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Integrated Nutrition Program: Making it happen



Nutrition is a core pillar of human development and well-nourished individuals tend to be healthy, productive, learn effectively, and contribute positively to the economy.

Background:

Nutrition is a core pillar of human development and well-nourished individuals tend to be healthy, productive, learn effectively, and contribute positively to the economy. Only a few challenges being faced by global community are as dreadful as malnutrition in terms of scale, a condition that affects one in three people (according to the Global Nutrition Report, 2017). Malnutrition is associated with exceptionally poor outcomes in several domains that affect human development. Investments in nutrition contribute greatly to economic productivity, human capital development, and poverty reduction by improving work capacity, cognitive development and scholastic performance. Investments in nutrition also directly have an impact on the health status of populations through reducing morbidity and mortality.

By adopting the multi-faceted approach to nutritional security and working with stakeholders across state's food and healthy ecosystem, the VCF are working towards achieving a large-scale sustainable impact on the state's most vulnerable population and sustainable eco-system for nutrition in Andhra Pradesh.

Andhra Pradesh is committed to improving the nutritional status of women & children and Anganwadi centers are the focal point for the delivery of these services. The government of Andhra Pradesh signed an MoU with VCF to improve the quality of life through an integrated, multi-thematic approach. As a part of it, restructuring and strengthening of Integrated Child Development Services (ICDS) have been prioritized by VCF.

The important objective of the project is to catalyze action through the existing public system i.e. ICDS services in Andhra Pradesh. The project works on both the supply and demand sides and improve service delivery and demand for services of ICDS. There will be a special focus on household practices, and on vulnerable populations in vulnerable geographies. It is an ambitious approach but has a tremendous opportunity of scale.

Project objectives:



- **Enabling** the ICDS policy framework and facilitating community engagement to focus on children under 5.
- **Strengthening** convergent actions for improved nutrition outcomes.
- **Transforming** Anganwadis to focus on children and mothers' retention.
- Preventing leakages in the delivery system and ensuring proper delivery
- **Bolstering** the ICDS ecosystem through enhanced training and capacitation

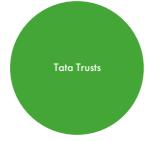
Key Stakeholders of the program

Department of Women Development and Child Welfare (DWDCW), Govt. of AP

Working for the development and welfare of women and children to ensure the health and nutrition through the ICDS system

> Vijayavahini Charitable Foundation

End to end implementation of programs, working for improved nutrition standards

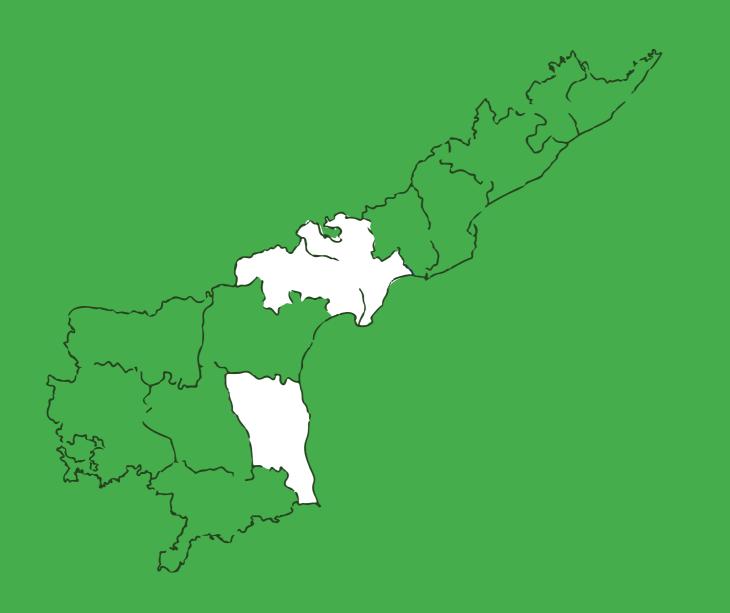


Involved in providing the pre-requisite technical and funding support for implementation of integrated Nutrition program

The India Nutrition Initiative (TINI)

Involved in design of the program as well as funding to implementation, as partner organization.





Program Outreach

Andhra Pradesh

State

Krishna, Guntur, Nellore and Prakasam

Districts

ICDS Projects

2,00,000 **Lactating & Pregnant women**

13991

Anganwadi Workers

Key Program highlights

Transformation of Anganwadi centres:

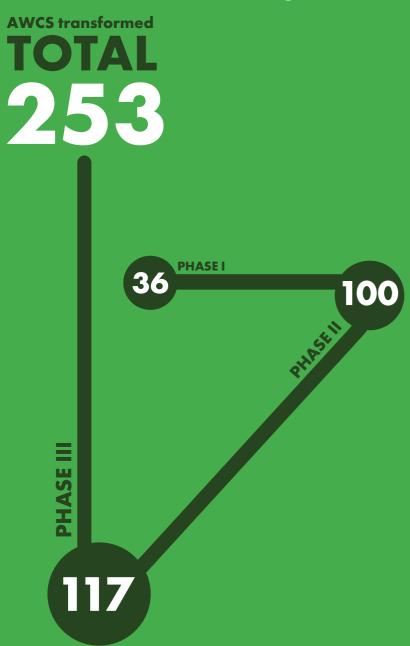
One of the important components under Integrated Nutrition Program is refurbishment of Anganwadi Centres in order to make them model AWCs to improve the mother and children retention in 265 villages of Vijayawada parliamentary constituency (VPC) in Krishna District.

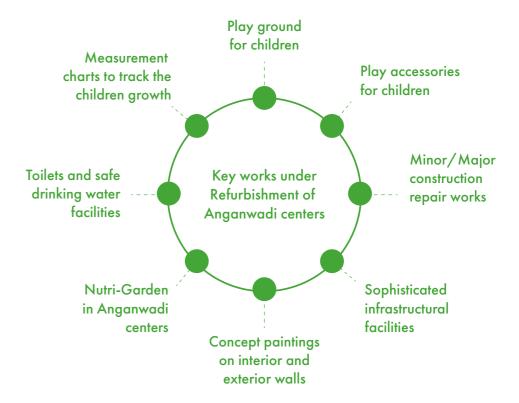
Under the refurbishment of Anganwadi centres, the project invested in demonstrating that, investing and ensuring that AWCs have the requisite infrastructure, motivated and well-trained functionaries are quickly able to attract and retain their respective customer / beneficiary base.

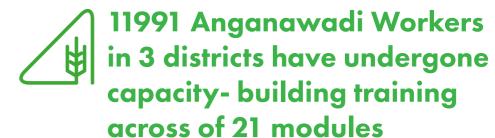
Refurbishment plan includes minor civil work (repairs), concept painting on the walls, provision of safe drinking water, construction of child friendly toilets, development of Nutri-garden, playground with instruments installation, and provision of basic furniture, IEC materials and Preschool education kit to each Anganwadi centre.

During last financial year, we have completed the transformation of 253 Anganwadi centres through infrastructure refurbishment in a Phased manner. These centres are streamlined with prerequisite infrastructure.

Phase wise transformation of Anganwadi centres







Monitoring of ICDS System Strengthening and Nutrition Improvement Program (ISSNIP) Implementation in Krishna, Guntur and SPSR Nellore districts, Andhra Pradesh

The objective of ISSNIP is to support the Government of India and participating states to "Strengthen the Integrated Child Development Services (ICDS) policy framework, systems, and capacities, and facilitate community engagement, to ensure greater focus on children under three years of age and strengthen convergent actions for improved nutrition outcomes."

The main aim of ILA training under ISSNIP program is to systematically train Anganwadi workers to improve their day-to-day practices. Around 11991 AWWs in 3 districts have undergone capacity- building training across of 21 modules. The awareness levels of AWWs are drastically improved due to these training sessions.



ISSNIP Capacity building





500 Supervisors trained



Block coordinators trained

Aadhaar enabled **Supplementary** Nutrition Program (AeSNP) in Prakasam district of Andhra Pradesh.

The Supplementary Nutrition is one of the six services provided under the Integrated Child Development Services (ICDS) Scheme which is primarily designed to bridge the gap between the Recommended Dietary Allowance (RDA) and the Average Daily Intake (ADI). Through Aadhaar authentication technology, the current project aims at plugging the leakages in service delivery of SNP and to ensure regular delivery to authentic beneficiaries. As part of the pilot initiative, VCF supported the department of women welfare and child development in implementing AeSNP in Prakasam district. The Trusts provided fingerprint authentication devices for a pilot project in 10 ICDS projects of Prakasam district. The Anganwadi workers have gone through capacity building training to run the systems. In the next couple of months, the systems will be stabilized and later on end-line analysis will be done. To replicate the same mechanism in other districts, rigorous plans were developed and are to be executed with the consultation of the department in coming months.

Reducing leakages in SNP of ICDS scheme



20000 **Pregnant and**

lactating women authenticated



000 2089

Trained

Capacity building/hands on Trainings for ICDS functionaries

VCF has been focusing on improving and upgrading the skills of ICDS Functionaries through various hands-on Training and capacity building to frontline workers of ICDS on Nutrition and its components (ANC, PNC, IYCF, and Growth Monitoring and WASH-1000 Days) by visiting Anganwadi centers and attending block level meetings in Krishna district.

These capacity building training sessions created a visible impact in terms of adequate nutrition education for Anganwadi workers to train and educate mothers on concepts of weighing and feeding their own child. Since AWWs will have a wider reach and acceptance than any other Government functionary, these messages will easily spread to each and every stakeholder.

Improving skillset of Anganwadi workers



46
Training



500 AWWs

BCC/IEC Activities

Mobilizing key influencers is a crucial aspect in order to establish sustainable ecosystems for ICDS services. VCF has been advocating effective community involvement and their active participation to utilize ICDS and other government-related services to eradicate malnutrition and spreading the message of optimal nutritious practices to improve maternal and child nutrition.

Through Poshan Month and other platforms, we have reached to a lot of people and escalated the importance of nutrition for quality and healthier life. The Trusts has extensively focused on spreading the message through innovative approaches by adopting prevailing cultural practices/ customs/ ceremonial occasions to promote a specific set of behaviors and to enhance community participation in ICDS services.

Educating the community on Nutrition aspects



Meetings Conducted



Support department in implementation of Kishori Vikasam Scheme:

An Awareness program for adolescent girls on health, nutrition and counselling has been conducted by WCD department across the state. Technical support unit of VCF has been playing a critical role in deployment of Kishori Vikasasm Scheme reaching out and monitoring Anganwadi workers for effective implementation of the project.



Key Outcomes/outputs of the Program

- 253 AWCs in Krishna District transformed infrastructurally
- 480 AWCs became part of a survey to assess existing infrastructure
- 2000 Anganwadi workers trained on Aadhar authentication
- 4000 biometric devices distributed under the Aadhar enabled Supplementary Nutrition Program
- 12000 Anganwadi workers trained on skill upgradation in Nutrition education
- 20000 people reached through BCC/IEC activities in the Krishna district



Overall impact

- Anecdotal evidence says that there has been a significant improvement in Enrolment rates of children and mothers due to transformation of Anganwadi centers.
- Learning outcomes of the children has been improved due to IEC paintings on walls of Anganwadi centers.
- Due to our transformation of AWCs, Government took up an initiative to transform 4000 AWCs in Andhra Pradesh Rural Inclusive Growth Project (APRIGP) mandals of the state.
- ICDS functionaries are capacitated with required nutrition knowledge



Anganwadi transformation

An Anganwadi center is a hub for all the health and nutrition-related activities in the village. There are around 1000 Anganwadi centers (AWC) functioning in villages of Vijayawada rural Parliamentary constituency (VPC) and most of them do not have child-friendly infrastructure, adequate growth monitoring devices and the staff are not skilled enough to implement the objectives of ICDS. This has led to an enormous decrease in the enrollment of children and other beneficiaries. These centers can be revived and upgraded with provisions of requisite infrastructure to Anganwadi centers.

In this regard, VCF and VCF have taken the initiative to transform 400 AWCs in VPC through infrastructure refurbishment with the collaboration of local communities, PRI and ICDS. This also includes capacity building of ICDS the department focusing on 1000 days (Pregnancy and Infant and Young child feeding up to 2yrs) and provision of growth monitoring devices along with other basic amenities.

The refurbished Anganwadi centers have become model AWCs and created a positive impact in terms of enrollment and working hours of the center as well as learning outcomes of the children. The enrollment levels are improved as compared to other centers where refurbishment is not done. When it comes to day-to-day closure of AWCs, the AWWs would close the center by 3 pm but it has gone up to 5 pm due to Anganwadi transformation. The learning outcomes stand drastically improved solely because of beautiful and attractive art paintings on the walls of refurbished centres.

The local community, PRI members, functionaries from the ICDS department felt motivated when they saw the transformation of AWCs done by VCF and decided to contribute as well. For example, Local MPP of Vijayawada rural has declared to contribute for construction of boundary wall to the AWCs. Likewise, this project has an individual story of contribution from each village.

Krupa Jyothi, who brings her nine months old daughter to the Anganwadi center every day, calls it her baby's second home. "Being a lactating mother, I am given lunch with rice, dal with green vegetables, milk and egg daily", she says. Kavita a mother of a four-year-old boy, said, "As the center has improved facilities, my kids love spending their time here. Children are also given a few lessons in Telugu and English. The Anganwadi environment has been changed and it keeps our children to stay more and more time in the center. The facilities provided here are on par with any private preschool in the city."



"Being a lactating mother, I am given lunch with rice, dal with green vegetables, milk and egg daily", says Krupa Jyothi.

Way Forward

- Equip refurbished centres: On the lines of transformation of Anganwadi centres, in the coming months, we are proposing to equip refurbished centres with early childhood educational material as well as play equipment. And also planning to initiate evaluation study to capture the impact of refurbishment on enrolment, learning outcomes and other nutrition- related aspects.
- Orientation and training of front line workers: In the coming years, we are going to concentrate on monitoring and capacity-building of Anganwadi workers on height and weight measurements. There are plans to support government in implementation of ISSNIP training modules.
- Action plan for BCC/IEC Activities: To work on the demand side, we would focus on awareness campaigns for mass mobiliszation through intensive BCC/IEC activities across the region. We are planning to organise Kalamata's on Nutrition, Health and Sanitation through local groups. Recorded messages would be developed on critical issues related to nutrition, health and hygiene practices which would be used during the Village Health Sanitation and Nutrition Days.



Will equip refurbished centres with early childhood educational material as well as play equipment.



To support government in implementation of ISSNIP training modules.



Rice Fortification in MDM and ICDS in Andhra Pradesh



Andhra Pradesh has a very high burden of vitamin and mineral deficiencies. 58.6% of children and 60% of all women are anemic as per the National Family Health Survey-4.

Background:

Andhra Pradesh has a very high burden of vitamin and mineral deficiencies. 58.6% of children and 60% of all women are anemic as per the National Family Health Survey-4. To combat the high burden of malnutrition in India, NITI Aayog developed the National Nutrition Strategy, where staple food fortification has been stated as one of the most cost-effective approaches to control vitamin and mineral deficiencies. With the help of Govt. of AP, VCF has come forward to explore and support rice fortification. Providing critical nutrients through staples such as rice, is also aligned with AP's State Nutrition Mission.

The Food Safety and Standards Authority of India (FSSAI) developed specifications for fortified rice after expert consultation which includes strong clinical evidence from the National Institute of Nutrition in Hyderabad and St. John's Research Institute in Bangalore. Since then, four states have started plans to fortify rice in one district, Karnataka in four districts (state-wide gradually), Tamil Nadu in ten districts for MDM, ICDS, and PDS. In December 2017, AP Ministries of Agriculture and Information Technology, Panchayat Raj and Rural Development invited and discussed with VCF to explore and support rice fortification. Providing critical nutrients through staples such as rice, is also aligned with AP's State Nutrition Mission 2016-2026.

In this context, VCF and VCF rolled out the rice fortification project in three districts of Andhra Pradesh. Rice fortification is a cost-effective, culturally appropriate strategy to address micronutrient deficiency in countries with high per capita rice consumption. Fortification of rice makes it more nutritious by adding vitamins and minerals, many of which are lost during the milling and polishing process. Fortified rice—rice that is enriched with essential vitamins and minerals—is one of the most cost-effective ways to address micronutrient deficiencies and sustainably reach populations, rather than just pockets of need.

VCF together with Sight and Life Foundation as a technical partner, through Vijayavahini Charitable Foundation is implementing the program. Currently, we are working in 3 districts i.e. Krishna, Guntur, and West Godavari reaching out to around 1 million beneficiaries of ICDS and MDM Scheme.

Project objectives:



Strengthen the existing supply chain system of APSSDCL

- Eradicating the Micronutrient deficiencies(MNDs) by the provision of Fortified rice to AWCs and Schools in three districts of Andhra Pradesh.
- Demonstrating the scalable and sustainable model of rice fortification initiative across the state and country.
- Strengthen the existing supply chain system of APSSDCL by providing ample capacity building training.

Key Stakeholders of the program



Helps implementation of rice fortification initiative in midday meals scheme and ICDS services in Andhra Pradesh



Involved in providing the pre-requisite technical support and gap funding

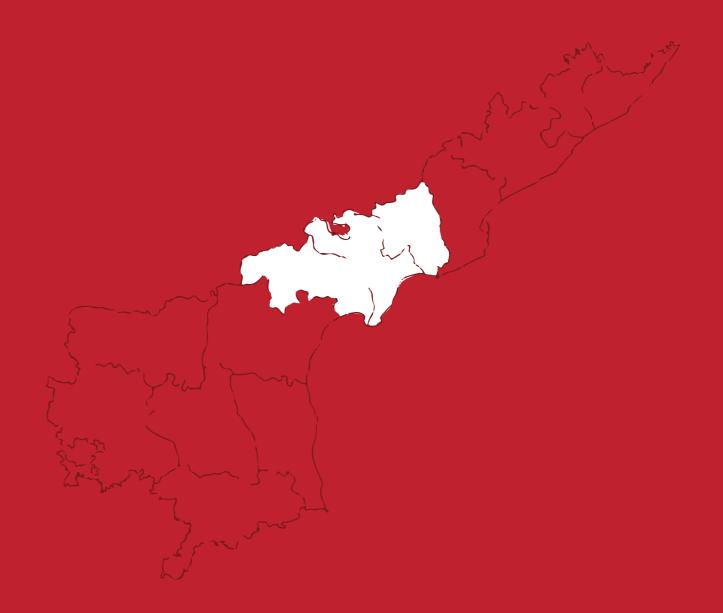


Provided technical expertise for the project implementation.



End to end implementation of programs, working towards addressing the Micro Nutrient Deficiencies

Program Outreach



Program Outreach

State

Districts

Beneficiarie

П

2

0.65M

AP

(Krishna and West Pregnant woman, Godavari districts) lactacting mother, and children

Key Program highlights

Selection of rice mills and FRK vendors for blending activities:

According to the project requirement, each district requires at least 1200-1500 MT of fortified rice per month. As our plan is to do blending at a selected rice mill and transporting it to all MLS points, we require a medium size rice mill (5-10 MT per hour capacity). As per the project requirement, we have onboarded 3 rice mills in Krishna and West Godavari districts to blend FRKs with Normal rice for rice fortification. For the selection of FRK vendor, we need to check the capacity and quality measures. So we even visited the FRK plants and taken quotations from various vendors. There are four active players in FRK production as of now.

Improvement in output capacity and better service delivery of fortified rice



6

Rice mills selected for blending activity



4FRK
Vendors

selected



120 MTs

Supply of FRKs to rice mills

Capacity-building Training for frontline workers of APSCSCL:

Improving capacities of the APSCSCL workers is one of the important aspects with respect to the regular supply of fortified rice to Schools and AWCs. Frontline workers of APSCSCL have gone through different kinds of capacity building workshops and thus it led to an effective mechanism of Supply chain management.

Enhancing capacities of frontline workers of APSCSCL



60

People are trained on QA&QC



Monitoring the supply chain management:

Improving capacities of the APSCSCL workers is one of the important aspects with respect to the regular supply of fortified rice to Schools and AWCs. Frontline workers of APSCSCL have gone through different kinds of capacity building workshops and thus it led to an effective mechanism of Supply chain management.

Partnership with "Sight and Life" organization to capture the innovative Blending practices of Rice fortification in Andhra Pradesh:

To combat malnutrition and micronutrient deficiency, in early 2018, Andhra Pradesh announced its plans to distribute fortified rice through government feeding programs such as midday meals and ICDS in three districts in the first phase and later scale it up to the entire state with the support of VCF.

Currently, the rice fortification program includes a batch blending system to blend fortified rice kernels with regular rice. However, there are shortcomings with the batch-blending system, which created the need for a new onesystem. To support this effort, Sight and Life, in partnership with VCF and the Government of Andhra Pradesh, has pioneered an innovative, cost-effective blending process, called continuous blending.

This is the first of its kind in India and the first time a continuous blending process is being employed to fortify rice for large-scale government programs.

This Knowledge has been captured in a technical brief, "Rice Fortification in Andhra Pradesh: Pioneering an Innovative Blending Process to Improve Nutrition Outcomes" and included a step by step guide for operationalizing rice fortification using the continuous blending model.

The six-membered team of VCF and sight and life organizations co-authored a technical brief which contained the optimal blending practices of rice fortification initiative.

Supply of Fortified rice in PDS Fair price shops of Vizianagaram district:

Andhra Pradesh State has identified Vizianagaram to roll out the pilot for supplying fortified rice through PDS Shops. Since the prevalence of Anaemia is very high in Vizinagaram, the Government of Andhra Pradesh has chosen Vizianagaram district as a pilot initiative. Tata Trusts has been identified as a technical partner to implement this pilot initiative.

The Government and Tata trusts expected that it would lead to a long-lasting and visible impact on the health and Nutrition of children in many ways by offering micro nutrient-rich foods. The successful implementation of this pilot in Vizianagaram might be helpful in replicating the same initiative across other districts in Andhra Pradesh.

BCC/IEC Activities:

Engaging and mobilizing relevant stakeholders is a crucial thing in order to increase the awareness levels of fortified rice and its positive impact on health. There were many myths about using fortified rice among communities. So we have decided to clear the scepticism about fortified rice through different modes of BCC/Activities in project districts. As part of that, our team has visited schools, social welfare hostels and spread the awareness on rice fortification by distributing the IEC material on fortified foods and organizational visits.

During this quarter, we have visited 12 schools and 8 AWCs to provide an adequate awareness on of fortified rice. We have given hands-on training to important stakeholders to spread the benefits of fortified rice. Along with that, we have conducted Kala jathas on fortification and other nNutritional practices at schools.



IEC/BCC Activities for better public outreach





Public campaians conducted



Hands on training

Key Outcomes of the Program



Produced 12000 MTs of fortified rice and supplied to schools, welfare hostels and Anganwadi centers in Krishna and West Godavari districts.

Reached to 0.65 million beneficiaries through the supply of fortified rice.





Reduction in Micro Nutrient Deficiencies observed among pregnant woman, lactacting mothers, and children through anectodal evidence

- Our model has shown a way to other states such as Telangana to implement rice fortification program in their government feeding programs.
- Myths and skepticism around fortified rice come down due to our BCC/IEC activities

Innovations

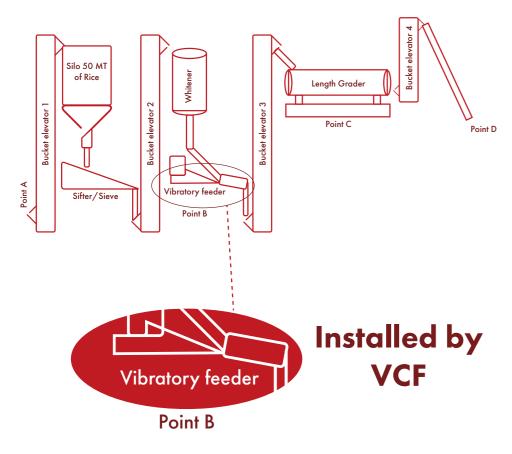
Unique blending Model of Andhra Pradesh:

The uniqueness of the present project is the blending model adopted in it. There are other pilots in Orissa and Karnataka where development partners have put in heavy capital investment. To reduce the cost burden, VCF and technical partner came up with a model which is an efficient and unique low-cost model of the dosing system without changing the set-up of the rice mill. Andhra Pradesh is a rice surplus state and with 'Decentralized Procurement' system, the rice procurement is totally done by the state-owned A. P. Civil Supplies Corporation. Hence, attaching the mills to the MLS point level or up to school level is possible and can be controlled entirely by the State Civil Supplies Department or Corporation.

The operational model is:

- The rice from warehouses to be shifted to the selected mills
- The rice to be then fortified at the mills
- Then the fortified rice to be shifted to the MLS points
- And from there the regular distribution follows.

The depiction of the blending model is below.



The current RFP model in Andhra Pradesh is the most effective way of blending and only incurs FRK costs with minimal blending charges. It reduces capital cost drastically and enables state governments to scale it up in their respective states. The model adopted in AP is being showcased as a scalable and sustainable model at the national level as well.

Future Plans

- We are planning to roll out the efficacy study to measure the longitudinal impact of rice fortification initiative on school children in Andhra Pradesh. As part of this study, students from the treatment group will receive hostel meals cooked with micronutrient fortified rice and the control group will receive hostel meals cooked with natural rice grains (nonfortified rice) for the period of one year.
- Extensive plans were made to expand the rice fortification initiative to Guntur district. We are in touch with the APSCSCL to roll out the initiative in schools, welfare hostels and ICDS centres of Guntur district.





Rural Prosperity
Mission



The Rural Prosperity Mission seeks to improve economic indicators of poor households by building on SERP's expansive social mobilization architecture of 71 lakh SHG members spread across all 13 districts of Andhra Pradesh.

Background:

On 20 June 2017, VCF entered into a Memorandum of Understanding (MoU) with the Andhra Pradesh Society for Elimination of Rural Poverty (AP-SERP), to enhance the livelihood opportunities and incremental incomes of 71 lakh households in the state of Andhra Pradesh. In order to successfully deliver the objects of the MoU, VCF appointed Vijayavahini Charitable Foundation (VCF) to execute the Andhra Pradesh Rural Prosperity Mission (RPM) on their behalf as the Lead Knowledge Partner, in collaboration with SERP. VCF is a not for profit, section 8 company initiated by VCF to implement various livelihoods interventions in AP and across other states.

The Rural Prosperity Mission seeks to improve economic indicators of poor households by building on SERP's expansive social mobilization architecture of 71 lakh SHG members spread across all 13 districts of Andhra Pradesh. In this context, VCF, AP SERP and other partnering agencies are nurturing innovations, leveraging new-age technology, tapping emerging growth sectors, engaging with private sector & social enterprises and building internal technical capacities to enhance rural livelihoods in Andhra Pradesh.

Being an autonomous society under the Department of Rural Development to facilitate poverty reduction in the state, SERP has been appointed by the Government of Andhra Pradesh as the nodal implementation agency of the Mission. The World Bank through the AP Rural Inclusive Growth Project (being funded to SERP) is a Financial and Strategic partner to this program.



To support in effective training, monitoring and documentation of the interventions

To facilitate establishment of Centres of Excellence across various domains for replication of best practices

Objectives:



To increase the income levels of the SHG/FPO members in an irreversible and sustainable manner



To improve and strengthen the existing livelihoods and promote new livelihood opportunities to the households by integrating technology, best practices along with convergence of resources



To promote multi-thematic interventions at the household level



To demonstrate pilot models, facilitate exchange of knowledge through workshops / studies



To support in effective training, monitoring and documentation of the interventions



To facilitate establishment of Centres of Excellence across various domains for replication of best practices

Role of VCF and other stakeholders



End to end implementation of programs, working towards income enhancement of farmers by supporting them and helping enhance the productivity of crops



The financial and strategic partner in implementing the APRIGP program and is responsible for providing financial support to the FPOs.

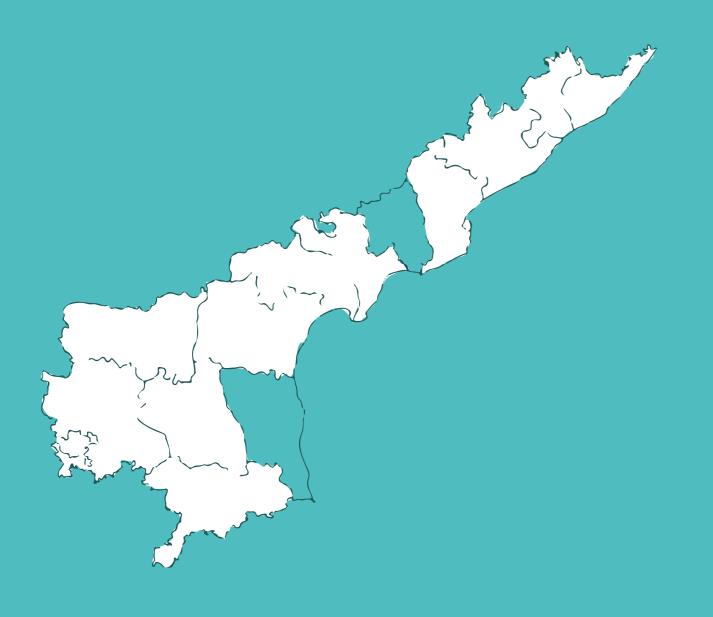


Provides agriculture extension services through its AES staff and support in market linkages to the farmers with its FPO framework.



Expert resource organisations were on-boarded within the project for supporting in the specialised support services

Outreach:



Collaborations & Partnerships

- VCF signed an MoU with Andhra Pradesh Food processing Society (APFPS) for implementation of integrated Tomato Value Chain development in 3 districts of Andhra Pradesh viz. Anantapur, Chittoor and Kadapa under the Operation Greens scheme of Ministry of Food Processing Industries (MoFPI).
- The Maa Thota program was sanctioned by NABARD under Tribal Development Fund for implementation in Rajavommangi Mandal, East Godavari district.
- VCF signed the MoU with Visakha Dairy for piloting cattle feed interventions with the dairy farmers in its operational area.
- Discussions with Krishna Milk Union on piloting integrated dairy farming through introduction of indigenous cow breeds and promotion of zero budget natural farming with the cow urine and dung. A village meeting also happened in one of the villages.

Key Initiatives

Agri-entrepreneurship

The main objective of this initiative is to support the farmers with end-to-end services in agriculture by providing customized value-add services like farm advisory, cheaper agri-inputs, better access to cheap credit, strong linkages to markets etc.

For this, Syngenta Foundation India (SFI) has been on-boarded as the implementation partner, who will train the rural youth in Agronomy and Extension management through Agriculture Technology Assistant training. The trained youth will become Agri-Entrepreneurs (AE) who can provide services to farmers in the area and earn a fee for that. Each Agri-Entrepreneur will be positioned as a service agent for agriculture and will deal with 200 farmers in 3-4 villages. While increasing incomes of the farmers through one-step at a time, the objective is to be able to become a one-stop solution for all the agriculture needs of the farmers in those 3-4 villages.

The pilot project taken up with SERP aims at promoting 100 Agri Entrepreneurs in Chittoor and Anantapur districts. The 45-day training of these 100 Agri entrepreneurs is being conducted by NIRD. In total, 78 Agri – Entrepreneurs have completed their training across three batches.

Agri-entrepreneurship

State

Districts

٦

AP

2

Anantapur & Chittoor

AE

Beneficiaries

78

10,869

Farmers



Till date, 78 Agri Entrepreneurs have been trained who are providing services to 14,000 farmers.



13 AEs have set up their input stores in Chittoor with credit support from Samunnati Finance.



2 custom hiring centres were opened by AEs. Another CHC at Chinnagottigallu was being managed by an AE.



2 Dal mill processing units were established in Anantapur.

Rs. 3000

Seed fund sanctioned by SERP for each AE to set up their enterprise.



1706 farmers in Anantapur and 1216 farmers in Chittoor have been trained by the AEs on various package of practices



- Discussions with Mother Dairy have been initiated to get support for the marketing of mangoes.
- Discussions with Rallis India Ltd. have been initiated to use AEs as the last mile connect for aggregating input requirements from farmers.
- The cattle feed shops are being utilized to promote farm mechanisation by suggesting implements provided by Kamal Kisan. The AEs will be incentivized for every sale that they make.

Key Outcomes:



10,869 farmers are reaping the benefits in the form of farm advisory, cheaper agri inputs, better access to cheap credit and market linkages



2 Custom Hiring Centres were operated by Agri **Entrepreneurs that enabled** farmers to use advanced farming equipment

Spices Value Chain

An end-to-end supply chain analysis was conducted to identify the cost economics, major stakeholders, prime business locations, transaction points and potential customer base by conducting FGDs & in depth interviews. The study helped to map the existing impact on rural livelihood & economics in the different parts of the agency area. Also planning an alternate sustainable structure was an objective of the process. Data was collected from farmer leaders for 11000 farmers regarding existing turmeric farming practices, land use, inputs used, yield obtained and range of price of turmeric sold. The findings from the study were:

The farmers here mostly used the local variety of turmeric seed which has a two-year crop harvest cycle. The crop was kept in rain-fed condition mostly and almost no outside farm inputs were supplied. There were no proper methods of sowing and crop management practiced. The turmeric was harvested and boiled and polished by local but inefficient methods. It was seen that the yield obtained was 600-800 kg per acre. Land holding was average 0.2-0.3 acre per farmer where turmeric is grown. On an average, the turmeric was sold at Rs.65 per kg. This roughly translated into an income of Rs.7800 to Rs.15,600 per harvest cycle.



The main objective of this initiative is to support the farmers with end-to-end services to strengthen the spices value chain



Farmers would be trained on best package of practices to help improving their farm yields and provide better market linkages



Progress:

Productivity Enhancement:

In the second phase, the project started to assess the factors impacting yield under an action learning program under which non-randomized control trials are being performed in 31 demonstration plots across the region. The objective is to find the optimum sets of practices for best yields alongside conserving the perpetual organic nature of this region.

The key changes the program has started propagating are:

- The plots are being tested with a better seed variety called Pragati which reduces the crop harvest cycle from 2 years to 6 months. This would directly enable the farmer to double the production.
- The turmeric seed was sown without any line sowing and directly on the level farmland. Now the farmers are being taught to sow in a line on raised beds. This improves the productivity of the crop and provides the root a proper space to grow.
- Proper crop management like weeding, irrigation and application of bio-inputs are also being promoted to the farmer to improve the yield of the crop.

Primary Processing Equipment

The turmeric farmers in this region have been provided 4 small scale turmeric boilers and polishers with the support of IISR. Additionally, in convergence with the horticulture department, 6 large scale turmeric boiling and processing units have been given, to support the farmers in the primary processing of turmeric. The farmers are extremely satisfied with the efficiency of the equipment and the ITDA has decided to scale up this initiative to a larger set of farmers in the coming year.

Marketing Initiatives

An arrangement has been entered with GCC to procure 50 MT @ Rs.90/Kg of turmeric from the FPOs with whom we are working. Due to excessive production of turmeric, the prices have come down to Rs.75-80/Kg. Samples of the local, Roma and Pragati varieties have been sent to various private companies that procure turmeric for consumption and extraction purposes. Discussions have been held with NCDEX e Markets Ltd. (NEML) to conduct e-auction for turmeric in Paderu to improve the market price realization.



Spices Value Chain development

State

Districts

Beneficiaries

1

- 1

631

AP

Visakhapatnam

Farmers

Direct market linkage of turmeric

Quantity Mobilized

10 ton

Community entrepreneur incubation

Point of business and number of discrete ownership

12

individuals under capacity building

Organic certification under NPOP, NOP, EU

Certification

500

Plots under process



Yield enhancement by up to 100% under a quasi-experiment in 31 plots

Process Tracking Document

3

Plots under process

Capacity building & machinery installation for value addition

Installed Machinery

4

Facility centres

Climate Smart Agriculture

Much of income generation of farmers is affected by poor extension and package of practices. To demonstrate how technology intervention can address these issues, a pilot with 500 farmers is being implemented in Ramabhadrapuram vegetable FPO, Vizianagaram district with technical assistance from Lean Crop Technology Solutions Pvt. Ltd (Lean Agri). The support includes including data collection, dashboard development and year-long consultancy in terms of package of practices for 500 FPO farmers.



Farmers are brought onboard

13182 **SMSes** 7668 calls

were done to provide agri-based advisory services personalized to each farmer



Climate Smart Agriculture

State

Districts

Beneficiaries

1

T Vizianagaram **735**

Farmers

522

Soil health cards evaluated

747

Soil health cards evaluated

Digital boundaries

created

Breed improvement for cattle

The genetic semen being used currently for artificial insemination process of large ruminants, yields either male or female offspring. While the female offspring (buffaloes) are useful for the farmers, the male calves (particularly buffaloes) are a burden for the farmers; yielding no output and consuming the fodder that the milking animals need to consume. In addition, the non-descript buffaloes in the tract areas have been found to have very low body weight, reaching puberty at around 4-5 years of age, thereby producing lesser milk.

To help this situation, a specialized sexed semen technology from ABS India was procured to be used for artificial insemination of buffaloes for the first time in AP. This sorted sexed semen was from Murrah buffalo (the highest milk-yielding buffalo in the country) and this technology gives only female calves which have better body weight and could be expected to give at least twice the milk production, as compared to the mother.



Sexed semen technology is introduced that results in only female calves which produce twice the amount of milk benefitting farmers



A total of 2500 semen straws were distributed to 18 SERP FPOs in Krishna, Guntur & Visakhapatnam districts.

A total of 2500 semen straws were distributed to 18 SERP FPOs in Krishna, Guntur & Visakhapatnam districts. VCF facilitated a training programme on "specialized sexcel technology" for 18 VAS (Veterinary Assistant Surgeon) doctors belonging to all the FPO mandals.

VCF introduced Herdman Mobivet software to track the complete cycle for the animals for which the sorted semen technology is being used. Using this software, from a central database system, we can now track the complete cycle of the animal.

VCF conducted a software training session for the same 18 VAS (Veterinary Assistant Surgeon) doctors belonging to all the FPO mandals. Further, even the 18 VES (Veterinary Extension Specialists) of SERP were trained to start using the software more robustly.

ABS

State

AP

Districts

Krishna, Guntur, Visakhapatnam & Prakasham

Inseminations

1751

Key outcomes:



81% of the semen straws distributed to Krishna district were utilized whereas it is 58% and 25% were distributed across for Guntur and Visakhapatnam districts.



15% of semen straws were utilized in Prakasham district.

Way Forward



Requesting the Animal Husbandry dept. to utilize all the straws as early as possible and analysed the results.

16%
Success rate of conception



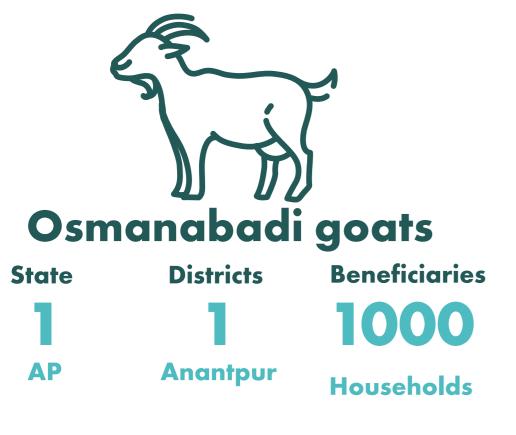
Osmanabadi breed introduction in goats

Small ruminants rearing is an important part of the livelihood for the people in Anantapur and as per the 19th Livestock Census of Gol, the current number of sheep and goats is estimated to be around 46 lakhs in the region and the number of goats to be 8 lakh. Reliance on small ruminants may reflect in districts like Anantapur, a decline or absence of common resources on which landless households and smallholders depend; goat and sheep are able to survive on degraded lands. Sheep are technically grazers, meaning they prefer munching grass low to the ground. Goats, on the other hand, are known as browsers, meaning they often choose to select leaves, shrubs, vines, and weeds, found at the tops of plants, higher off the ground. With a lack of fodder being a main problem in the driest region of AP, it is necessary to bring in drought resistant animals that would survive the dry heat.



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It was encouraged to introduce a good variety of goat due to the presence of marketing channel in neighbouring areas of Chennai & Bangalore. It was also because goats are much preferred for consumption in the neighbouring states than sheep.



62

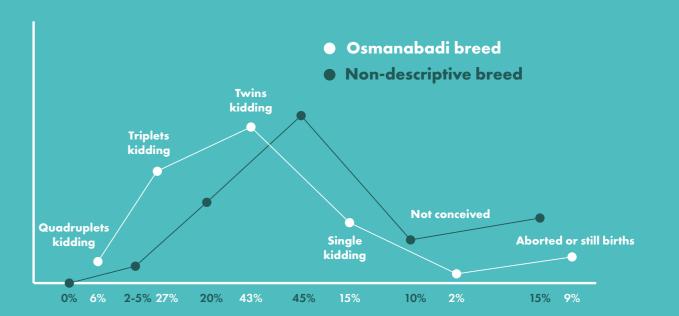
Key outcomes:

- Choice of breed variety: The Osmanabadi goat was suggested after a thorough understanding of the requirements and consultation with experts.
- Based on the recommendations, 6000 Osmanabadi Goats were introduced in a FPO in Anantapur, and distributed among 1000 families.

As of now, the impact data from goats grounded in Nallamada & Gudibanda FPOs only were studied, because they were the pure line breeds obtained from Osmanabad district in Maharashtra.

The stats for the Nallamada & Gudibanda FPOs stands as follows:

Total goats procured from Umerga town, Osmanabad district, Maharashtra: 492 No died: 46 (9.4%) No of animals left: 446 In 446 animals, the following reproductive parameters were observed & this could be compared with the native breed as follows:



Dairy

Objective:

To enhance the income levels of dairy farmers in Andhra Pradesh, various dairy interventions like Azolla demonstrations, Dry Forages (TMR) provision etc. are being done. The main objective is to increase the milk yields by providing nutrition to the animal at a minimal price by reducing the feed cost.

Progress:

- Demonstrated Azolla plots in E.G, Krishna and in Srikakulam Dist.
- Initiated to pilot with Krishna Milk union in introducing cow breed in this belt.
- Input linkages form AH dept. on using farm implements to dairy farmers.
- Integrating dairy and agriculture to enhance income generation throughout the calendar year.
- Provided TMR feed with subsidy to the farmers, with the convergence of govt. departments.
- Introducing low-cost feed and management practices.

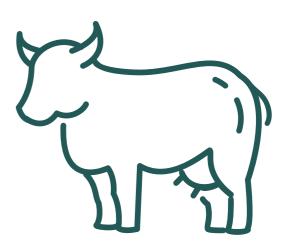
State Districts Farmers

1 3 150

AP Krishna, East
Godavari and
Srikakulam

Demonstrating Azolla as nutritive feed to cattle

Farmers targeted through the activities



Enhance Milk production thereby increase in income generation

70

Farmers targeted through the activities



Bee-keeping

With a view to provide a sustainable livelihood opportunity and enhance the incomes of poor farmers, VCF has started the 'Bee-keeping' project as a pilot in Kurnool dist. with 30 beneficiaries. Later, with the objective to encourage sustainable livelihoods by providing SHG women an increased and diversified income, the bee-keeping project was grounded in Chittoor district with over 2000 beneficiaries. Also, the project has been grounding in ITDA Rampachodavaram and ITDA Parvatipuram.

State Districts Beneficiaries

1 2 2030

AP Chittoor, Kurnool

Progress:

- Completed registration of Chittoor honey FPO and completed marketing licenses such as PAN, GST and FSSAI number for maintaining food safety standards
- Chittoor pure honey logo, branding, and packaging process approved by the district collector of Chittoor.
- Completed honey analysis for AGMARK grade A, specifications in accredited NABL laboratory, Guntur.
- Chittoor Honey FPO has supplied 1,040 kg of honey to Tirumala Tirupati Devasthanams.
- Involved Agri Entrepreneurs by Syngenta Foundation and AES, NREGS APMs and trained as master trainers, and prepared an action plan for monitoring of bee hives across Chittoor district.



- Distributed four bee colonies in Vizianagaram cashew nursery to demonstrate and conducted a one-day training program on scientific beekeeping.
- Identification of beneficiaries was completed in Maredumilli region with 200 beneficiaries. Conducted bee-keeping training program for 5 days in Rampachodavaram to ground the beekeeping activity.
- In Parvathipuram, 300 beneficiary applications mobilized.
 In phase-1, grounding with 100 beneficiaries with Horticulture department subsidy.

Diversified Income

2000

Beekeepers annual income



Crop production by bee pollination

800

Baseline of Control & Treatment plot

Lakshadhikari Rythu

"Lakshadhikari Rythu" is being piloted among 1500 households (SHG/FPG members), in Sarabavaram, Lododdi, Badadanampalli GPs in Rajavommangi Mandal, ITDA Rampachodavaram, East Godavari district, AP. These GPs are inhabited majorly by Tribes (Konda Reddy & Konda Dora), have abundant cashew plantations with the potential for diversification of livelihoods. Based on the interest expressed by community and prevailing gaps with regard to livelihoods and available resources, multi-thematic interventions have been planned to enhance the income levels of each household to 1.2 lakh per annum.

State Districts Mandal

1 1 1

AP East Godavari Rajavommangi

GPs Beneficiaries

3

& Badadanampalli

Lododdi, Sarabhavaram 1190

Tribal Households



Progress:

- The SHG members were capacitated on backyard poultry management practices by forming common interest groups, involving the resources of WASSAN. 2 Poultry entrepreneur model – sheds were completed and 33 birds (30 hens & 3 cocks) have been introduced in the shed and the laying of another 2 sheds is in progress.
- Created awareness on rearing fishes economically through tarpaulin pond at household level. Installed 9 tarpaulin fish ponds for the households came forward with co-contribution.
- Reduced mortality of birds during change in season, in collaboration with the Department of Animal Husbandry, household campaigns are conducted on poultry vaccination. As on date, 1880 birds are vaccinated (lasota vaccine), which are being reared by 146 households.
- Enumeratted cashew trees across all the 3 GPs.
- Capacitated interested youth from pilot panchayats in pruning and training practices on cashew trees by experts from ICSD. Later, these groomed youths would be able to take up pruning and operation of chain saws as an entrepreneurship.
- Completed rejuvenation activities (Pruning & training, Enumeration, Basin formation) in 17 Model cashew farms in 3 GPs for cashew best management activities.
- Conducted village level campaigns to identify families rearing goats and milch animals to plan income enhancement interventions.
- Created awareness among cotton and tobacco cultivating farmers on best practices of millet cultivation which would reduce input cost and enhance income levels. In the process, 30 tribal farmers from 3 panchayats have agreed to take up demonstration of millet cultivation during this Kharif season. Guli ragi nurseries have been developed and transplantation has been done after land preparation.
- Helped 15 farmers to come forward to participate in demonstration of SRI paddy cultivation, as a consequence to farmer complaints about losses. SRI paddy transplantation was completed in all the 15 plots. By seeing the growth of paddy with our intervention, another 6 acres were laid by the farmer's interest.

- Planted Hill broom rhizomes as the boundary plantations to demonstrate best practices.
- Initiated more approvals for Maa Thota program, to be synced with Lakshadhikari Rythu program.
- Carried out Azolla demonstrations benefitting 20 dairy farmers.
- Signed MOU with CDR and Girijana Seva Sangam on Ram pump installation. For the first time in AP, a 2-inch hydraulic ram pump was installed at Bodlanka.

Lakshadhikari Rythu

80

Beneficiaries attended for trainings

Trainings conducted

17

Demonstrations conducted such as demo plots, model farms **15**

Farmers cultivating SRI paddy

4

146

Poultry entrepreneurs

Beneficiaries
who taken up poultry in
their backyards

Cashew Value Chain development

Cashew farmers experience several hardships in cashew cultivation due to variation in climate, rainfall and also due to severe insect pest incidence which finally leads to significant loss in yield. In this context, VCF launched cashew value chain development initiative in 4 districts of Andhra Pradesh viz. Vizianagaram, Vishakhapatnam, East Godavari and Srikakulam.



Strengthening the Cashew value chain by training farmers on best practices and improving market linkages

Progress:

- · Cashew orchard spraying activities have been completed in 10 FPOs in Vizianagaram, Visakhapatnam, ITDA-R.C varam, Parvatipuram, and Seethampeta. Mobilising the cashew farmers to avail Rs.10,000 being provided by SERP for cashew rejuvenation activities.
- Around 1,500 hectares of cashew spraying activities have been reported by the project functionaries.
- 36 Village Resources persons have been mapping farmers activities on a monthly basis and expected yields data in ITDA-Parvathipuram.
- Conducted a key stakeholder meeting with Olam International Pvt. Ltd, to discuss on modalities of upcoming cashew marketing season and Olam has continued to support on providing market intelligence on cashew RCN prices once the official opening of international market prices.



1,500 hectares of cashew spraying activities have been undertaken

Cashew Value Chain development

State

AP

Districts

East Godavari, Visakhapatnam, Vizianagaram & Srikakulam

Beneficiaries

18,000 **Farmers**

Productivity Enhancement

Cashew diary and cashew calendar



Better marketing price cashew RCN

Farmers benefited from **buyer-seller meets**

Farmers benefited from digital moisture meter



Goatery promotion under Lakshadhikari Rythu

An exposure visit has been carried out to the Lakhpati Kisan CINI small ruminants' development project in Nandurbar district, Maharashtra. The various approaches and key learnings followed in this project was learnt and tried to be implemented in the Rajavommangi mandal for the Lakshadikari project.

To understand the project area and work out the road map for implementation of these activities, a senior veterinarian from ICSD Dr.CK Rao who had worked in Livestock initiatives was called for. As per this plan, initial awareness activities with the community was done; entirely value chain for small ruminants was mapped and a proposal was made. According to this, developing capacity of community was the activity identified as highest priority, for which The Goat Trust from Lucknow was roped in.

In addition to this, the Livestock team from VCF also attended the workshop in Lucknow for developing professionals on the planning and management of Livestock-based Livelihoods, along with two staff from SERP Livestock team as well.

The Goat Trust was also invited to the mandal to conduct a diagnostic study & propose a model for developing of Livestock Entrepreneurs in Rajavommangi mandal. The proposed methodology to groom the trainers was based on analysing the natural resource status, existing assets and practice survey, etc

State	Districts
1	- 1
AP	East Godavari
GPs	Beneficiaries
3	50
Lododdi, Sarabhavarm & Badadanampalli	Households

Progress:

 An orientation was conducted for a select group of 12 entrepreneurs selected in the 3 GPs of Rajavommangi mandal.



An 8-day training in a span of 2 months, and a regular follow-up & discussions would groom the selected ones as Livestock Entrepreneurs in the mandal.

Goatery under Lakshadhikari Rythu

To promote entrepreneurship in goatery

15

Farmers taken



To promote goatery as a livelihood for the tribal households

50

Beneficiaries taken up the goatery

SHG Products Marketing – eMahila

VCF is supporting the Society for Elimination of Rural Poverty (SERP or Velugu, Department of Rural Development, Government of AP) in branding and digitally marketing the products made by the SHG members. The products being piloted include many popular regional sweets and gourmet snacks, groceries, garments, toy and festival-themed handicrafts among others. Our objective is to enable the SHGs to have a robust online presence and assisting them in marketing their products.

State	Districts	Beneficiaries
1	13	104
AP		SHG Groups

Key milestones:

- SHG products were launched on Kalgudi e-commerce platform
- · eMahila portal landing page was created for branding
- When people were searching for emahila on Google, our emahila.org page was not coming anywhere in the results. So, we immediately created Google Ads last month so that potential customers would not be lost. By constantly observing the feedback from Google Ads and Google Analytics we have modified/optimised the landing page experience of emahila.org such that it now appears first in Google on searching for eMahila.
- Internet Saathi as the last mile sales agent for the rural market



- Tapping the rural markets to create awareness about eMahila project and also to facilitate the rural people by placing orders through digital payment modes.
- 'Saathis' in Guntur and Krishna district have been chosen for a one month pilot to understand the rural market needs and also the perception and feedback about products being sold on eMahila platform.
- Through this intervention we understood that COD is the preferred payment mode by the rural people and also they are expecting groceries (BigBasket for Rural Areas) to be delivered at their door step.

On-board the SHG groups to e-commerce platform for additional revenue generation

104
SHG groups
on-boarded

Increase the sales of SHG products through online marketing

Theme-based AD campaigns

1766
Products
listed on portal

Future Plans

- To develop an integrated Tomato Value Chain in the 3 districts of Andhra Pradesh under the Operation Greens project
- To implement the Maa Thota program activities in Rajavommangi area mandal of East Godavari district
- To pilot cattle feed interventions with the dairy farmers in the Visakha Dairy operational area
- To promote integrated dairy farming with the help of Krishna Milk Union
- To follow-up on the first draft of the proposal VCF submitted to Mission Shakti, Govt. of Odisha for promoting the sales of SHG products through e-commerce platforms on the lines of eMahila.
- To follow-up with administrative sanction given to 20 shade net houses in Chittoor area.
- To obtain licenses for the fertiliser-cum-pesticides shops for the agri-entrepreneurs and create sustainability for the existing cattle feed shops.

Magical 12 boxes of Honey Bees

"I, like many other women in my village, had thought it was destined to continue to be a daily wage laborer. However, now, these fascinating creatures not only sit on my hand, but also make me happy through honey production from the 12 bee boxes and are actually improving my family's income prospects."- Rubi Selvi, a women beekeeper from Chittoor district.

T. Rubi Selvi, a women beekeeper of Madhavaram village, about 15 km from Chittoor, used to work as daily wage labour in the farm fields surrounded by her village. She used to earn 150 rupees per day but found it difficult to earn both ends meet. However, her story transformed, when she turned to invest in beekeeping for generating future rewards. Though she was a beginner in scientific beekeeping management, she harvested honey after 35 days of receiving 12 bee colonies, by providing sustainable income to farmers, pollination support through beekeeping under Mission for Integrated Development of Horticulture scheme.

"Her total investment is ₹60,000 out of which ₹24,000 is covered by subsidy (40% subsidy under MIDH) from Horticulture Department and the remaining ₹36,000 taken as loan from Village Organization under Velugu.

She used to earn ₹ 3000 per month and through bee-keeping she is augmenting that income further by ₹ 6000 per month. Bees need diversified flora to collect honey and pollen from forest and agriculture, horticulture crops and availability of water resources."

Since beekeeping is a new livelihood activity, I was not fully aware of a practical aspect of beekeeping in basic level training programs. Attending awareness and beginners training program organized by DRDA- Chittoor with technical assistance from VCF helped me. "she said. She said that she did not expect much income from her first harvest of honey from 12 bee colonies. The present rate of honey is up to 300 to 350 rupees for kg. She is very confident of harvesting 24 KGs of honey from 12 bee boxes per month, which means she would be able to earn 6,000 rupees/ month. She has been one of the successful women entrepreneurs, who succeeded even by not owning any major means of production.



In spite of being landless, the innovative idea of Beekeeping project has helped her significantly in becoming more self-sufficient and ensuring a sustainable and eco-friendly system of income generation for her family. For such landless and marginal farmers, this initiative is really about an income security strategy, which is also market oriented. Thus, it automatically breaks the chains of social hierarchy and empowers the farmers.

Evolution of her enterprise

Today, she is earning up to 6,000 per month through the sale of honey. Which is much above the income she earned working as a labourer. Further, her current source of income isn't dependent on seasonality, but instead on scientific maintenance of bees, which are anyway so useful to natural ecosystems. Further, demand for honey never seems to cease, given its traditional usages and health benefits. By tapping the market for this useful product, she is selling and earning money, and in turn taking care of household expenses and repayment of loans.

In fact, she states that the demand for good quality of honey is so high, in seasons like Dasara, Diwali, and Sankranti, she is not able to meet her own local market demands. Therefore, she plans and hopes to scale up (so that she has more access to bee boxes) her business, eventually with a financial help from banks and availing 40 % subsidy component from the Horticulture department. Good quality honey has made her realize the immense demand for her product in the market and her enterprise's eventual ability to meet the same.

Development of best practices

She is one of the strong cadres of local skilled master trainers who have been teaching and spreading the knowledge of scientific beekeeping and helping many women beekeepers throughout Chittoor to develop and sustain a better livelihood. Her knowledge of bee upkeep, nurture and spread of the same, is helping and inspiring several other women to take up entrepreneurship, with chances of upscaling their enterprise with constant handholding and support from the Government.



Agricultural
Technology in
partnership with
TAU



VCF has initiated a partnership with the NITSAN Lab for Sustainable Development at Tel **Aviv University (TAU)** to increase farmers' net income through the diffusion of Israeli technologies and innovations in agriculture.

Background

VCF has been a knowledge partner to the Government of Andhra Pradesh's Rural Prosperity Mission aimed at enabling 71 lakh SHG households to earn a net income of at least INR 10,000 per month. The initiative focuses on various segments including agriculture, horticulture, animal husbandry, fisheries, handlooms and handicrafts as well as digital livelihood and non-farm enterprises.

Further to this initiative, VCF has initiated a partnership with the NITSAN Lab for Sustainable Development at Tel Aviv University (TAU) to increase farmers' net income through the diffusion of Israeli technologies and innovations in agriculture. This is intended to be achieved through a network of local innovation hubs - the "Indo-Israeli Innovation Villages" - initially in Andhra Pradesh and in the future throughout India, where innovative Israeli technologies in production and post-harvest of various produce (agriculture, horticulture, aquaculture, livestock) will be identified, adapted, localized, proven through pilots in field conditions and showcased, prior to their handover to other agencies for large-scale rollout. Vijayavahini Charitable Foundation (VCF) has been designated by Tata Trusts to be the nodal agency responsible for project implementation.

Objectives

To bridge the gap between the Israeli innovation ecosystem and the reality of small and marginal Indian farmers by immersing outstanding students from a variety of backgrounds in the field for several months to create a platform for integrating and adopting Israeli technologies to the Indian rural reality.

Role of VCF and other stakeholders



End to end implementation of programs, working towards income enhancement of farmers by supporting them and helping enhance the productivity of crops



Provides irrigation equipment like drip system to the farmers on subsidy



Knowledge partner providing technical and monitoring supports for various demonstrations constructed by advising the best implementation practices

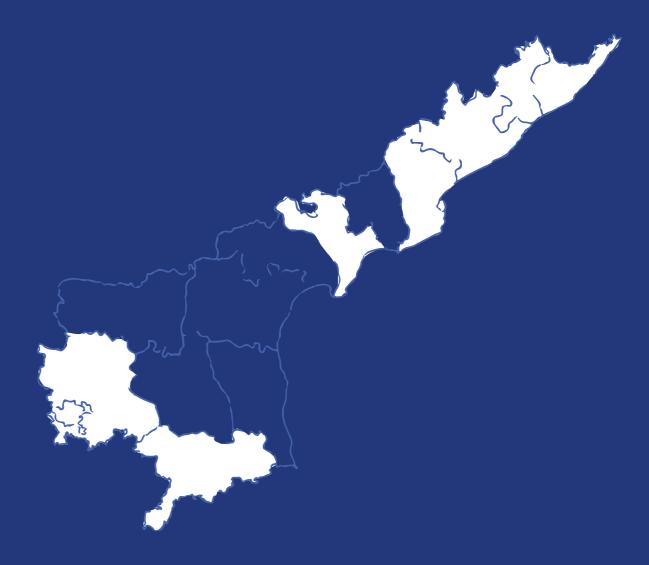


Provides the necessary support through schemes and extension services.



Provides agriculture extension services through its AES staff and support in market linkages to the farmers with its FPO framework.

Outreach



Agriculture Technology in partnership with TAU

State

Districts

Beneficiaries

1 AP 7

101
Farmers



Major achievements

Progress of key interventions:

- Successfully conducted productivity enhancement demonstrations in 8 plots across Krishna, Anantapur districts for various crops viz. Tomato, Brinjal, Cauliflower, etc.
- Tal-ya trays were piloted in 7 demonstration plots, which has shown better yield than the normal plants
- Established 2 AMAIZZ dryers each at Anantapur and Guntur and piloted with Chilly crop.
- Conducted two capacity building ToT trainings to the farm extension officers of VCF, SERP and horticulture officers.
- Started Agri-clinics concept in Ramabhadrapuram, Vizianagaram district which enables farmers to access the solutions for the farm problems by contacting the VCF extension officer through telephone. The program has been successful and served 54 farmers till date.
- 1. Productivity enhancement through horticulture demonstrations: Proved that the Package of Practices (POP) and Mulching enhances the productivity.

Productivity enhancement

>30%

Okra, Tomato crops



Better in Size of the fruits, appearance, less infestation from the pests

2. AMMAIZE dryer-New drying technology:

Goal/ Objective	Indicator	Actual (as on March 2019)
	Reducing the time	The time of the drying is more compared to sun drying as the environment is cool and the type of dryer is blower model.
Reduce the drying time and increasing the quality of drying	Quality of drying	Quality of the produce is better than the produce in sun drying in terms of color of the chilly pods, Shattering of the seeds from the pods, inert material, and stalks of the pods are remains same. No breaking of pods.

3. TAL-YA experiments:

Goal/ Objective	Indicator	Actual (as on March 2019)
Reduce the water	Reduction of Water usage	The growth of the plants with TALYA Trays and with that of control plants are in better condition. TALYA trays suppresses the weeds and reduce the completion for water and nutrients.
usage and increase of the fertilizer use efficiency.	Enhancing the fertilizer use	Plants with the TALYA trays are came for flowering earlier than that of control plants. The vegetative growth of the plants are better than plants without TALYA trays.



4. Trainings to the farm extension officers:

Goal/ Objective	Indicator	Actual (as on March 2019)
To provide the quality assistance to the farmers through farm extension officers	Number and type of trainings undergone	Trained more than 50 farm extension officers with Omar Zeidan an Horticulture expert, Israel. Extension officers came from different organization such as Horticulture department, SERP and VCF organizations. 30 farm extension officers are trained on Tomato crop in the field as well as in class room at Kuppam in the month of February 2019.
	Adaptation of the learned inputs	Plants with the TALYA trays are came for flowering earlier than that of control plants. The vegetative growth of the plants are better than plants without TALYA trays.

Innovations/ Best practices

- Adopting yellow mulch for the control of white flies in okra gave positive results.
- Mulching in the cauliflower yielded flowers of good size, the quality and quantity.

Overall impact

Conducting demonstrations in the farmer's field indicated the importance of pheromone traps and mulching/TALYA trays in control of pests, weeds and conservation of moisture. Later adoption of such practices reduced their expenses of cultivation.

Future Plans

- To implement the Operation Greens project in Anantapur, Chittoor and Kadapa districts of Andhra Pradesh and develop an integrated Tomato Value Chain.
- To continue Tal-Ya tray experiments in the horticulture
- To continue the productivity enhancement demonstrations across Krishna & Anantapur and also start the demonstrations in Chittoor.



TALYA trays suppressed the weeds and reduced the competition for water and nutrients.



Crop productivity is enhanced

"My crop productivity is enhanced, my income is enhanced" - happily expressed by Mr. Evuri Nageswar Rao, aged 60 years, a beneficiary farmer of VCF residing in Chandapuram."

Evuri Nageswar Rao used to grow tomato crop every year, but every time the crop yield was very low due to pests and diseases. He would incur losses due to very low prices of the vegetable as well. When VCF representatives approached him for conducting productivity enhancement demonstrations in his field, he agreed to work with the Trusts as part of Tomato demonstration. But, he expressed his concern that he doesn't have any experience with drip irrigation system. As part of the demonstration, VCF supported Rao by paying his non-subsidy part of Rs.11,650/- to APMIP for getting drip irrigation in a way that he will be able repay the non-subsidy amount by the end of the demonstration.

Due to health problems during the demonstration, his son Mr. Ramesh managed on his father's behalf. VCF started the Tomato crop demonstration in his field of 70 cents by dividing the field in to two equal halves. One part as the experimental plot with Package of practices (POP), mulching and basal application of fertilizers and other as the control plot with farmer's own practices. In the experimental plot, one row of tomato plants was grown in TALYA trays. He hads taken up the tomato variety ofas VNR 3357. By preventing the pest attacks with pheromone traps, VCF was successful in reducing the expenditure on pest and disease management. All the operations wereare tracked in the APP based monitoring system. The yield details are as follows

Control Plot

2360 5028

2.13

Plants

Total yield (in kgs)

Per plant productivity in Kg



Experimental plot

1440 5672 3.94

Plants

Total yield (in kgs)

Per plant productivity in Kg



One row with TAL-YA tray

84

976

11.6

Plants Total yield (in kgs)

Per plant productivity in Kg

Due to this experiment, the total income he earned was Rs.1,34,695/- out of which the total expenditure incurred for both plots was Rs.73,556/-. Earning him a net profit of Rs.61,139/-. As the demonstration was successful in enhancing the yield, he was very happy.





Village
Development
Plans



In terms of project coverage, we have been working in 16 Mandals and 265 Gram Panchayats of Krishna district.

Background

VCF signed an MoU with the Government of Andhra Pradesh to work on multi thematic development in 265 Gram Panchayats of Vijayawada Parliamentary constituency (VPC) in Krishna district. Trusts conducted one of the largest micro planning assessments in the country in 265 gram panchayats, and developed extensive village development plans. This initiative was to help the community to develop their Village Development Pplan (VDP) in a participatory manner, which includes personnel development, human development, social development, economic development, environmental development and captured the needs of all sections across these villages. The Village Development Plans (VDPs) were presented to the Government of AP. VCF came forward to facilitate the Implementation of VDPS with the help of various government departments and to make these villages as "Adarsh Grams".

Parliamentary Assembly Constituency Constituencies

4

Population 10,00,000

Mandals

GPs **265**

16

Project objectives:

The key objectives of the project include

- Facilitating sustainable processes in the implementation of VDPs, 265 GPs enabling a participatory and collaborative approach
- Improving basic amenities and services, social security, the practice of good governance, with the goal of creating model villages for replication across the country
- Enhancing capacity building and showcasing sustainable solutions for existing problems, bolstering local institutions in a participatory approach.

During 2018-19, under the "VDP" project, the project was involved in comprehensive development of villages, focused on collaborative approach with people's participation in coordination with concerned government departments -

- 1. Social development activities
- 2. Human development activities
- 3. Economic and environmental activities and
- 4. Infrastructural development activities.
- 5. Documenting the needs in regard Infrastructure development and submission to Govt.

The project focuses mainly on an output-based approach. As a result, we have initiated village institutions and community level meetings to identify issues. This is to be done by facilitating meetings and followed by passing resolutions, representated by community and followed up at mandal and district level.



Key Stakeholders of the program



Acts as a catalyst to make the project self-sustainable by providing the required resources to implement village development plans



End to end implementation of programs, working towards income enhancement of farmers by supporting them and helping enhance the productivity of crops



Involved in providing the pre-requisite technical support and gap support for implementation of village development plans

Program Outreach

Implementation of VDPs

State

District

Mandals

16

Villages

265

Households

2.5 lakhs

Major Achievements

Key Program highlights

Village Development Committees (VDCs):

One of the key intervention by the Trusts is facilitating the formation of village development committees and monthly review meetings to the VDCs to resolve the problems in respective villages. The presence of village development committees ensure better functioning of local government authorities and acts as a supervisory body for developmental activities. VCF successfully facilitated the formation of village development committees in 264 Gram Panchayats and conducting the regular monthly review meetings with VDCs to discuss and resolve village issues.

Encouraging sustainable processes for village development

264

1200

933

Formation of VDCs

Issues raised during VDC meetings

No. of issues resolved

Capacity building Trainings

VCF has facilitated capacity building trainings and exposure visits for village development committee members. The objective was to give the Village Development Committee (VDC) members a first-hand exposure to the process of improvement in local governance, sustainable village development due to community mobilization, and resulting in effective and equitable utilization of resources. These capacity building trainings enabled VDCs to initiate development activities on their own and fostered their responsibility to the supervisory bodys. Till March, VCF and VCF conducted 8 exposure visits and several capacity building workshops to enrich their capability towards sustainable village development.

Enhancing capacities of rural communities

10 Exposure visits

5

Orientation workshops for VDCs

Awareness campaigns

Another emphasis of VCF is to create awareness for longlasting results and sustainable development. Creating awareness among rural people is crucial for the sustainable model of development. VCF has been conducting many IEC/ BCC activities on issues like education, basic health care, nutrition, zero waste management, personal hygiene, clean drive, WASH and many other themes. In the last 6 months, VCF has conducted awareness camps by associating with VDCs and local government institutions, Panchayat Raj Institution (PRI) systems and partnered NGOs.



VCF has been conducting many IEC/BCC activities on issues like education, basic health care, nutrition, zero waste management, personal hygiene, clean drive, WASH and many other themes.



Infrastructural Development

One of the important components of the project is to improve basic amenities in villages. In this context, VCF has been working with several government departments. The Trusts has initiated several activities including a creation of sustainable sources to access safe drinking water, support towards solid waste management, parks and burial ground development etc.

A. Potable Drinking water facilities

VCF partnered with Gram panchayats to provide them gap funding in the development of physical infrastructure in 265 villages. Trusts realises that the key to drinking water security lies with the community. Our approach involves promoting locally-owned and managed drinking water security plans at the community-level. These plans are simple which can be used, monitored and managed by people and local governments.

With the community mobilization, until March, VCF and VCF constructed 116 mini storage tanks and provided water pipelines to 72 GPs for improved water facilities. This was done with the help of village development committees in respective villages.



With the community mobilization, until March, VCF and VCF constructed 116 mMini storage tanks and provided water pipelines to 72 GPs for improved water facilities.

Sustainable access to safe drinking water

116

35000 Mtrs

Construction of Mini storage tanks

Installation of water pipelines

B. Solid Waste management (SWM)

Solid waste management is one of the flagship programs for the government of Andhra Pradesh and VCF. Due to lack of monitoring and technical expertise, the functioning of SWM was in pathetic condition. VCF and VCF grabbed the opportunity to revive solid waste management efforts by providing adequate technical and infrastructural support. In this regard, we have provided 260 SWM tricycles and 40 battery vehicles to collect the waste from households and dump it in Solid waste management centres. Apart from that, VCF and VCF have also supported in waste segregation (dry and wet) by providing two coloured dustbins to each and every household across the region.

Establishing Sustainable Solid waste management mechanism

1000000 **Dustbins**

Tricycles and Battery vehicles



C. Avenue plantation and provision of Tree guards

Developing green cover is the one of the focus areas of VCF. Over the last two years, Trusts has facilitated avenue plantation and IEC/BCC activities in rural areas. A major challenge around avenue plantation in rural areas is with the protection of trees from the cattle; it requires tremendous amounts of human labour. Even with the additional efforts of human labour, large swathes of green cover still remain affected. In order to improve the green cover, VCF has provided around 50000 Tree guards across the region. This has resulted in better survival rate of plants. Apart from tree guards, we also provided 208 watering cycles to the villages for easy watering to the plants and trees. These interventions played a key role in improving Green cover across Vijayawada parliamentary constituency.

Improving the green cover in the region

185 GPs
Avenue plantation

49500 Installation of Tree guards

208

Tricycles for watering to the trees

D. Burial Ground Development

Developing existing burial grounds is one of the focus areas of VCF. A major challenge in rural areas is guarding the burial ground from animals or unwanted human activities. To avoid unwanted trespassing by animals and humans, boundary walls are required for many burial grounds across the region. As part of the burial ground development initiative in VPC region, Trusts has provided necessary finances. In addition to that, we have turned burial grounds into beautiful parks with required facilities, the community having active participated.

Until March 19th, we have directly developed 13 burial grounds and assisted gram panchayats in developing suchgrounds in 100 more villages. These burial grounds are comparatively more superior than those found in other villages across the state.

Establishing model burial grounds

Tata Trusts developed

burial grounds

Development of burial grounds with departmental convergence



Developed 13 burial grounds and assisted gram panchayats in developing such grounds in 100 more villages.

E. Park Development

The project has initiated several development activities in Vijayawada rural parliamentary constituency. As a part of that, we invested in the beautification of parks to bring back some of the original flavours of a typical rural life. Challenges with the development of parks in rural areas have usually to do with guarding the park from animals and watering the plants. To eliminate such issues, fencing walls and water pipelines are required. As part of the park development initiative in 20 villages of VPC, we have provided what is necessary to foster the park development initiative.

> **Establishing Parks and** improving green cover

Tata Trusts developed parks

Development of parks with departmental convergence

Key Outcomes/outputs of the Program

- · Facilitated the formation of VDCs in 264 Villages and conducted monthly review meetings towards selfsustenance.
- Liaisoned with Government departments and mobilized funds for various developmental activities in the region.
- ChanneledThrough interdepartmental convergence, we were able to mobilize 8.32 crores during 2018-19 for the development of villages, through interdepartmental cooperation.
- Provided drinking water facilitiesy to 79 Villages by cConstructing 115 Mini water storage tanks and installing 35000 meters of water pipelines.
- Developed parks and bBurial grounds in 20 Gram Panchayats with the collaboration of VDCs and by taking our inputs, the Government is replicating the same across the district.

- Developed parks and bBurial grounds in 20 Gram Panchayats with the collaboration of VDCs and by taking our inputs, the Government is replicating the same across the district.
- Watering Tricycles have been provided watering tricycles to 208 GPs to boost up athe Avenue plantation.
- Conducted As part of educating community on several issues, over 300 community education and awareness camps were conducted between 2017 to 2018.
- Provided 49600 tTree guards were provided to 265 GPs to protect plantsthe plants.
- Provided 1,00,0000 dustbins to 80 GPs with 50% contribution from Villagers.
- Equipped To promote the replicable Solid waste management mechanism, 40 bBattery vehicles and 250 tTricycles provided to collect the waste from source and exemplify replicable solid waste management.
- Facilitated VDCs to gGrievance cell at mMandal level and district level for resolving the issues.
- Facilitated the resolution of During last year, 254 issues were taken to concerned departments and resolved through dedicated follow- up mechanism.
- Constructed 195 SWMPC sheds were constructed in VPC due to our monitoring and diligence with Government.
- As part of Liquid waste management in the region, we have Piloted the construction of magic sSoak pits in 5 VPC villages as part of replicable liquid waste management initiatives. of VPC and plans were to made to replicate the same model across the district.

Key Stakeholders of the program

Introduction of magic soak pits:

Liquid waste is a primary concern in the region and there needs to be a cost effective intervention to manage this. We have introduced the concept of magic soak pits to manage the waste water efficiently. It is a hassle- free method for household waste water management. A magic soak pit, also known as a soak away or leach pit, is a covered, porouswalled chamber that allows water to slowly soak into the ground. Pre-settled effluent from a collection is discharged to the underground chamber from which it infiltrates into the surrounding soil.

The major focus of this concept was to initiate cost effective liquid waste management mechanism in villages of Krishna district. We have piloted the construction of magic soak pits in three villages to address the problem of liquid waste. The amount incurred to construct one magic soak pit is ₹4500 and it an optimal and economical option among others to manage household waste. The initiation of magic soak pits reduced the cost drastically.

Establishment of Parks:

A major innovation cum intervention during last year was to introduce the concept of parks in villages. With the help of Village Development Committees (VDCs), we managed to establish 20 parks by pooling resources from different stakeholders viz. government, communities, VCF and so on. We have supported and provided technical inputs in terms of design, resource mobilization, monitoring etc.



Overall impact



80 Gram panchayats came out of acute drinking water scarcity.



Effective solid waste management has led to, villages becoming waste-free and even generating wealth out of household waste.



Inception of VDCs led to rapid improvement in communication with respective government officials.



Community driven interventions set examples for other districts and villages in the state.



Infrastructural facilities improved drastically because of our convergence and liaison with various line departments of the government.



Munagacharla's lack of water

Sources once considered renewable are diminishing rapidly. Water is one element which, is declining in the face of human onslaught. India's historic billionth baby has not led the government to take concrete measures of population control. This has resulted in grave levels of water scarcity in rural areas especially during the summer.

Munagacharla is a village which is struggling to access safe drinking water.

Located in Nandigama Mandal which is 2 km away from the NH-65 on the way to Hyderabad and almost 10 km away from Nandigama town, It has a total of about 415 households that primarily depend on agriculture and daily wage labour work. There is a water tank with the capacity of about 40000 litres, which is located at the end of the village on the way to Takkellapadu. The villagers get the drinking water from this tank. It was built in 1998. This water tank gets the water through a scheme named Kollikolla. Every street of this village has a water pipeline facility through this tank and people get drinking water through the taps connected to these pipelines.

A total of 20 taps are present here providing drinking water to the villagers. Besides there are about 17 hand bore pumps in almost all of the streets providing water facilities.

The villagers get water for about 2-3 times a week from this tank. The water from this tank is slight reddish in color and is not favorable for drinking. People face difficulty drinking it. Though they clean the tank every 15 days, the water is still in the same condition. As a result, water borne diseases are real.

The villagers often go to the nearby village Hanumanthupalem to bring water. In the summer season, the villagers hardly get water 1-2 times a week. So it has become a major problem for them to get sufficient drinking water. Also the ground water level is less. While they install a new bore pump it takes about 350-400 meters to get the water. Thus they get very little amount of water i.e. about 4-5 buckets of water for half an hour of running the motor. Due to this, the village panchayat has to bring water from the nearby villages in the water tankers. This has turned into a major issue in the village.



In the discussions at the Village Development Committee (VDC) meetings, the committee members informed VCF about the drinking water issues faced by the villagers. When we questioned the villagers about drinking water facilities, they informed us that they face problems in fetching water from the nearby villages. They explained to us the less availability the water through drinking water taps and the tankers from the nearby villages facilitated by the panchayat. In such situation, the VDC committee members requested us to provide some alternatives to solve this problem.

After several field visits made by the project team for feasibility test, the team has drawn a conclusion to provide a mini water storage tank to store water. So the project team mobilized the community and came forward to build two mini water storage tanks with the capacity of 5000 liters and 3000 liters at two different locations in the village. Due to the VCF' intervention in the village, nearly about 20% of water facility is increased. The mini water storage tanks in the village ensure the complete facilitation of drinking water supply to 85 households nearby.



Balance sheet as on 31.03.2019

L. No.	Particulars	As at 31.03.2019	As at 31.03.201
1	EQUITY AND LIABILITIES		
1.	Funds and liabilities a) Share capital b) Reserves and surplus	11,000	11,000
2.	NON-CURRENT LIABILITIES		
1.	Other Non-Current Liabilities a) Grants for Capital Asset	36,87,602	22,41,499
3.	CURRENT LIABILITIES		
	a) Other current liabilitiesb) Short-term provisions	13,55,46,805 9,74,794	4,14,73,109 44,633
	TOTAL	14,02,20,201	4,37,70,241
II.	ASSETS		
1.	NON-CURRENT ASSETS		
	a) Fixed assets		
	Tangible Assets	30,74,993	20,79,027
	Intangible Assets	6,12,609	1.62.472
2.	CURRENT ASSETS		
	a) Cash and cash equivalents	13,32,23,159	3,96,05,997
	b) Short-term loans and advances	29,46,659	17,33,258
	c) Other current assets	3,62,781	1,89,487
	TOTAL	14,02,20,201	4,37,70,241

Income and Expenditure account for the year end 31.03.2019

SL. No.	Particulars	As at 31.03.2019	As at 31.03.2018
1	Income		
	a) Amount appropriated out of Earmarked Grants	15,43,29,627	2,96,11,453
	b) Amount amortized from Capital Grants	8,52,253	1,78,241
	c) Donations received	78	
П	Total Revenue	15,51,81,958	2,97,89,694
Ш	Expenditure		
	a) Program cost	13,93,27,165	2,68,99,151
	b) Administrative Cost	1,50,02,540	27,12,302
	c) Depreciation	8,52,253	1,78,241
	Total Expenses	15,51,81,958	2,97,89,694
IV	Excess of Income over Expenditure before exceptional and extraordinary items and tax(III)	-	-
٧	Exceptional items	-	-
VI	Excess of Income over Expenditure before extraordinary items and tax (V-VI)	-	-
VII	Extraordinary items	-	-
VIII	Excess of Income over Expenditure before tax(VI_VII)	-	-
IX	Tax expense 1. Current Tax 2. Deffered Tax	-	-
X	Excess of Income over Expenditure for the period	-	-

Cash flow statement for the year ended 31st March,2019

SL. No.	Particulars	As at 31.03.2019	As at 31.03.2018
	Cash flow from operating activities		
	Excess of income over expenditure	-	-
	Adjustements for Non-Cash Items:	8,52,253	1,78,241
	Depreciation		
	Esxcess of Income over expenditure before working capital changes	8,52,253	1,78,241
	Adjustments for increase/decrease in operating liabilities:		
	Other Current Liabilities	9,40,73,696	4.14,73,109
	Provisions	9,40,73,696	4.14,73,109
	Cash generates from operations	9,44,69,415	3,97,73,238
	Income Tax Refund	-	-
	Net cahs flow from/used in operating activities(A)	9,44,69,415	3,97,73,238
	Cash flow from investing activities		
	Purchase of Fixed Assets	(22,98,356)	(24,19,740)
	Net increase in Cash and cash equivalents (A+B+C)	(22,98,356)	(24,19,270)
	Cash flow from financing activities(B)		
	Share Capital received	-	11000
	Cappex Grants received	14,46,103	22,41,499
	Net increase in Cash and cash equivalents (A+B+C)	9,36,17,162	3,96,05,997
	Cash and cash equivalents at the beginning of the year	3,96,05,997	-
	Cash and cash equivalents at the end of the year	13,32,23,159	3,96,05,997
	Reconciliation of Cash and cash equivalents with Balance sheet:		
	Cash and cash equivalents as per Balance Sheet Less: Bank balances not considered as Cash and cash equivalents as defined in AS 3 Cash flow statements	13,32,23,159 -	3,96,05,997 -
	Net increase in Cash and cash equivalents (A+B+C)	13,32,23,159	3,96,05,997



