg)	Income (Rs)
Kharif	Maize	20	350	12	4200	Kharif	Turmeric (Salem)	5	250	50	12500
	Udad	10	150	45	6750		Ginger	1	50	100	5000
Rabi	Cootan	10	100	40	4000	Rabi	Chilli (Pennar Green)	4	70	70	4900
	Wheat	40	750	15	12000		Onion (N-53)	3	300	20	6000
							Garlic (Deshi)	4	100	80	8000
						Summer	Moong	20	280	40	11200
							Dudhi	3	200	20	4000
							Kareli	3	150	30	4500
				Total	26950					Total	56100

WaSH Educators Training - WET 2014

Water is at the core of sustainable development and plays a vital role in economic growth and poverty eradication. Water, Sanitation and Hygiene (WaSH) are central to achievement of many developmental goals. However, with the increasing demands on the limited water resources, universal access to safe drinking water and sanitation is a challenge that is here to remain unless there are concerted efforts made towards undertaking conscious and collective measures towards proper water resource management. The NGOs/CBOs working with communities in integrated rural development issues spearhead the village development activities at different intervention levels. They are able to communicate WaSH effectively and bring about behavior change in a sustainable manner.

It was envisaged that if a cadre of water educators, equipped with the understanding of sustainable management of water is created, it can act as a great resource for the society and benefit the people through innovative, need specific, sustainable and replication interventions. Thus the pilot project of training water educators evolved.

VIKSAT with support from NCSTC, Govt. of India launched WaSH Educators Training (WET) programme to reach out to individual, NGOs and



communities committed toward this field and teach/improve them in their work towards WaSH.

In the WET 2014 batch, 29 participants including 19 males and 10 females participated from 9 states of India namely Tamil Nadu, Gujarat, Odisha, UP, Delhi, Assam, AP, Rajasthan and Madhya Pradesh. The training was conducted at VIKSAT Training and Resource Centre in Ahmedabad.

VIKSAT Library and Resource Centre

VIKSAT has a rich collection of over 3500 books and audio-visuals, along with a computerized database in its library. The space and facilities of the resource centre together with peaceful and scenic natural setting of the campus and easy accessibility adds to the uniqueness of the resource centre as a training venue.



VIKSAT Library and Resource Centre

VIKSAT extends its thanks to all the institutions and individuals who have contributed to and worked with us in development action. We are grateful to the government departments, funding agencies, donors, our NGO and CBO partners for having stayed with us and supporting our efforts. We acknowledge their significant support during the year 2014-15 and hope for their continued cooperation in the coming years. Some of the partners, with whom we have been working, are as follows:

Major Funding Partners

- National Bank for Agriculture and Rural Development (NABARD)
- Collectives for Integrated Livelihood Initiatives (CInI)
- Sir Ratan Tata Trust (SRTT)
- Sir Dorabji Tata Trust (SDTT)
- Navajbai Ratan Tata Trust (NRTT)
- Ministry of Environment, Forest and Climate Change (MoEFCC), GoI
- John Deere Foundation (JDF)
- John Deere Water (JDW)
- United Way of Mumbai (UWM)
- Indian Council of Agricultural Research (ICAR)
- Gujarat Forest Research Foundation, Gandhinagar (GFRF)
- Gujarat Biodiversity Board (GBB)
- KFW- IGWDP (Indo German Watershed Development Programme)
- Department of Science and Technology (NCSTC Div.), GoI

Activity/Technical Partners

- DRDA, Banaskantha
- DRDA, Mehsana

- DRDA, Sabarkantha
- DRDA, Kachchh
- End Water Poverty (EWP)
- Center for Environment Education (CEE)
- Vikram A Sarabhai Community Science Centre (VASCSC)
- Kachchh Heritage, Art, Music, Information and Resources (KHAMIR)
- Paryavaran Edutech
- KVK, Khedbrahma
- Kutch Nav Nirman Abhiyan (KNNA)
- Sardarkrushinagar Dantiwada Agricultural University (SDAU)
- Sustainable Rural Enterprise (SURE)
- Aravali Agriculture Resource and Training Center (AART)
- NABCONS
- AFC, Mumbai
- WES-Net India
- Sajjata Sangh

Our Bankers

- State Bank of India
- Dena Bank
- Indian Overseas Bank
- Bank of India

Abridged Balance Sheet

(Rs. in Lakhs)

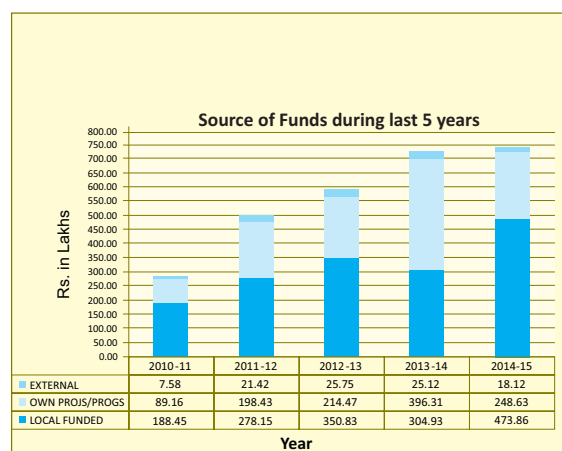
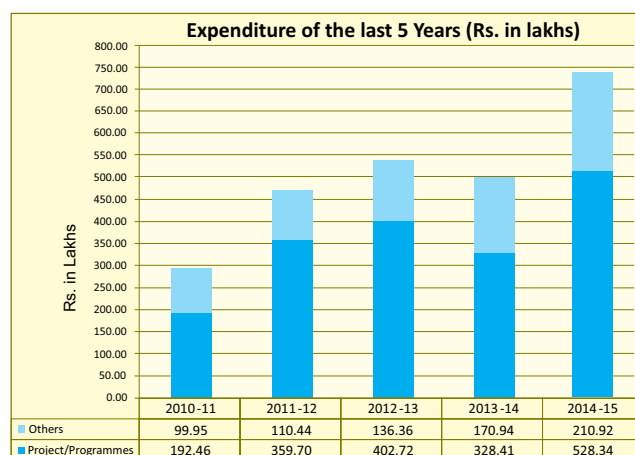
Funds & Liabilities	31 March 2014	31 March 2015
Endowment Fund Account	80.00	60.00
Reserves & Other Earmarked Funds	922.08	857.00
(Inclusive of accumulated surplus/deficit)		
Balance of Project Grants	195.00	236.00
Sundries & Suppliers	47.00	5.00
Total	1244.00	1158.00

Assets	31 March 2014	31 March 2015
Immovable and Movable Properties	201.00	198.00
Investments in Approved Securities	269.00	249.00
Bank Account and Cash/Fdr etc.	242.00	283.00
Advances and Other	532.00	428.00
Total	1244.00	1158.00

Abridged Income and Expenditure Account

Income	31 March 2014	31 March 2015
Projects and Programmes Income	329.98	510.00
Income from Other Sources	146.96	234.00
Loan receipt	402.65	254.00
Total	879.59	998.00

Expenditure	31 March 2014	31 March 2015
Projects and Programmes Expenditure	328.41	508.00
Staff Salaries	117.25	152.00
Establishment and Administrative Expenditure	51.06	75.00
Amount transferred to other Earmarked Fund	2.63	3.00
Loan disbursement	402.65	266.00
Total	902.00	1004.00
Surplus/(Deficit)	-22.41	-6.00
Total	879.59	998.00



Chairman

Prof. M S Swaminathan
M S Swaminathan Research Foundation
3rd Cross Street, Taramani Institutional Area,
Chennai - 600 113

Members

Shri Pradeep Khanna
PCCF (Retd.)
Gujarat Forest Department
K-20, Sector - 20, Gandhinagar 382 020

Dr. Omkar Jani
Principal Research Scientist
Gujarat Energy Research & Management Institute (GERMI)
1st Floor, Energy Building, PanditDeendayal Petroleum
University, Raisan Village, Gandhinagar - 382 007

Prof. Rita Kothari
Associate Professor
IIT Gandhinagar
Vishwakarma Government Engineering College Complex,
New C.G. Road, Chandkheda, Ahmedabad - 382 424

Shri Kartikeya V Sarabhai
Director
Centre for Environment Education
Thaltej Tekra, Ahmedabad - 380 054

Dr. D.V. Rangnekar
BAIF (vice president) (Retd.) / Advisor
(MP Rural livelihood programme).
4, Shobhana Apartment, Nehru Park, Vastrapur,
Ahmedabad - 380 015

Ms. Pallavi Patel
Director
CHETNA
SUPATH - II, B-Block, 3rd Floor, Opp. Vadaj Bus Terminus,
Ashram Road, Ahmedabad - 380 013

Ms. Vijayalakshmi Das
Managing Director
Ananya Finance for Inclusive Growth Pvt. Ltd.
101, SAKAR I Building, Opp. Gandhigram Station
Ashram Road, Ahmedabad - 380 009

Prof. Deepti Bhatnagar
Organizational Behaviour (OB)
Indian Institute of Management (IIM)
Vastrapur, Ahmedabad - 380 015

Prof. Indira Hirway
Director
Center for Development Alternatives
E- 71, "Akash"
Nr. Chief Justice Bunglow, Bodakdev,
Ahmedabad - 380 054

Shri Kiran Desai
Senior Programme Director
Centre for Environment Education
Thaltej Tekra, Ahmedabad - 380 054

Shri T K Balappan
Secretary
Nehru Foundation for Development (NFD)
Thaltej Tekra, Ahmedabad - 380 054

Shri S. C. Sharma
1001, Jivabhai Towers
Sandesh Press Road
Ahmedabad - 380 054

Shri Dilip Surkar
Director
VIKSAT
Nehru Foundation for Development (NFD)
Thaltej Tekra, Ahmedabad - 380054

VIKSAT Offices**VIKSAT**

Nehru Foundation for Development
Thaltej Tekra, Ahmedabad - 380 054
Phone: + 91-79-2685 6220,
Tele Fax: + 91-79-2685 2360
Email: viksats@gmail.com
Web: www.viksats.org

VIKSAT Field Office

Opp. N.R.A. Primary School
B/h Bhuvneshwari Guest House,
Govindnagar, Opp. Bhiloda Opp. S.T. Bus Stop
Bhiloda - 383 245, Dist.: Aravalli
Phone: 02771 - 233 970
Email: viksats.bhiloda@gmail.com

VIKSAT Field Office

Near BMB City
Kukma Lakhond Road
Kukma, Bhuj - 370 105, Kachchh
Phone: 02832-271555, 699062
Email: viksats.bhuj@gmail.com

VIKSAT Field Office

Nr. Old Water Tank
Limdi Chowk
Satlasana - 384 330
Dist.: Mehsana
Phone: (02761) 253158
Email: viksats.satlasana@gmail.com

VIKSAT Field Office

C/o Radheshyambhai Sadhu
2, Shivshakti Society, Masali Road
Radhanpur, Dist.: Patan
Phone: 02746-276058
Email: viksats.santalpur@gmail.com

VIKSAT Field Office

C/o Parmar Arkhabhai, Nr. Dashama Temple
At & Post: Kheroj
Ta: Khedbrahma, Dist.: Sabarkantha 383 270
Phone: 02775 284360
Email: viksats.khedbrahma@gmail.com

Vikram Sarabhai Centre for Development Interaction (VIKSAT)

VIKSAT was set up in the year 1977 as an activity of the Nehru Foundation for Development, to take proactive steps to conserve the environment. VIKSAT has been working at grassroots level with communities in their local regions towards developing models which ensure sustainability of livelihoods through natural resource management. It has been imparting skills related to institution building, resource generation, management, networking and other support. Broadly, VIKSAT works in four key thrust areas, namely, Forestry, Land and Water Management, Sustainable Livelihoods and Institution and Capacity Building.

The head office of VIKSAT is located in Ahmedabad, Gujarat. It has five field offices in four districts of Gujarat, viz. Bhiloda & Kheroj in Sabarkantha district, Satlasana in Mehsana district, Kukma in Kachchh district and Radhanpur in Patan district.



www.viksat.org

VIKSAT

Nehru Foundation for Development

Thaltej Tekra, Ahmedabad - 380 054

Tel: +91 79 26856220, 26852360

Email: viksat@gmail.com