

**Project title – Promoting Sustainable Agriculture and Diversified Livelihoods in Anantapur District**

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Gouthami & Padmavathi  
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## List of abbreviations

AFEC	Accion Fraterna Ecology Centre
ALP	Alternate Livelihoods Project
APCNF	Andhra Pradesh Community Natural Farming
APDMP	Andhra Pradesh Drought Mitigation Project
APMAS	Mahila Abhivruddhi Society, Andhra Pradesh
ASMS	Apex Sasya Mitra Samakhya
ATMA	Agriculture Technology Management Agency
BC	Backward Castes
BftW	Bread for the World
CBO	Community Based Organisations
CEO	Chief Executive Officer
CMSS	Community Managed Seed System
CNF	Community Natural Farming
CSO	Civil Society Organisation
DFiD	Department for International Development
FFS	Farmer Field Schools
FPC	Food Producer Company
FPO	Farmer Producer Organisation
GMR	Grandhi Mallikarjuna Rao
GSMS	Grama Sasya Mitra Samakhya
HMV	Heavy Motor Vehicle
HR	Human Resources
HRS	Horticulture Research Station
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFAD	International Fund for Agricultural Development
JICA	Japan International Co-operation Agency
LMV	Light Motor Vehicle
MACS	Mutually Aided Co-operative Society
MARKFED	Andhra Pradesh State Co-operative Marketing Federation Limited
MSMS	Mandal Sasya Mitra Samakhya
NABARD	National Bank for Agriculture and Rural Development
NAFED	National Agricultural Co-operative Marketing Federation of India Limited
NCDC	National Co-operative Development Corporation
NGO	Non-governmental Organisation
NHS	Nithya Haritha Sedyam
NPM	Non-pesticidal Management
RARS	Regional Agriculture Research Station
RBI	Reserve Bank of India
REDS	Rural and Environment Development Society
RNFPCL	Ryuthu Neshtam Food Producer Company Limited
RUDSETI	Rural Development and Self Employment Training Institute
SADLP	Sustainable Agriculture and Diversified Livelihoods Project
SC	Scheduled Castes
SMG	Sasya Mitra Group
ST	Scheduled Tribes
STO	Socio-Technical Organiser
TOR	Terms of Reference
USA	United States of America
YRC	Youth Resource Centre

# Summary

## 1. Introduction

Accion Fraterna Ecology Centre (AFEC) is an NGO working on strengthening rural livelihoods and conserving ecology for the last 40 years in the drought prone district of Anantapuramu in Andhra Pradesh, India. They are committed to promoting livelihood security, self-reliance and human dignity for poor farmers, working through their institutions, led by women and promoting drought mitigation and climate resilient agroecology, agro-processing and non-farm livelihoods. They appreciate that they are not alone in this endeavour; there are several stakeholders like the government, CSOs, industries, media, universities, research bodies, scientists, etc., with whom they join hands and work together for synergetic results.

The Sustainable Agriculture and Diversified Livelihoods Project (SADLP) is funded by Bread for the World (BftW), Germany. SADLP works directly with around 18,000 households of small & marginal farmers and farm labour who are organized into around 900 Sasya Mitra Groups (SMGs) in 230 villages in 8 mandals of erstwhile Anantapuramu District. The programme focuses on mitigating drought, improving climate resilience and enhancing livelihood security for its target groups through promoting sustainable agriculture and diversifying their income sources.

This is the third phase of the SADLP being implemented for the period 1<sup>st</sup> April 2021 to 31<sup>st</sup> March 2024. As part of the contract with BftW, an external evaluation is to be done during each phase. While it was done in April 2017 for the 1<sup>st</sup> phase, The pandemic induced lock-down meant that this was not conducted for the 2<sup>nd</sup> phase. However, an internal evaluation was conducted in August 2020. The current independent external evaluation covered the project implementation of the 3<sup>rd</sup> phase from April 2021 to March 2023, while keeping in view the work done by AFEC since 2007.

### 1.1 The core problem, direct causes and underlying causes

The project proposes to address the core problem of “high vulnerability of livelihoods” caused by frequent droughts. The effects of the problem are poverty, indebtedness, low incomes (from agriculture and other sources), malnutrition, downward occupational mobility and forced distress migration.

### 1.2 Development Goal

The small and marginal farmers and farm labourers enhance their adaptability to droughts and reduce their vulnerability of livelihoods with improved gender equity and lead a life in dignity.

The approved objectives & indicators of SADLP, 3<sup>rd</sup> phase (2021-2024):

<b>Project Objective</b>	<b>Indicators</b>
<u>Objective 1:</u> In 230 villages of Anantapur District the vulnerability to drought is reduced.	<u>Indicator 1.1</u> 60% of small/marginal rainfed farmers (out of 15000 farmers - 80% women) have adopted at least 4 drought mitigation measures (out of 7 introduced by the project) reducing their vulnerability to drought.
<u>Objective 2:</u> In 230 villages of Anantapur District the	<u>Indicator 2.1</u> 40% of farmers and farm labour (out of 15000 - 80% women) have reduced 15% costs in agriculture operations through reduced vertical

livelihood security is improved.	dependence.
	<i>Indicator 2.2</i> 75% (out of 8000 rural youth – 80 % women) have additional monthly income of Rs 3000 to 6000.

## 2. Need for the Evaluation

AFEC understands that promoting sustainable agriculture and securing livelihoods is a challenging and long-term process given the harsh agro-climatic conditions and backwardness of Anantapur District. Climate change is worsening the problem of vulnerability to drought cause by erratic and uncertain monsoons. There are hardly any models or proven strategies available to guide consistent work of this magnitude and over this period of time (since 2007).

AFEC has evolved a strategy of promoting Drought Mitigation and Climate Resilience in Rainfed Agriculture and creating opportunities for supplementary income to achieve a degree of livelihoods security. It is important for AFEC to continue to understand and evolve while implementing the project through continuous research, experimentation, action-reflection-learning, combining indigenous knowledge, wisdom of women and men farmers as well as the latest scientific innovations.

AFEC commissioned this independent external evaluation of the SADLP in order to assess its relevance, effectiveness, efficiency, impact and sustainability. The evaluation was expected to do an outcome and impact chain assessment and evaluate whether the strategies and activities are effectively and efficiently leading to desired outcomes. The results of the evaluation will contribute to the learning and improves performance of the project and the organization.

### 2.1 Objectives of the External Evaluation of the SADLP

1. Evaluate the project design including its objectives. Review the approach and design adopted in achieving the project outcomes.
2. Assess factors (in design and implementation) that have contributed to or impeded achievement of outcomes.
3. Assess the appropriateness and effectiveness of the project management processes followed.
4. Assess the people's institutions (SMGs, their federations and FPOs) and their participation in the programme
5. Examine the relevance, efficiency, effectiveness, impacts and sustainability of the project
6. Provide actionable and strategic recommendations and lessons from the findings to improve the implementation.

### 2.2 Assessment Period

The Assessment is being conducted between February and April 2023 for the period April 2021 to February 2023. It is important to note that the current implementation is built on the consistent work being done since 2007 on Sustainable Agriculture and Diversified Livelihoods.

## 3. Key Findings

### 3.1 Collectivisation of small and marginal farmers, and farm labourers

- The SMG members show a strong sense of understanding of and identity with the SMG. However, understanding of the activities of the GSMS, MSMS and ASMS is currently weak.

- AFEC leadership has been motivating SMG members to work together and support each other in a humane way so as to go beyond merely the monetary.

### 3.2 Improved gender equity

- 95.4% of the SMG members are women. All SMG Convenors are women, while 95% of the Co-Convenors are women. In the GSMS, all the Convenors are women and 98% of the Co-Convenors are women. In the MSMS and ASMS, all the Convenors are women and 98% of the Co-Convenors are women.
- In the FPOs, 76% of the Board of Directors are women.
- Women members and especially women leaders, show a high level of self-confidence in their interactions. They demonstrate a deep understanding of the project activities and their rationale.

### 3.3 Life with dignity

- The SC and ST members ratio in the SMGs is double that of the ratio in Anantapuramu District. As against 14.3% SC and 3.8% ST population (2011 census) in Anantapuramu District, the SMGs have 32.7% members from the SC and 6.4% members from the ST communities.
- About 6.3% of the women members are women-headed households (including single women), amongst the most vulnerable of the communities.
- The project is to be lauded for ensuring that all the landless women who are SMG members have received financial assistance for their livelihoods.
- In the last two years, 60.3% of women farmers and 100% men farmers (total 62.5%) have taken loans from the SMGs for agricultural purposes. This contributes to the reduction in dependency on others in the social hierarchy and thereby reducing the vulnerability of the farmers.
- Due to CBO services, in 2021, 71% of the sample farmers had a cost reduction of 10%. In 2022, 43% of the sample farmers had a cost reduction of 15%.
- The data collected shows that the average cost of cultivation per farmer in Kharif 2020 is Rs.75,083, while average cost reduction per farmer in Kharif 2021 Rs.5649 i.e., the savings in agriculture operations is 8%. During Kharif 2022, the average cost reduction per farmer is found as Rs.10,720 i.e., the saving in agriculture operations has increased to 15%. In 2022, 43% of the farmers had 15% cost reduction in agriculture operations due to reduced vertical dependence.

### 3.4 Enhanced adaptability to drought

- **Technologies and practices:** The project developed and propagated innovative, low cost, user friendly, location-specific climate resistant practices and technologies to mitigate drought and enhance productivity in Rainfed Agriculture in drought prone Anantapuramu District. Consequently, the farmers' ability to cope with droughts has increased improving the economic status of the families and enriching agro bio-diversity.
- **Climate resilient cropping models:** AFEC designed and promoted 10 drought resilient mixed cropping models with millets, oil seeds, pulses and vegetables suitable for rainfed agro climatic conditions, so that small rainfed farmers can have a higher probability of harvest even in drought years. Mixed food crop models are being adopted



by farmers in rainfed lands. This leads to a change in food consumption leading to a change in the nutrition status at the household level.

- The cost of cultivation of the climate resilient crop models is 3 times lower compared to a mono-crop of Groundnut. Further the risk of crop failure is high in mono-crop Groundnut.
- These farmers reported that their family food basket is now diversified with nutritious millets, pulses and vegetables. The harvested food grains and vegetables were worth between Rs 10,000 and Rs 15,000/-. The mixed crops are integrated in horticulture too by intercropping between the tree rows.
- **Contingency/relay cropping:** AFEC promoted contingency/relay cropping, in order to grow adequate nutritious fodder for cattle and small ruminants. This system is promoted when the main crop could not be sown in time or when it is harvested early. AFEC convinced shepherds and dairy farmers to sow a second crop for late rains as fodder crop. When the late rains were favourable, these farmers harvested both fodder and grains worth Rs 5000 to Rs 8000 per acre. The shepherds especially are leasing fallow lands and cultivating horse gram for grazing sheep.
- **Managing moisture stress:** AFEC has developed and propagated moisture stress management technologies such as farm pond lining, mobile protective irrigation, row water sowing, millet crops and drought resistant seeds which are widely adopted by farmers across the district during the long dry spells. Some of them are up scaled by the Government across all districts.
- **Collaboration with Rainfed Agricultural Research bodies:** AFEC is collaborating with the Regional Agricultural Research Station for developing and improvising suitable farm equipment for small and marginal farmers. The low-cost farm implements like cycle seeder cum weeder, auto sprayers, motor pump set, sprinkler and drip sets, Ananta Seed drill, mobile solar pump set, three-layer bags, tarpaulins etc. were introduced and distributed at subsidized cost to SMGs initially. Later they are made available for hire and sale through FPOs, which are helpful in saving costs in agriculture and also reduce the drudgery of work, especially for women farmers. The drought resilient seed varieties of rainfed crops developed by the research stations are promoted with farmers.
- **Kitchen Gardens widely adopted:** It is observed that this is the least expensive and the most effective of all the agriculture interventions with 10,634 SMG members growing and consuming naturally grown fresh vegetables and fruits. Of them, 3200 gardens (30%) are maintained round the year and remaining 70% are maintained seasonally for 6 to 8 months in a year. About 50% of the vegetables are eaten at home for at least 3 days a week. The rest is sold or shared with neighbours and relatives. Income of up to Rs. 600-1000 per month was quoted by the women. The achievement against the plan is 106%. During the pandemic induced lockdown, when there was short supply, these families consumed and shared the fresh vegetables and fruits every day. This has built community bonding and enhanced the nutritional status of all.
- **Natural farming and agro ecology models:** AFEC is promoting low-cost natural farming practices (*zero budget natural farming*) intensively by collaborating with Azim

Premji Foundation, Rythu Sadhikara Samstha and some local NGOs. The farmers that we interacted with, expressed that they are preparing and applying Jeevamrutham (a bio-inoculant) for their crops and getting very good results. The concept of natural farming is gradually taking root and spreading among the farmers in the project area as well as across the district. AFEC is promoting some innovative agro-ecology models such as a) 5-layer cropping model with tree crops and annual crops, b) 365-days green cover models and c) agro-ecology landscape development through Farmer cooperatives. These models are promising and have potential to benefit farmers.

- ***Moving towards agro-ecology:*** It is observed that AFEC is promoting a holistic concept of ‘agro-ecology’ with small farmers by combining drought mitigation technologies, sustainable agriculture, natural farming practices and farmers cooperatives. Such an agro-ecology farming paradigm is not only ecologically and economically sustainable but also has potential to contain the effects of climate change.
- AFEC leadership played a key role in ensuring the setting up of the Millets Board by the Government to encourage farmers to plant and consume millets as part of drought mitigation measures as well as to improve nutrition levels.
- Based on the 2<sup>nd</sup> Monitoring Survey, 88% of the sample women farmers have adopted 4 of the drought mitigation measures, 49% have adopted 5, 40% have adopted 6 and 12% have adopted all 7 drought mitigation measures introduced by AFEC.

### 3.5 Reduced vulnerability of livelihoods

#### a. Skill Development Programmes

- The skill development programmes have changed the lives of 1075 young women and 2889 young men (total 3964).
- The training programmes have been attended by 78 young women and 1443 young men (total 1521). Of them 53 young women and 1095 young men (total 1148) are currently in employment or are self-employed.
- Job fairs and collaboration have attracted 1047 young women and 1446 young men (total 2493). Of them, 324 young women and 396 young men have been employed (total 720) through 33 job fairs where 16 employers were present.
- In the sample, 86% of those who have been through the Skill Development programmes earn Rs.6000 and above per month while 12% earn between Rs.3000 and Rs.6000 per month.
- In addition to technical knowhow, the alumni have a high self-confidence built up during the training programmes.
- The formation of networks amongst the alumni of the skill development programmes and those who attend the job fairs increases their social capital.

#### b. Alternate Livelihoods

- 2204 women have been given financial assistance as part of the Alternate Livelihoods Project between April 2021 and March 2023. Another 1800 women have been given financial assistance from ALP recovery amount through SMGs.
- Of the 2191 women who have received financial assistance, for whom data was collected, 66% earn an additional Rs.3000 to Rs.6000 per month and 22% earn above

Rs.6000 per month. (Appendix 5 – Some Examples of ALP Borrowers) (Appendix 6 - Detailed tables)

- Since April 2021, of the 129 women who head their households, who have received financial assistance for small businesses, 87 (67%) earn an additional Rs.3000 to Rs.6000 per month and 16% earn above Rs.6000 per month.
- In addition to taking loans for agriculture, business and other productive purposes, women take loans for consumption purposes as well. In some cases, it appears that the burden of repayment, especially of the consumption loans, is almost entirely on the women.

### 3.6 Policy Advocacy

- AFEC has influenced the Government's drought mitigation policies through demonstrating by implementing directly with farmers in rainfed, drought affected lands.
- AFEC leadership played a key role in ensuring the setting up of the Millets Board by the Government to encourage farmers to plant and consume millets as part of drought mitigation measures as well as to improve nutrition levels.
- AFEC is collaborating with the Regional Agricultural Research Station for developing and improvising suitable farm equipment for small and marginal farmers such as cycle weeder, auto sprayers, motor pump set, sprinkler and drip sets, Ananta Seed drill, mobile solar pump set, three-layer bags, tarpaulins etc. These help to reduce labour, drudgery and costs.

Of the total budget for the project direct activities in the field for the 3 years of Rs.21.2 crores, 59% has been spent so far. The remaining 41% will be spent in the final year when the tempo of work does tend to increase.

## **4. Key Recommendations**

- Strengthen CBOs and Women Leaders: The SMG members are active and identify strongly with the SMGs. Over the next few years, the members should have a similar level of understanding, functioning and comfort with the GSMS, MSMS and the ASMS. The capacities of the women leaders will need to be built up so that they are able to take the vision of the collectives forward.
- Financial assistance to members: As the loan amounts increase based on need, women need to be made aware of their increased responsibility while taking loans from the SMGs, especially for consumption purposes. The total loan repayment that a family makes to all sources should ideally not exceed half the monthly income of the family i.e., if the average monthly income is Rs.10,000/- to Rs.12,000/-, monthly repayments to all sources should be in the range of Rs.5000/- to Rs.6000/-<sup>1</sup>.
- Nurture FPOs as business entities: Running the FPOs, value addition to the product and marketing, at scale, needs a set of business skills which is different from the work currently being done by AFEC. Key staff should be able to focus on both “social” and “enterprise” aspects while running the FPOs. This should also apply to the FPO outlets

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<sup>1</sup> [https://www.rbi.org.in/Scripts/BS\\_ViewMasDirections.aspx?id=12256](https://www.rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=12256) – These guidelines came about because of the distress seen when women are members of several SHGs and take multiple loans. One of the principles of responsible lending is to prevent over indebtedness of borrowers.

and the NPM shops, whose services need to be widened. To maximise prices for organic produce, appropriate value chains need to be set up. For women to become legal members of FPOs, families should be encouraged to register land jointly in the names of women.

- Promote Circular Economy: The FPO outlets should also sell the produce that they procure (millets, pulses, groundnuts, etc.), in the villages where they are situated and thereby create a circular economy. There are an additional 84,000 families in these villages who are potential customers. The FPO outlets and NPM shops will also become centres for exchange of local seeds amongst the members.
- Promote innovative models in Natural Farming: Agro-ecology innovations such as agro-forestry, 5-layer crop models, integrating food crops in tree crops, landscape agro-ecology models, 365-days green cover models along with natural farming should be integrated and tailored based on needs of the farmers and further expanded to cover more farmers and areas. These models have good potential to enrich soil resources, agro-biodiversity, climate resilience, food and nutritional security besides providing assured incomes to the small farmers.
- Need of robust enabling eco-system for input supply and marketing for natural farmers: Farmers are shifting to Natural Farming practices as recommended by the organisation. However, lack of ready-made availability of inputs required for Natural Farming is slowing down the process of adoption. The services of NPM shops or Bio-resource centres need to be expanded and strengthened. They can be centres for exchange of local seeds amongst the members. Also, it is essential to build market linkages for natural farm produce, so that they realise better price.
- Need of capacity building on Natural Farming and Agro-ecology: There is a deficit of trained staff on natural farming and agro-ecology, not only in AFEC but in other NGOs too. AFEC can focus on building trained human resources in natural farming and agro-ecology models. Newly recruited agriculture graduates too need intensive trainings for a length of time to get equipped. There is a need for special training on climate resilient production systems and ecological consciousness to interested farmers for confidently adopting agro-ecology models with natural farming practices.
- Capacity building on Business skills: Systematic capacity building needs to be taken up for all those who want to run a business – SMG members who take loans to start or expand a business, Skill Development Programme alumni who start their own business, those who are involved in FPOs, run FPO and NPM outlets, etc. Some inputs in terms of Income & Expenditure analysis, calculating working capital, maintaining basic accounts, etc. will help the members become better at business decisions.
- Actively Encourage Women entrepreneurs: In any population, about 20% are termed as innovators and are quick to grasp new ideas and concepts. They are the entrepreneurs who are willing to take risks and come forward to take loans in the groups. Another 20% of the population are “early adopters”. Once they see the positive results from the innovators, they are then ready to set up small enterprises themselves. Thus, the audience for business or alternative livelihood loans are these 40% of the groups. (other than traditional work such as agriculture, livestock, horticulture, etc.) Women can be encouraged to set up small businesses in non-traditional areas, as well as FPO outlets,

NPM, etc. A separate group should be formed for the entrepreneurs in the groups so that their need for practical inputs can be met.

- Skill Development Programmes for young women and girls: Skill development programmes should be created for women including non-traditional livelihoods such as auto driving, driving LMV, repairing home appliances and cell phones, etc. Given the increase in use of cell phones for both communication and information, during the pandemic, women members should be trained in using it to its potential (to subscribe for weather updates, market rates for produce, etc.)
- Nurture growth of Karyakarthas: It is universally seen, that in an effort to include more women, they are often brought in at the lowest rung of the organisation at terms that are not entirely favourable to them. Care should be taken by AFEC to ensure that this does not happen while creating a cadre of karyakarthas. To ensure transparency, the policies specific to karyakarthas should be spelt out clearly with the rationale. While all the karyakarthas are women, there need to be more women at all levels to ensure development led by women. The organisational policies need to be adapted so as to be more conducive for women to be recruited and retained.
- Measuring the work: To address the intertwined and deep-rooted issues in the project area, a complex and nuanced programme has been designed and implemented. The measurement of such work needs to be equally nuanced, using both quantitative and qualitative indicators. For example, the implementation of the project is based on strong CBOs. It is important to define this, both through the numbers, as well as the processes that result in strong CBOs. We recommend a workshop before the next strategy is finalised, with senior team members and PME experts to rework the indicators so as to be able to capture the project outcomes and impact from a broader perspective.
- Share the learning: AFEC has worked consistently on Sustainable Agriculture and Diversified Livelihoods, since 2007. It is not common for an NGO to receive support to work on an issue for this period of time (even though it takes that time for change to take place). AFEC should now document the process of implementing, learning, making course corrections and moving forward. This will capture the changes in the communities as well as chart the progress of an established organisation that has been pathbreaking and influential in many ways.

## Chapter 1 - Background and Introduction

### 1.1 The Implementing Organisation

Accion Fraterna Ecology Centre (AFEC) is an NGO working on strengthening rural livelihoods and conserving ecology for the last 40 years in the drought prone district of undivided Anantapuramu in Andhra Pradesh state in Southern India. (Appendix 2 – Map) It is committed to promoting livelihood security, self-reliance and human dignity for poor farmers, working through their institutions, led by women and promoting drought-climate resilient sustainable agriculture, agro-processing and non-farm livelihoods. They collaborate with several stakeholders like the government, CSOs, media, universities, research bodies, scientists, etc., and work together for synergetic results.

### 1.2 The Context

The undivided Anantapuramu district falls in the rain shadow region with an average annual rainfall of 552 mm which is the second lowest rainfall in the country after the desert district of Jaisalmer in Thar Desert, Rajasthan. The district is semi-arid, drought prone and deprived of alternate livelihood opportunities due to a lack of industries and a service sector. Out of one million hectares of cultivable land more than 80% is dependent on rainfall which is highly skewed, resulting in frequent crop failures. Climate change is aggravating droughts and adversely impacting the rainfed farmers and the landless, affecting their livelihoods. The effects of this are poverty, indebtedness, low incomes, malnutrition, downward occupational mobility and forced distress migration.

Given the context in the district, AFEC along with other stakeholders has been evolving various strategies to mitigate drought by enhancing the adaptability to climate change through sustaining rainfed agriculture and diversifying the basket of livelihood options for households of small and marginal farmers and farm labourers.

### 1.3 The Project

The ‘Sustainable Agriculture and Diversified Livelihood Project’ (SADLP) implemented by AFEC addresses the core problem of “high vulnerability of livelihoods” caused by frequent droughts. It focuses on reducing the vulnerability to drought and improving livelihood security along with improved gender and social equity. AFEC is implementing this project with financial support from Bread for the World (BftW), Germany funded in 3-year phases from April 2015. Now the project is in its 3<sup>rd</sup> phase starting from April 2021 to March 2024.

### 1.4 The Target Group

This project is implemented in 230 villages of 8 mandals<sup>2</sup> of Anantapuramu and Sri Sathya Sai Districts with approximately 18,000 households (95.4% women) who are organised into 933 Sasya Mitra Groups (SMG). The members can be further divided into those who own land and the landless. Amongst those who own land, 86% are small and marginal farmers. Some of them have irrigation from tube wells, some are entirely reliant on rainfall and some farmers have both types of land. Each category is further divided into marginal, small, and big farmer, based on their landholding size<sup>3</sup>.

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<sup>2</sup> The mandals are Atmakur, Beluguppa, Dharmavaram, Kalyandurg, Kuderu, Kundurpi, Rapthadu and Settur.

<sup>3</sup> Marginal = less than 1 hectare; Small = between 1 and 2 hectares; Big = more than 2 hectares

Social categorisation of SMG members as on 28<sup>th</sup> February 2023:

Category	SC	ST	BC	Others	Total	% of all members
Farmers with land - women	4326	935	7924	1128	14,313	<b>79.8</b>
Farmers with land - men	213	34	546	30	823	<b>4.6</b>
Landless – women	1320	186	1167	119	2792	<b>15.6</b>
Landless – men	0	0	0	0	0	
<b>Total</b>	<b>5859</b>	<b>1155</b>	<b>9637</b>	<b>1277</b>	<b>17,928</b>	
Percentage	32.6%	6.4%	53.8%	7.1%		

Another 7000 households are covered from amongst these 230 villages, in 32 villages, with a specific focus on promoting Natural Farming with funding from Azim Premji Foundation. These households are not members of the Sasya Mitra Groups (SMG). Thus, the direct coverage is about 25,000 families with about 1,20,000 people in 230 villages.

In addition, about 60,000 families (300,000 people) who live in these villages and are not members of the SMGs are also impacted to some extent by the project. The indirect reach would be about 3 million people in the entire district through policy advocacy on rainfed agriculture and awareness programmes on natural farming and drought mitigation.

### 1.5 Development Goal

The small and marginal farmers and farm labourers enhance their adaptability to droughts and reduce their vulnerability of livelihoods with improved gender equity and lead a life in dignity.

The approved objectives & indicators of SADLP, 3<sup>rd</sup> phase (2021-2024):

Project Objective	Indicators
<u>Objective 1:</u> In 230 villages of Anantapur District the vulnerability to drought is reduced.	<u>Indicator 1.1</u> 60% of small/marginal rainfed farmers (out of 15000 farmers - 80% women) have adopted at least 4 drought mitigation measures (out of 7 introduced by the project) reducing their vulnerability to drought.
<u>Objective 2:</u> In 230 villages of Anantapur District the livelihood security is improved.	<u>Indicator 2.1</u> 40% of farmers and farm labour (out of 15000 - 80% women) have reduced 15% costs in agriculture operations through reduced vertical dependence.
	<u>Indicator 2.2</u> 75% (out of 8000 rural youth – 80 % women) have additional monthly income of Rs 3000 to 6000.

### 1.6 Funding Partners

SADLP is the core project of AFEC supported mainly by BftW, Germany. It acts as the hub for attracting other donors for short term projects that supplement its objectives. They include:

- The Alternate Livelihoods Project (ALP), funded by Ms Anupama Nadella from the USA, supports the SMG women members in diversifying their livelihoods into the non-farm sector, through financial assistance.
- The Community Natural Farming Project (CNF) funded by the Azim Premji Foundation to promotes natural farming in 32 villages that are part of the SADLP.

- ICRISAT and Walmart Foundation are supporting 4 Primary Processing Centres and 1 Secondary Processing Facility in strengthening agri-business, to increase market gains for farmers through value addition.
- NABARD provides support for Institution Building and Business Development of 5 FPOs and 3 Watershed Development Projects.
- Say Trees Environmental Trust, Bangalore support the development of agro-ecology blocks in 46 project villages where 5-layer model fruit tree plantations are promoted.



## Chapter 2 - The Framework Conditions

### 2.1 Political, economic, ecological, societal and socio-cultural factors

The changes to the political, economic, ecological and social factors explained in the proposal (2021-2024) have been updated below.

#### 2.1.1 Anantapuramu District bifurcated

Anantapuramu District was bifurcated into two districts: Anantapuramu and Sri Satya Sai, in April 2022. 7 out of 8 project mandals continue in Anantapuramu district, while one mandal, Dharmavaram falls in Sri Satya Sai District. Now the project is spread across two districts.

#### 2.1.2 Area under Irrigation increased

In 4 mandals of the project (Atmakur, Dharmavaram, Kuderu and Rappthadu) the village tanks are being filled every year with water from the Handrineva canal, resulting in an increased groundwater table. Therefore, the existing borewells got recharged and new borewells were dug. As the use of micro irrigation equipment also increased, the extent of irrigated area has increased from 12% to 25% in the last 3 years. The farmers in these areas are mostly growing high investment cash crops such as banana, sweet Lime, papaya etc. along with annual crops such as vegetables, groundnut and maize.

#### 2.1.3 Extent under rainfed farming is declining due to occupational shift

The farmers are incrementally abandoning rainfed agriculture in Anantapuramu District because of increasing cost of cultivation and increased incidence of droughts. The sowing percentage in Kharif season did not cross 65% in the district in the last two years in spite of timely rains. Wage employment either through a National Employment Guarantee scheme or farm labour has become the major income source for small farmers. An occupational shift is taking place from farming to part farming and part labour. Wage labour has become the predominant income source for 80% of rainfed farmers. With support, drought tolerate tree crops could provide succour to rainfed farmers.

#### 2.1.4 Impact of the Covid pandemic on the Context

The pandemic induced lockdowns caused panic, helplessness and a feeling of isolation in people. The situation reinforced the need for togetherness and motivated them to be more co-operative among themselves and supportive of each other.

There were changes to eating patterns as people were dependent on their own produce and became more conscious of health and nutritious food such as green leafy vegetables, fresh vegetables, millets, grown naturally without chemical inputs. This was borne out by a recall of their meals in the morning and the previous night when a fair majority had had ragi or jowar with vegetables rather than just rice and chutney. Even those with money were unable to buy anything. SMG members said that it was more important to have food growing in their backyards or fields as at least that would ensure they were able to eat well.

This consciousness about health has continued with members saying that they take medical advice at an earlier stage rather than waiting for an illness to become serious.

Those who had migrated for work came back to the village and some of them have settled back again. As the rains were good in the last two years, they were able to do some agriculture.

Members from landless families in Pothugunta village said that prices of everyday essentials have gone up while their wages have remained the same.

The karyakarthas and other field level staff highlighted the fact that communication had improved and become easier with the use of the mobile phone for meetings and sharing information.

## **2.2 Risks to project success, assumptions/prerequisites**

The region faces extreme weather conditions with erratic rainfall, long dry spells or sudden heavy rains. Climate change only adds to the unpredictability of these phenomena. Agriculture in the project area is mainly dependent on rainfall leading to frequent crop failures. In 2021 and 2022, the monsoons were unusually heavy and even caused flooding in some villages (La Niña Effect). The table below shows the variation in rainfall in the last 6 years<sup>4</sup>.

<b>Year</b>	<b>Actual Rainfall in Anantapuramu District</b>
2017	609.8 mm
2018	349.3 mm
2019	581.2 mm
2020	805.1 mm
2021	819.6 mm
2022	707.4 mm

While the average annual rainfall in the district is 552 mm, the table above gives the actual rainfall in the last few years. This shows the high variation in rainfall from year to year.

Project activities are planned around the crop cycle and seasons. Therefore, AFEC needs to be and are flexible in scheduling and implementing their activities, keeping in view the changing weather conditions.

For example, in a year of good rainfall at the right times, there may be less need for protective irrigation or less demand for alternative livelihood options. In a drought year, the uptake from the FPO shops may reduce. Hence, while a strategy and plan are prepared, the project would need to adjust these based on the situation and respond to the needs of their community accordingly.

## **2.3 Relevant activities of other organisations**

There are some NGOs in undivided Anantapuramu District including the parent organisation of AFEC, Rural Development Trust (RDT) which works in all villages of the district. Some NGOs in the district promote Natural Farming with the support of the Rythu Sadhikarika Samstha, a Government agency. Some NGOs are working on promoting FPOs while some are implementing various schemes of the Government. Only a few including AFEC are working on organizing farmers, strengthening rainfed farming, diversified livelihoods and policy advocacy. There is a clear understanding among the NGOs not to duplicate activities in project villages. A coordinated network approach is present among the NGOs, which gives them additional lobbying capacity with the government. AFEC plays a pivotal role in networking of NGOs and CSOs on issues affecting farmers, gender, environment and agriculture. In the context of the pandemic, AFEC was nominated by the Government as a nodal agency for coordinating the Covid control efforts between NGOs and the Government and to ensure efficient implementation of relief activities and vaccination across the district.

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<sup>4</sup> Source: Regional Agricultural Research Station

#### **2.4 Role of government agencies**

The state promoted Community Natural Farming (CNF) is being implemented on a sizable scale in the district and AFEC is a part of this initiative. Government agencies such as NABARD, NCDC and the Horticulture Department are now focusing on forming new FPOs and promoting agro-value chain involving capable NGOs including AFEC. The Department of Agriculture is implementing the program, Community Managed Seed System through NGOs. There are also different government agencies at work, such as the women Self Help Groups, Rythu Bharosa Kendras, Village Secretariats, etc., in the district. There are research agencies such as the Regional Agri Research Station, Krishi Vignana Kendra, Horticulture Research Station and Livestock Research Centre. The extension agencies such as Department of Agriculture, Agriculture Technology Management Agency and District Water Management Agency are also implementing drought related programmes. Marketing agencies such as NAFED and MARKFED procure agricultural produce at Minimum Support Prices announced by Government of India, with support of NGOs.

## Chapter 3 - The Evaluation Process and Methodology

### 3.1 Timing of the evaluation

The Sustainable Agriculture and Diversified Livelihoods Project (SADLP) is funded by Bread for the World (BftW), Germany in 3-year phases from 2015. The 3<sup>rd</sup> phase started on 1<sup>st</sup> April 2021 and is due to end on 31<sup>st</sup> March 2024. This evaluation comes towards the end of the second year in March 2023.

As part of the project contract with BftW, an independent, external evaluation is to be done during each phase. While it was done in April 2017 for the 1<sup>st</sup> phase (2015 to 2018), the pandemic induced lock-down meant that this was not conducted for the 2<sup>nd</sup> phase (2018-2021). An internal evaluation was conducted in August 2020. The current external evaluation covers the project implementation of the 3<sup>rd</sup> phase from April 2021 to March 2023.

The current independent external evaluation coincides with two years of ‘above average’ rainfall in 2021 and 2022. It is to be noted that there is considerable variation in rainfall in the project villages. The first year of the project was in the shadow of the Covid pandemic. India had ended lockdowns as a country and the vaccination process was rapidly covering the populations. Fear and anxiety over the unknown and the trauma of the forced isolation in the initial stages continued till about mid-2022. Normal, unfettered project implementation was possible from Year 2.

### 3.2 The External Evaluation Team

The external evaluation team consisted of two persons, Ms.Gouthami and Ms.Padmavathi Koppula. They are introduced briefly below.

**Ms.Gouthami** has been part of **senior management** in *grassroots implementing organisations* as well as *international donor agencies* for 3 decades. Over time, she focussed on **gender equality**, and sharpened her skills in **strategic management** throughout the project cycle from appraisal and planning, to implementation, review, evaluation and impact assessment. (*India, Timor Leste, Philippines*)

As a **social entrepreneur** for a decade, she took the initiative in setting up, strategising and running a widely recognised and awarded *responsible travel company*. She quickly learnt *new ways of working*, with a *range of stakeholders*, stretching her limits and becoming **self-reliant, creative and adaptive**.

Her **strengths** are her passion for *gender justice, programme management, critical analysis* while working with quantitative and qualitative *data, people management, innovative thinking* and applying *participatory* methods in practice. She thrives in a context of *uncertainty* where she needs to *learn quickly* to move ahead.

Detailed profile - <https://www.linkedin.com/in/gouthamisocialdevelopment/>

**Ms.Padmavathi Koppula** is the CEO of Aranya Agricultural Alternatives. She has worked extensively over the last 25 years with underprivileged women and facilitated the formation of Farmers’ Producer Organisations (FPOs), Co-operative fodder forests, Food forests, Community herbal gardens, and Co-operative food preservation systems.

She is one of the leading permaculture practitioners, designers, and teachers globally, having trained over 6000 people nationally and internationally. She was key to organizing *National permaculture convergences* in 2016 and 2020 and *International Convergence in 2017*.

She led the team in Kurnool District for the Andhra Pradesh Drought Mitigation Project, working with 5000 farmers in 36 villages to form 12 FPOs to prepare them for drought-resilient production systems. She also led the team training and capacity building of Irrigation Engineers and farmers on the Participatory Irrigation Management and Environment Management in the command areas of the Nagarjunasagar Project and other major and minor irrigation projects in the states of Andhra Pradesh and Telangana.

She has supported tribal, small, and marginal farmers to develop regenerative agriculture practices, converted agricultural crop residue for adding soil organic carbon, and been part of evaluation and impact assessment studies.

As a consultant and while working with the governments of Andhra Pradesh and Telangana, she has been involved in projects supported by JICA, World Bank, DFiD, IFAD, etc. on issues related to water, irrigation, livelihoods, and sustainable agriculture.

Detailed profile - <https://www.linkedin.com/in/padma-koppula-5ba36517/>

### **3.3 Process in brief**

- The two evaluators were selected through a competitive bidding process as per the Terms of Reference (ToR). A contract was signed with each evaluator. (Appendix 1 – ToR)
- All the documents related to the evaluation were shared with the evaluators.
- A kick-off meeting was organised in the main office at Anantapur on 24/Feb/2023 with the key staff from AFEC and the evaluators. Detailed presentations were made by the project core team about the work done so far. The evaluators then requested some additional details and data, which were duly provided.
- An Inception Report was submitted by the evaluation team detailing the evaluation design, methodology, additional data requirements and tentative timelines.
- The evaluation field visits were organised between 9/Mar and 15/Mar and then again between 13/Apr and 15/Apr. The detailed schedule of visits is given in Appendix 3. The evaluators split into two teams for part of the field visits. Every evening they exchanged notes and further questions.
- A meeting was held on 15/Mar with the project core team to get their detailed inputs and to share the preliminary findings in a broad stroke.
- They participated in an ASMS meeting on 15/Apr and observed the brainstorming process to discuss the way forward.
- The evaluators worked separately on their aspects of the report – Ms Padmavathi Koppula on Sustainable Agriculture and Ms Gouthami on Institutions, Skill Development and Alternate Livelihoods. The issues of Gender, Social Equity and Sustainability are cross-cutting and addressed by both evaluators. The report was then finalised by the Team Leader, Ms Gouthami, in consultation with Ms Padmavathi Koppula, and the Draft Report shared with the project core team.
- The report went through several drafts before being finalised and shared with AFEC and BftW.

### 3.4 Methodology

The methodology was guided by the OECD-DAC criteria and guidelines, focusing on Relevance, Effectiveness, Efficiency, Impact and Sustainability (REEIS). The evaluation was done in a participatory manner with community members and staff through focussed group discussions, individual interviews and physical checks. The project team members accompanied the evaluators and helped to translate where needed, logistics and other support. SMG members responded freely and explained project activities in detail and responded to all questions.

AFEC has an MIS and PME system in place. The field data is computerised each week and verified each month. The PME Unit conducts an annual Monitoring Survey in April to track the outputs and outcomes of the project. To feed into the Evaluation, the 2<sup>nd</sup> Monitoring Survey for this project was conducted in March 2023. The quantitative data shared by the PME Unit bolstered the qualitative data collected by the evaluators during the FGDs.

#### 3.4.1 Methods of Data collection and related processes

1. Review of documents – project proposal, budget vs expenditure, project reports, Baseline and Monitoring Surveys, previous evaluation reports, annual reports, AFEC website, etc.
2. Preparation of evaluation tools and checklists based on key questions (Appendix 4)
3. Performance based stratification / grading of CBOs and Villages
4. Stratified Random Selection of villages and CBOs for assessment
5. Purposive selection of some activities and villages where some special activities are implemented
6. Verify village level records and data management systems at village and mandal levels
7. Individual interviews and focused group discussions with SMGs, FPOs, CBO leaders, young women and men
8. Participation, interaction and observation at special events such as International Women’s Day, Job Fair, ASMS meeting, etc., organised by CBOs and project team.
9. Interactive sessions with the karyakarthis, field staff and core team (group discussions, brain storming, presentations, input sessions and individual sharing)
10. Meetings with external stakeholders
11. Meeting with Board of Trustees
12. Analysis of data collected in 2<sup>nd</sup> Monitoring Survey

The evaluation tools consisted of check lists with some follow up questions for interviews and focused group discussions with the stakeholders. The sample villages, CBOs and activities were selected based on stratified and random sampling for focused group discussions, interviews and farm visits. The staff and karyakarthis who were interviewed were open and transparent in responding to the questions and candid about their understanding and knowledge.

#### 3.4.2 Sampling Methodology and Sample size selected

	Sample Type	Total	Sample %	Sample Size	Method of Sampling	Remarks
1	Mandal	8	100%	8	Universe	
2	Clusters	42	67%	28	Random Sample	
3	Villages	230	14%	33	Random Sample	
4	SMGs (Grade - ‘A’)	635	10%	65	Stratified Random selection from each grade A,B,C proportionately	SMGs, GSMS and MSMS were graded by AFEC based on the functioning and
5	SMGs (Grade - ‘B’)	236	9%	21		

6	SMGs (Grade - 'C')	65	11%	7		performance of CBOs such as meetings, attendance, savings, loans, convergence, planning, monitoring of activities, etc.
7	GSMS (Grade - 'A')	155	10%	16	Stratified Random selection from each grade A,B,C proportionately	
8	GSMS (Grade - 'B')	59	14%	8		
9	GSMS (Grade - 'C')	4	25%	1		
10	MSMS (Grade - 'A')	7	43%	3	Stratified Random selection	
11	MSMS (Grade - 'B')	1	100%	1	Universe	
12	Sustainable Agriculture (A Grade Villages)	158	10%	16	Stratified Random selection from each grade A,B,C proportionately	The villages were graded by AFEC based on the quality and quantity of sustainable agriculture activities being adopted by farmers in these villages.
13	Sustainable Agriculture (B Grade Villages)	31	10%	3		
14	Sustainable Agriculture (C Grade Villages)	7	14%	1		
15	AFYRC Skill Trainees (Current and Alumni)	1521	7%	99	Stratified based on skill trades and Gender and then selected randomly	23 women 66 men
16	ALP Beneficiaries	2204	9%	200	Randomly selected covering all mandals and all types of businesses	All women only
17	Best SMGs	25	20%	5	Randomly selected among graded SMGs	Outstanding groups
18	FPO leaders	150	11%	16	Random sampling	11 Women & 5 men
19	ASMS	1	100%	1	Universe	Participated in ASMS meeting
20	AF Staff	110	59%	65	Gender wise Random sampling	25 women and 40 men

The 2<sup>nd</sup> annual monitoring survey was conducted in the second half of March 2023. The sample size was 8 mandals (100%), 35 clusters (85%), 47 villages (20%), 166 SMGs (18%), 831 farmers (6%), 205 ALP beneficiaries (10%) and 102 (8%) trained young women and men covering in the second half of March 2023. The sample for 1.1 & 2.1 indicators remains the same for 3 years, while the sample for indicator 2.2 is drawn from 2 years. The evaluators added some questions to the survey questionnaire and used the data for the evaluation.

### 3.5 List of Stakeholders interacted with, and Activities assessed

The evaluators interacted with the following stakeholders for the evaluation:

1. 864 SMG and GSMS members in the 33 selected villages
2. 156 MSMS and FPO members from all the 8 mandals

3. 45 ASMS members
4. 47 women from list of 1100 potential leaders from CBOs.
5. 64 Randomly selected young women and men from all Skill trades of AFYRC who have completed their training and 35 trainees from current batches
6. 200 Randomly selected women from all types of businesses, who received assistance from Alternate Livelihoods Project
7. 422 Randomly selected women and men farmers adopting various Sustainable Agriculture and Drought mitigation measures
8. Participants of International Women's Day and Job Fairs
9. 65 key staff at main office, mandal offices, village level, including karyakarthas

The External stakeholders interacted with are:

- Project Director, District Water Management Agency
- District Development Manager, District Horticulture Office
- District Development Manager, NABARD
- CEO of APMAS,
- Secretary, REDS
- Principal Scientist, Regional Agriculture Research Station (RARS)
- Principal Scientist, Horticulture Research Station (HRS)
- Project Coordinator, ICRISAT

The project activities assessed by interacting with beneficiaries are:

- i. Farmer field schools
- ii. Natural Farming practices replacing agro chemicals
- iii. Crop diversification with millets, pulses and vegetables
- iv. Drought resistant crops – improved varieties
- v. Protective irrigation during dry spells
- vi. Contingency or relay crops
- vii. User-friendly low-cost farm tools and equipment
- viii. Kitchen Gardens
- ix. Cow Urine Pits
- x. NPM Shops
- xi. 365 Days Green Cover farms
- xii. Skill Trainings from AFYRC
- xiii. Alternate Livelihoods Promotion for Women
- xiv. Special Events: International Women's Day and Job Fairs

The Special Activities visited are:

- Agro-ecological Landscape development model
- 5-layers model of agro-ecology farming system

### **3.6 Challenges faced**

- While the project objectives are limited and focussed, the work of AFEC that is needed to achieve them is vast, varied and complex. This was dealt with by having a team of 2 evaluators with complementary skills – one focussed on Sustainable Agriculture and the second focussed on Institutions, Skill Development and Alternate Livelihoods. Gender, Social Equity and Sustainability issues were cross-cutting these themes.



- While the focus of the Evaluation was on the two-year period from April 2021 to February 2023, the impact of the work is only possible because of the project implemented in the previous phases on sustainable agriculture and diversified livelihoods since 2007.
- The evaluation took place at the end of the 2<sup>nd</sup> year of the 3-year project and could not capture the potential outcomes and impacts from the third year of implementation.
- The geographical area of the project is vast, covering 8 mandals and 230 villages. In total, both the evaluators together spent about 50 days in meetings, field visits and report writing.
- Time was definitely a constraint for this evaluation. The project team was efficient in providing us with vast amounts of quantitative data. For the qualitative data through focus group discussions and direct interactions, it was challenging to capture every voice that wished to be heard. Using the quantitative data to effectively highlight the qualitative data took longer than planned.

## Chapter 4 - Results

### 4.1 Relevance of the SADL Project

The SADL Project components are designed to address the goals and objectives to mitigate the livelihood vulnerability caused by harsh arid and semi-arid agro-climatic conditions, drought proneness and climate change. The Anantapuramu region is a rainfed agrarian economy without industrial development. About 90% of the farmers are small and marginal with an average landholding of 1.6 hectares of rainfed land. They are resource poor and vulnerable due to the high risks involved in rainfed agriculture. Hence promotion of sustainable agriculture and diversified livelihoods through strengthening of community institutions are relevant to minimize the risks of drought and achieve livelihood security for small farmers and farm labour.

#### 4.1.1 Participatory approach led by women

The foundation of AFEC's work is 18,000 households in 933 Sasya Mitra Groups (SMG) with 15 to 25 women members each, in 230 villages, of which the SMGs are active in 218 villages. The formation and strengthening of groups are processes carried out since 2015 and is not limited to this project period.

Initially, the members were both women and men. However, in since 2019, there has been a move to have only women as members in the group. Currently there are 95.4% women. This move is in line with the shift from *development of women to development led by women*. Functioning through groups ensures that the members have a feeling of togetherness, support each other and have a good understanding of the reality of the life of each member.

The SMG members belong to the following categories:

Category	SC	ST	BC	Others	Total	% of all members
Farmers with land - women	4326	935	7924	1128	14,313	<b>79.8</b>
Farmers with land - men	213	34	546	30	823	<b>4.6</b>
Landless – women	1320	186	1167	119	2792	<b>15.6</b>
Landless – men	0	0	0	0	0	
<b>Total</b>	<b>5859</b>	<b>1155</b>	<b>9637</b>	<b>1277</b>	<b>17,928</b>	
Percentage	32.6%	6.4%	53.8%	7.1%		

#### 4.1.2 Social equity

The relevance of the project in reaching the most vulnerable members of the community such as women belonging to the SC and ST communities and women-headed households (including single women) as seen in the tables below:

Category	SC	ST	BC	Others
Farmers with land - all women	30.2%	6.5%	55.4%	7.9%
Farmers with land - men	25.9%	4.1%	66.3%	3.6%
Landless – all women	47.3%	6.7%	41.8%	4.3%
Landless – men	0	0	0	0
<b>Total</b>	<b>32.7%</b>	<b>6.4%</b>	<b>53.8%</b>	<b>7.1%</b>
Anantapur District	<b>14.3%</b>	<b>3.8%</b>		

**Key Finding:** The SC and ST members ratio in the SMGs is double that of the ratio in Anantapuramu District. As against 14.3% SC and 3.8% ST population (2011 census) in Anantapuramu District, the SMGs have 32.7% members from the SC and 6.4% members from the ST communities.

<b>Women headed households</b>	<b>SC</b>	<b>ST</b>	<b>BC</b>	<b>Others</b>	<b>Total</b>
Farmers with land	204	42	391	65	702
Landless	205	27	170	30	432
<b>Total women headed households</b>	<b>409</b>	<b>69</b>	<b>561</b>	<b>95</b>	<b>1134</b>
	36%	7%	50%	8%	6.3%

**Key Finding:** About 6.3% of the women members are women-headed households (including single women), amongst the most vulnerable of the communities.

#### 4.1.3 Network of SMGs federated in 4 tiers

The Convenor and Co-Convenor of each SMG come together at the village level to form the Grama Sasya Mitra Samakhya (GSMS). The Convenor and Co-Convenor of the GSMS' come together at the mandal level to form the Mandal Sasya Mitra Samakhya (MSMS) and then they are federated at the district level in the Apex Sasya Mitra Samakhya (ASMS). The village level, mandal level and the district level organisations are to discuss issues that come up in the SMGs related to social and economic issues such as agriculture, livelihoods, health, water, education, etc. They ensure convergence of programmes implemented by the government and other organisations to ensure greater benefits for their approximately 18,000 members as well as the villages in which they live. This helps to increase the effectiveness, efficiency, impact and sustainability of the programme overall.

**Key Finding:** 95.4% of the SMG members are women. All SMG Convenors are women, while 95% of the Co-Convenors are women. In the GSMS, all the Convenors are women and 98% of the Co-Convenors are women. In the MSMS and ASMS, all the Convenors are women and 98% of the Co-Convenors are women.

**Key Finding:** The SMG members show a strong sense of understanding of and identity with the SMG. However, understanding of the activities of the GSMS, MSMS and ASMS is currently weak.

#### 4.1.4 Farmer Producer Organisations (FPO)

AFEC has organised the farmers from the SMGs into 9 FPOs and federated them as the Ryuthu Neshtam Food Producer Company Limited (RNFPCCL). The FPOs have 6000 shareholders with 4673 women (78%) and 1327 men. 98% of the shareholders are small and marginal farmers. The FPOs aim to ensure better prices for small and marginal farmers through bulk commodities trading, value addition and marketing of their farm produce.

The RNFPCCL has set up the Rythu Nestham Food Processing Centre (FPC) at Muddalapuram village in Kuderu Mandal. The machinery and infrastructure at the FPC are supported by Walmart Foundation. The value-added products are developed with technical support from ICRISAT. The federation ensures that the quality of the output is maintained. The marketing process ensures branding, sales and visibility of the products. They support small and marginal farmers in getting better prices by trading, value addition to their produce and marketing.

**Key Finding:** In the FPOs, 76% of the Board of Directors are women.

#### 4.1.5 Reduced vertical dependency and reduced costs in agricultural inputs

The SMGs are working to move from “vertical dependency and exploitation” to “mutual co-operation and self-reliance”. The savings amount started at Rs.50 per month per member and now goes up to Rs.200. The interest charged is between 12% and 24% per annum and decided by each group. Savings and repayments are collected, and the money is immediately revolved amongst the members who want to take loans. The savings is linked to each SMG and not pooled together at the village level or higher. Therefore, cash is available immediately without the need for the additional step of going to the bank or the moneylender. As on 28<sup>th</sup> February 2023, Rs.11.66 crores (Rs.116.6 million) is the savings amount available with 933 SMGs with 17,095 members (95.4% women).

AFEC has facilitated agricultural loans through the SMGs from the growing savings. This ensures that farmers take loans with clearly expressed terms and no other obligations, unlike the traditional systems of borrowing, where money lenders exploit socially and economically and keep them ever dependent on them. These loan amounts have increased over the years as the SMG savings amount has increased, till it is sufficient to meet the financial needs of members.

**Key Finding:** In addition to taking loans for agriculture, business and other productive purposes, women take loans for consumption purposes as well. In some cases, it appears that the burden of repayment, especially of the consumption loans is almost entirely on the women.

AFEC has revived the traditional system of farmers helping each other through forming mutual co-operation groups. From amongst the SMG members, groups of 5 to 10 members each come together to help each other for sowing, weeding and harvesting during the agricultural seasons. A total of 7551 SMG members (44%) are part of mutual co-operation groups. This helps them to save the cost of labour which is a saving on the amount of cash that is needed as working capital, further reducing their dependence on external sources.

#### 4.1.6 Climate Resistant Sustainable Agriculture

AFEC’s long term strategy is to focus on Sustainable Agriculture with small and marginal rainfed farmers so as to make rainfed agriculture regenerative and viable for them. Using traditional knowledge, AFEC’s own experience and the inputs of experts, AFEC have worked out 7 measures or activities that come to the aid of farmers, by minimising their vulnerability to drought and climate change, and spreading risk. These include:

1. Diversified cropping systems with millets and pulses
2. Drought resistant or high yielding seeds
3. Natural farming practices
4. Protective irrigation
5. Contingency crops
6. Equipment to reduce drudgery
7. Farmers Field Schools

These measures help farmers to cope with erratic rainfall, drought, hailstorms, insect and other pest infestations.

The FFS is an experiential learning and training methodology conducted in selected farms in each village covering the agricultural cycle from sowing to harvest. They were organised annually for two crop seasons in 2021 and 2022. The sessions are participatory and include land preparation, soil testing, seed selection, seed treatment, mixed cropping systems,

preparation and application of bio-fertilisers, mechanical and biological control of pest and disease management and harvesting techniques.

The practice of contingency/ relay crop is a new intervention and farmers from the shepherd communities have come forward to implement this method. This builds on a traditional practice that was practiced a few decades ago, of the shepherd community, where they lease lands to sow horse gram and allow the sheep to graze after the harvest. This allows the land to be revitalised naturally through the urine and dung of the sheep.

Another step that has been taken is to introduce implements such as the cycle weeder, hand sprayers and tarpaulins at reduced prices in the FPO shops. This supports small and marginal farmers in reducing the need for hiring labour as well as the drudgery of work for women, who normally do the weeding.

Based on their experience over the years and the inputs of experts, AFEC understand that if a farmer adopts at least 4 of these measures, s/he will be able to mitigate the effects of a drought. However, the effectiveness of these interventions would still depend on the extent of variation in rainfall and climate change.

Given the impact of climate change on rainfall intensity, dry spells, rainfall predictability, differences between day and night temperatures on annual cropping patterns, AFEC is experimenting with perennial horticulture, multi-layered tree cropping systems, agro-forestry and 365-days green cover farms (Nithya Haritha Sedyam). This enables a holistic concept of agro-ecology that integrates climate resilient sustainable agriculture, drought mitigation and natural farming suitable to the context in Anantapuramu district.

#### 4.1.7 Enhancing livelihood security through diversifying family income sources

One of the important facets of a successful drought mitigation strategy is to ensure a basket of livelihood options such that the risk is spread out and there is sufficient income around the year regardless of drought. To this end, AFEC provides Skill Development Programmes for rural young women and men and loans for Alternative Livelihoods through the SMGs.

When the project core team members were asked for an *estimate* of the average monthly income for a family of 5 or 6 members, to lead a basic life in Anantapur district, they gave a figure of Rs.10,000 to Rs.12,000. The minimum wage in the area is Rs.225. If a couple work as labourers for 25 days a month, they can earn up to Rs.11,250. This calculation helps to cross-check the estimate given by the team. Thus, the additional income target of Rs.3000 to Rs.6000 in the objective is seen to be relevant, being 25% to 50% of the needed family income.

##### a. Alternate Livelihoods Project for women

The Alternate Livelihoods project provides financial support particularly for women in the SMGs, to provide an additional income and to boost their self-esteem. Financial support is available for women to set up as small businesses to supplement their income from wage labour. Priority was given to women headed households, landless women, single women, women with disabilities and others who are the most vulnerable women in their communities.

The members of the SMGs, are for the most part, not included in the formal financial sector. As women, tangible and fixed assets are not in their names and hence they do not have collateral to offer. They are hesitant to take loans from the formal sector as literacy levels are low. With the socio-economic background of the members, it is important for the groups to offer loans

with repayments periods, rates and amounts decided based on the comfort level of the borrowers. This ensures that the women do not default and repay the loans with minimal delays. The crucial gap of access to financial capital is thus addressed by this activity making it relevant to the project.

SMGs that are classified as “A”, select 4 members each to receive financial assistance strictly for non-farm income generating activities. The SMG provides half the amount from its funds and the other half is given by the project. The repayment terms are decided by the group and the repayments are made to the SMG in their monthly meetings. This helps to increase the amount revolving within each group so that more interested members can get assistance for non-farm income generating activities. For example, in V E Thanda village, the financial assistance was given to 23 women in the first round. Once they had repaid the amount, in the second round, 15 women were supported. Thus, in each round, more women are able to get the assistance needed.

b. Skill Development Programme under educated / unemployed young women and men  
The AF Youth Resource Centre (YRC) has been reaching out to young women and men from the entire district to upscale their skills directly as well as in convergence with other training centres in the district and nearby towns and cities. These are youth who have some education and have the potential to increase their income with added skills through jobs or through starting small businesses. They have created the necessary infrastructure facilities with updated machinery and tools and employed skilled trainers. They currently offer 7 skill development courses at 2 centres.

There are several options available for youth to get trained in vocations, including free training from government institutions. Yet they prefer to join the AFYRC courses and pay a nominal fee because:

- The training is thorough, hands-on and practical
- It prepares them for the realities of the job market through building knowledge as well as the soft skills needed such as self-confidence, spoken English, work etiquette, etc.
- During the training programme, the trainees are provided lunch. Once the course is completed, they get a certificate of completion and a tool-kit from AFYRC and partners such as Edureka, Bosch Foundation, Schneider Electrical, Indian Red Cross Society, etc.
- There is handholding to deal with the teething problems in the initial months of a new job or in their own business.
- Alumni become a part of a large network of over 10,000 young women and men who receive regular updates on new opportunities, skills, etc.

In addition to providing their own training programmes, AF YRC mobilise young women and men to attend other vocational training at RUDSETI, Unnati Foundation, American India Foundation, Nudge Foundation, Dr Reddy’s Foundation, GMR Varalakshmi Foundation, Swarna Bharati Trust, Navagurukul among others.

**Key Finding:** In addition to technical knowhow, the alumni have a high self-confidence built up during the training programmes.

**Key Finding:** The formation of networks amongst the alumni of the skill development programmes and those who attend the job fairs increases their social capital.

#### 4.1.8 Conclusion of Relevance

The project objectives, activities, outputs and outcomes are designed to address the identified problems of the project area and are relevant in building community resilience to climate change through sustainable agriculture and diversified livelihoods. However, AFEC is flexible in its work and responds to the changing situation and context as was evident during the Covid pandemic. The strength that the project derives from the presence of ground level SMGs was clearly visible during the pandemic when relief supplies were supplied to those affected, regardless of their SMG membership.

SADLP is the core project of AFEC and has attracted other projects which complement its objectives such as the Alternate Livelihoods project, Community Natural Farming project, Value chain development project, Agro-ecology development project, Watershed developments projects and Carbon sequestration project.

#### **4.2 Effectiveness**

In this section we are reporting against the outputs and outcomes as defined in the SADLP proposal approved for the period 2021–2024. The data is drawn from the regular monitoring of the project and from the 2<sup>nd</sup> Monitoring Survey conducted by AFEC in March 2023, with additional questions by the evaluators. The Monitoring Survey covers the same 831 farmers each year.

##### 4.2.1 Outcome 1, Indicator 1.1

60% of small/marginal rainfed farmers (out of 15,000 farmers – 80% women) have adopted at least 4 drought mitigation measures (out of 7 introduced by the project) reducing their vulnerability to drought.

<b>Output description</b>	<b>Achieved</b>	<b>Percentage achieved</b>
15000 farmers including 12000 women farmers acquired awareness, technical and practical knowhow on drought adaptive measures promoted by AF (knowledge)	14,973 women farmers and 574 men farmers (total 15,547 farmers)	104% of total farmers planned 125% of women farmers planned
12000 farmers including 9000 women farmers adapt diversified crops combining millets, pulses and vegetables in 10000 hectares of Rainfed lands.	10,264 women farmers (97%) and 344 men farmers (total 10,608) have gone in for crop diversification on 4296 hectares	88% of total farmers planned 114% of women farmers planned
3000 farmers including 2500 women farmers have given protective irrigation to save the crops from moisture stress in 1250 hectares.	2030 women farmers (94%) and 122 men farmers (total 2152) went in for protective irrigation on 1307 hectares	72% of total farmers planned 81% of women farmers planned 105% of area planned
15000 farmers (80% women) sow contingency/ relay crops in 12000 hectares	10,658 women farmers (96%) and 407 men farmers (total 11,065) sowed contingency/ relay crops on 12,702 hectares	74% of total farmers planned 89% of women farmers planned 106% of area planned

2000 women farmers have low-cost equipment that reduces drudgery and costs in agriculture	2260 women farmers have low-cost low-drudgery equipment	113% of women farmers planned
Bio-inputs are available in 230 project villages for practicing Natural farmers	10,578 women farmers (97%) and 338 men farmers (total 10,916) are practicing natural farming in 196 villages.	85.2% of villages planned

The sustainable agricultural activities under SADLP are implemented in all the 230 project villages with SMG members. However, among them in 32 villages, similar agricultural activities are extended to non-SMG members also, under Community Natural Farming Project (funded by APF) thus covering the entire village. In order to avoid the attribution problem, AFEC excluded the 32 villages and graded 196 non-CNF project villages (having 833 SMGs & 15,298 farmers) for assessment on the adoption rate and quality of the recommended agriculture practices. 2 small habitations were merged with adjacent villages during assessment. The team has categorised 158 villages (81%) as “A”, 31 as “B” and 7 as “C”. The fact that there are 81% of the villages in the “A” category shows the high effectiveness of the Sustainable Agriculture programme. In another 32 villages, as part of the Community Natural Farming project, Sustainable Agriculture practices are propagated with all the farmers in these villages.

The project appears set on course to meet and perhaps exceed, the planned targets by the end of the project period. At the end of the second year of project implementation, it has covered more than two-thirds of the targets set for the three years, highlighting its effectiveness.

Data from the 2<sup>nd</sup> Monitoring Survey:

Details	Number	Percentage
Total no. of farmers	831	
No. of SMGs covered	163	
No. of villages covered	50	
Baseline conducted in April 2020 – No. of farmers practicing at least 4 out of 7 drought mitigation measures	247	30%
1 <sup>st</sup> Monitoring Survey conducted in April 2022	532	64%
2 <sup>nd</sup> Monitoring Survey conducted in March 2023	728	88%

Amongst the sample farmers, 30% of farmers were already practicing at least 4 out of the 7 drought mitigation measures introduced by AFEC. This figure increased to 64% by the end of the first year and to 88% by the end of the second year. Thus, the target of 60% was achieved in the first year itself amongst the sample farmers.

The farmers adopting the practices claimed that their savings from these practices range from Rs 8,000 to 15,000 per acre depending on the crops grown and rainfall pattern. The practices are effective when the rainfall deviation is less than 20% and there are no extreme weather events to impede the effectiveness.

While the first step in getting farmers to adapt to natural farming is to create awareness, the next step is to ensure that they are able to access natural inputs for their farms. AFEC established 15 out of the planned 16 NPM shops in the project area. 1223 farmers (76% of the



planned number) have accessed the 9<sup>5</sup> products available in the NPM shops for pest management and soil health improvement.

Agro-ecology multilayer cropping models including perennial fruit plants were initiated in 48 villages with 460 farmers in 500 hectares, using Natural farming techniques. This is a unique model where farmer committees are supervising and monitoring the plantations in a cooperative manner. The plantations have 1,80,677 perennial fruit plants like Guava, Mango, Kalajamun and Amla along with annuals such as a main crop of castor or groundnut, border crops such as sorghum, foxtail millet, cowpea and lab lab and vegetables like brinjal, tomato, chilly, coriander, fenugreek, etc.

AFEC raised the investment for this initiative from SAY TREES and Azim Premji Foundation including 300,000 tree saplings and protective irrigation infrastructure. AFEC is adding these farmers to carbon sequestration project to generate additional income from carbon credits generated.

Nithya Haritha Sedyam (NHS) or 365-day green cover is a unique experimental method in natural farming which promotes continuous cropping biodiversity in the farms. Different layers of seasonal crops are grown, that do not compete with each other. In this year, 90 farmers have participated in this experiment in the extent ranging from half acre to one acre each. Based on the criteria like mulching, crop diversity, use of jeevamrutham and relay cropping, 41 farmers (46%) were categorised as 'A' grade and are earning between Rs.40,000/- to 80,000/- per acre. The average additional income of the 90 farmers is Rs.8735/- between June 2022 and March 2023, with a range from Rs.42,000/- to a loss of Rs.12,500/-.

### **Key Findings:**

***Technologies and practices:*** The project developed and propagated innovative, low cost, user friendly, location-specific climate resistant practices and technologies to mitigate drought and enhance productivity in Rainfed Agriculture in drought prone Anantapuramu District. Consequently, the farmers' ability to cope with droughts has increased improving the economic status of the families and enriching agro bio-diversity.

***Climate resilient cropping models:*** AFEC designed and promoted 10 drought resilient mixed cropping models with millets, oil seeds, pulses and vegetables suitable for rainfed agro climatic conditions, so that small rainfed farmers can have a higher probability of harvest even in drought years. Mixed food crop models are being adopted by farmers in rainfed lands. This leads to a change in food consumption leading to a change in the nutrition status at the household level.

The cost of cultivation of the climate resilient crop models is 3 times lower compared to a mono-crop of Groundnut. Further the risk of crop failure is high in mono-crop Groundnut.

These farmers reported that their family food basket is now diversified with nutritious millets, pulses and vegetables. The harvested food grains and vegetables were worth between Rs 10,000 and Rs 15,000/-. The mixed crops are integrated in horticulture too by intercropping between the tree rows.

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<sup>5</sup> neem oil, custard apple seed oil , pongamia oil, ghana jeevamrutham, neem cake

**Contingency/relay cropping:** AFEC promoted contingency/relay cropping, in order to grow adequate nutritious fodder for cattle and small ruminants. This system is promoted when the main crop could not be sown in time or when it is harvested early. AFEC convinced shepherds and dairy farmers to sow a second crop for late rains as fodder crop. When the late rains were favourable, these farmers harvested both fodder and grains worth Rs 5000 to Rs 8000 per acre. The shepherds especially are leasing fallow lands and cultivating horse gram for grazing sheep.

**Managing moisture stress:** AFEC has developed and propagated moisture stress management technologies such as farm pond lining, mobile protective irrigation, row water sowing, millet crops and drought resistant seeds which are widely adopted by farmers across the district during the long dry spells. Some of them are up scaled by the Government across all districts.

**Collaboration with Rainfed Agricultural Research bodies:** AFEC is collaborating with the Regional Agricultural Research Station for developing and improvising suitable farm equipment for small and marginal farmers. The low-cost farm implements like cycle seeder cum weeder, auto sprayers, motor pump set, sprinkler and drip sets, Ananta Seed drill, mobile solar pump set, three-layer bags, tarpaulins etc. were introduced and distributed at subsidized cost to SMGs initially. Later they are made available for hire and sale through FPOs, which are helpful in saving costs in agriculture and also reduce the drudgery of work, especially for women farmers. The drought resilient seed varieties of rainfed crops developed by the research stations are promoted with farmers.

**Kitchen Gardens widely adopted:** It is observed that this is the least expensive and the most effective of all the agriculture interventions with 10,634 SMG members growing and consuming naturally grown fresh vegetables and fruits. Of them, 3200 gardens (30%) are maintained round the year and remaining 70% are maintained seasonally for 6 to 8 months in a year. About 50% of the vegetables are eaten at home for at least 3 days a week. The rest is sold or shared with neighbours and relatives. Income of up to Rs. 600-1000 per month was quoted by the women. The achievement against the plan is 106%. During the pandemic induced lockdown, when there was short supply, these families consumed and shared the fresh vegetables and fruits every day. This has built community bonding and enhanced the nutritional status of all.

**Natural farming and agro ecology models:** AFEC is promoting low-cost natural farming practices (*zero budget natural farming*) intensively by collaborating with Azim Premji Foundation, Rythu Sadhikara Samstha and some local NGOs. The farmers that we interacted with, expressed that they are preparing and applying Jeevamrutham (a bio-inoculant) for their crops and getting very good results. The concept of natural farming is gradually taking root and spreading among the farmers in the project area as well as across the district. AFEC is promoting some innovative agro-ecology models such as a) 5-layer cropping model with tree crops and annual crops, b) 365-days green cover models and c) agro-ecology landscape development through Farmer cooperatives. These models are promising and have potential to benefit farmers.

**Moving towards agro-ecology:** It is observed that AFEC is promoting a holistic concept of 'agro-ecology' with small farmers by combining drought mitigation technologies, sustainable agriculture, natural farming practices and farmers cooperatives. Such an agro-ecology farming paradigm is not only ecologically and economically sustainable but also has potential to contain the effects of climate change.

AFEC leadership played a key role in ensuring the setting up of the Millets Board by the Government to encourage farmers to plant and consume millets as part of drought mitigation measures as well as to improve nutrition levels.

Based on the 2<sup>nd</sup> Monitoring Survey, 88% of the sample women farmers have adopted 4 of the drought mitigation measures, 49% have adopted 5, 40% have adopted 6 and 12% have adopted all 7 drought mitigation measures introduced by AFEC.

#### 4.2.2 Outcome 2, Indicator 2.1

40% of farmers and farm labour (out of 15000 – 80% women) have reduced 15% costs in agriculture operations through reduced vertical dependence.

<b>Output description</b>	<b>Achieved</b>	<b>Percentage Achieved</b>
230 women karyakarthis acquired required knowledge and skills to facilitate CBOs and encourage farmers to adopt drought adaptation measures.	186 women karyakarthis have been trained on facilitating CBOs, including maintaining records, motivating farmers, etc. through 19 training programmes	81% of karyakarthis planned
800 SMGS and 230 GSMS comprising of 17000 households conduct monthly savings, credit and mutual cooperation regularly.	933 SMGs and 218 GSMS with 17,095 members	117% of SMGs planned 95% of GSMS planned 101% of households planned
600 CBO and FPO leaders (including 70% women members) participate in project planning, implementation and monitoring periodically.	620 leaders (90% women) actively participated in MSMS, ASMS & FPO meetings and monitoring visits.	103% achieved
Eight FPOs get working capital support for providing better services through Farmer shops, Custom Hiring Centres and other services.	Currently 9 FPOs are operational in the project area	100% achieved
Building public opinion among 10000 farmers (70% women) on drought adaptation measures, gender issues, women rights and related policy issues.	More than 10,000 women participated in events organised such as Women days, Combating drought Day, FPO Mahasabhas, etc.	100% achieved

The effective functioning of the SMGs, GSMS and the FPOs contribute to the reduced vertical dependency of the members. The table below give the detailed data about the SMGs:

	<b>Number</b>	<b>Percentage</b>
No. of villages	218	
No. of SMGs	933	
No. of members	17,095	
No. of women members	16,272	95%
No. of men members	823	5%

No. of SC members	5646	33%
No. of ST members	1211	7%
No. of BC members	9091	53%
No. of other members	1237	7%
Total money revolving as on 28/Feb/2023	Rs.11.66 crores	
No. of SMGs categorised as “A”	635	68%
No. of SMGs categorised as “B”	236	25%
No. of SMGs categorised as “C”	62	7%

The categorisation is done based on SMG norms, participation of members, social support and convergence of programmes with that of the Government and other organisations.

During the Women’s Day Celebrations, 961 women and 133 men (total 1094) attended in Kalyandurg, 833 women and 107 men (total 940) attended in Anantapuramu, and 147 women staff and 2 men staff participated in Atmakur. We saw the confidence with which women leaders spoke on the podium about girl child protection, supporting each other through crises and their promise to educate their daughters and ensure their employment. In the village meetings as well, women were able to explain each of the project activities in depth and with confidence. These are the results of the work of AFEC’s over several years and they continue to motivate and encourage the women members to become leaders.

**Key Finding:** Women members and especially women leaders, show a high level of self-confidence in their interactions. They demonstrate a deep understanding of the project activities and their rationale.

**Key Finding:** AFEC leadership has been motivating SMG members to work together and support each other in a humane way so as to go beyond merely the monetary.

#### Reducing vertical dependency

**Key Finding:** In the last two years, 60.3% of women farmers and 100% men farmers (total 62.5%) have taken loans from the SMGs for agricultural purposes. This contributes to the reduction in dependency on others in the social hierarchy and thereby reducing the vulnerability of the farmers. The table below gives the details of those who took loans:

Category	SC	ST	BC	Others	Total who took loans	Total Members
Women farmers with land	2661	874	4355	743	8633	14,313
Percentage	30.8%	10.1%	50.4%	8.6%	60.3%	
Women-headed households with land	142	33	214	47	436	702
Percentage	32.6%	7.6%	49.1%	10.8%	62.1%	
Men farmers with land	213	34	546	30	823	823
Percentage	25.9%	4.1%	66.3%	3.6%	100.0%	
<b>Total</b>	<b>3016</b>	<b>941</b>	<b>5115</b>	<b>820</b>	<b>9892</b>	<b>15,838</b>
Percentage	30.5%	9.5%	51.7%	8.3%	62.5%	

As part of the 2<sup>nd</sup> Monitoring Survey, a questionnaire was administered by AFEC, to 188 farmers from 47 SMGs in 47 villages to measure the cost reduction in agriculture operations

attributed to the project. 47 FGDs were done with 588 SMG members to cross-check the results. The table below gives the results:

Cost reduction	Year 1 (2021-22)		Year 2 (2022-23)	
	No of farmers	Achievement %	No of farmers	Achievement %
More than 15%	19	10%	80	43%
Between 10% and 15%	36	19%	61	32%
Below 15%	133	71%	47	25%
<b>Total</b>	<b>188</b>		<b>188</b>	

**Key Finding:** Due to CBO services, in 2021, 71% of the sample farmers had a cost reduction of 10%. In 2022, 43% of the sample farmers had a cost reduction of 15%.

**Key Finding:** The data collected shows that the average cost of cultivation per farmer in Kharif 2020 is Rs.75,083, while average cost reduction per farmer in Kharif 2021 Rs.5649 i.e., the savings in agriculture operations is 8%. During Kharif 2022, the average cost reduction per farmer is found as Rs.10,720 i.e., the saving in agriculture operations has increased to 15%. In 2022, 43% of the farmers had 15% cost reduction in agriculture operations due to reduced vertical dependence.

A total of 7551 SMG members (44%) are part of mutual co-operation groups. This helps them to save the cost of labour which is a saving on the amount of cash that is needed as working capital, further reducing their dependence on external inputs.

#### 4.2.3 Outcome 2, Indicator 2.2

75% rural youth (out of 8000 – 80% women) have additional monthly income of Rs.3000 to 6000.

Output description	Achieved	Percentage Achieved
2000 rural young men acquired employable skills and linked to employment/ self-employment	78 young women and 1443 young men (total 1521) have been part of the skill development programmes and linked to employment / self-employment <sup>6</sup>	72% of young men planned
6000 women get financial and technical support to take up off-farm & non-farm livelihood activities	4004 women have received assistance	67% of women planned

While Skill Development Programmes and the Alternate Livelihoods support for women are listed under the same Indicator in the SADLP, they are being reported separately, as the target group and the objectives of the interventions are different.

<sup>6</sup> Source: PME Unit; File name – AF Youth Resource Center – 2021-23.xlsx

a. Skill Development Programmes:

	Number	Percentage
Number of women who were trained	78	5%
Number of men who were trained	1443	95%
Total number who were trained	<b>1521</b>	
Number who belong to SC community	653	43%
Number who belong to ST community	92	6%
Number who belong to other communities	777	51%
Those who are currently employed by self or others	805	53%

In the period April 2021 to March 2023, 16 companies attended 33 job fairs in the Anantapur Company. The data on those who applied for and obtained jobs is given below:

	Number	Percentage of total
Number of women who attended	1347	48%
Number of men who attended	1446	52%
Total number who attended	<b>2793</b>	
Number of women who were given job offers	436	32%
Number of men who were given job offers	396	27%
Total number who got jobs	<b>832</b>	30%

The salaries earned by the recruited youth in Job fairs ranged from Rs 15,000 to Rs 30,000 per month.

In the 2<sup>nd</sup> Monitoring Survey, 102 (8%) of the AFYRC alumni were surveyed using a questionnaire to understand their status after completing the skill development programmes. The findings are given in the table below.

Alumni earning per month	Number	Percentage
Earning less than Rs.3000	2	2%
Earning between Rs.3000 and Rs.6000	12	12%
Earning Rs.6000 and above	88	86%
Total	<b>102</b>	

The Skill Development programmes are offered to young women and men who have some education and use the additional skills to access better jobs or start their own business.

**Key Finding:** The skill development programmes have changed the lives of 1075 young women and 2889 young men (total 3964).

**Key Finding:** The training programmes have been attended by 78 young women and 1443 young men (total 1521). Of them 53 young women and 1095 young men (total 1148) are currently in employment or are self-employed.

**Key Finding:** Job fairs and collaboration have attracted 1047 young women and 1446 young men (total 2493). Of them, 324 young women and 396 young men have been employed (total 720) through 33 job fairs where 16 employers were present.

**Key Finding:** In the sample, 86% of those who have been through the Skill Development programmes earn Rs.6000 and above per month while 12% earn between Rs.3000 and Rs.6000 per month.

### b. Alternate Livelihoods Project

**Key Finding:** The project is to be lauded for ensuring that all the landless women who are SMG members have received financial assistance for their livelihoods.

Category	SC	ST	BC	Others	Total who took loans	Total Members
Landless women	1320	186	1167	119	2792	2792
Percentage	47.3%	6.7%	41.8%	4.3%		
Landless women headed households	205	27	170	30	432	432
Percentage	47.5%	6.3%	39.4%	6.9%		
<b>Total</b>	<b>1525</b>	<b>213</b>	<b>1337</b>	<b>149</b>	<b>3224</b>	<b>3224</b>
Percentage	47.3%	6.6%	41.5%	4.6%		

**Key Finding:** Since April 2021, of the 129 women who head their households, who have received financial assistance for small businesses, 87 (67%) earn an additional Rs.3000 to Rs.6000 per month and 16% earn above Rs.6000 per month.

**Key Finding:** 2204 women have been given financial assistance as part of the Alternate Livelihoods Project between April 2021 and March 2023. Another 1800 women have been given financial assistance from ALP recovery amount through SMGs.

**Key Finding:** Of the 2191 women who have received financial assistance, for whom data was collected, 66% earn an additional Rs.3000 to Rs.6000 per month and 22% earn above Rs.6000 per month. (Appendix 5 – Some Examples of ALP Borrowers) (Appendix 6 - Detailed tables)

78% of the women received the assistance in the first round, 19% in the second round and 3% in the third round of the revolving fund.

The income of a sample of 205 women (10%) who received financial support for non-farm income generating activities was estimated during the 2<sup>nd</sup> Monitoring Survey. The findings are given in the table below:

Women earning per month	Number	Percentage
Earning between Rs.3000 and Rs.6000	172	84%
Earning Rs.6000 and above	33	16%
Total	<b>205</b>	

This is an additional source of income for these women.

The financial assistance is offered to women who mostly depend on labour work, single women, women with disabilities, etc. They are the most vulnerable amongst the SMG members. They start small businesses to diversify their income source and take up more dignified work.

### 4.3 Efficiency

The nature of the project does not involve supply of inputs or large investments on each farmer. It is more of a knowledge and technology dissemination project, with minimal incentives for adaptation of technologies. It is evident from the fact that the programme budget of SADL Project from BftW is Rs.7.81 crores covering 17,095 families directly, working out to

Rs.4569/- per family. Another 84,000 families who are living in the project villages are covered indirectly through the information dissemination activities and public campaigns.

The cost of cultivation is approximately Rs.25,000 per acre. Of this, the project contributes about Rs.1500 per acre through seeds, innovations and technical knowhow.

The budget for the project activities has been allocated under six heads - Promotion of CBOs, Public campaigns, Drought adaptive measures, Diversified / Alternate Livelihoods, Skill Training for Women, Business Promotion for Women - off-farm & non-farm livelihood activities for generating additional income. This allows the project to ensure efficient budgeting and spending on their outcomes and outputs as detailed in their proposal. The project has in place the necessary checks and balances to ensure that the co-ordination between the central office and field offices is efficient.

**Key Finding:** Of the total budget for the project direct activities in the field for the 3 years of Rs.21.2 crores, 59% has been spent so far. The remaining 41% will be spent in the final year when the tempo of work does tend to increase.

Supplementary projects such as the ALP, CNF, Value Addition through FPOs, have come in from other donors building on the grassroots presence, strong and active CBOs.

#### 4.3.1 Project Monitoring & Evaluation

The project monitoring system has its grounding in the records maintained at the SMG level by the karyakarthis with support from the field staff. In addition to the physical records, data is also collected using the mobile phone and consolidated at the Mandal office. This is then computerised as per the monitoring formats and shared with the Anantapur PME Unit where it is consolidated for the SADLP as a whole and against the planned outputs and outcomes. This is then shared with the core team, project committee, Mandal teams and CBOs. The process is transparent, and the data is accessible to all levels within the organisation.

A software package was to be created by an external consultant. However, their interest in the project petered out and now the data is maintained on Excel sheets.

At the beginning of each year, the targets for the year are broken down to each month, for each mandal, based on the relevance of the activity for the given time of the year. During the monthly meeting, at each level, a review is done of the work of the previous month, through both the quantitative and qualitative data. This helps in planning for the next month and helps the project to be on course. These meetings, conducted at cluster, Mandal and project level enhance the project efficiency.

Once a year, a Monitoring Survey is done with a sample of 837 farmers to capture the output and outcomes against the plan as given in the Strategy document. A baseline was established in April 2021 and the Monitoring Survey conducted in April 2022 and March 2023 to update the outputs and outcomes.

While a large amount of data is collected and collated, another layer of analysis would help the project to ensure the increased inclusion of the most vulnerable in terms of caste, class, gender, landholdings, etc.



### 4.3.2 Human Resources

The project currently has 115 staff members of whom 25 are women. The senior management team brings together several years of on-ground experience as well as leadership experience in sustainable agriculture, non-farm livelihoods, natural resource management, community organisation, institutions building, financial management and project management.

The table below gives the staff details for the project:

Staff details	No. of women	Percentage	No. of men	Percentage	Total
Senior level	1	8%	11	92%	12
Middle level	10	21%	37	79%	47
Grassroots level	10	20%	40	80%	50
Support staff	4	67%	2	33%	6
	25	22%	90	78%	115

As the project moves to working on development led by women, there is a need to increase the percentage of women staff from the current 22%, especially at the senior levels of the organisation.

In the period November 2022 to February 2023, 5 team members resigned from the SADLP while 10 team members were recruited. 53 capacity building programmes over 114 days covered 792 women and 1013 men (total 1805), both staff and SMG members. The training programmes covered Sustainable Agriculture, Capacity Building of CBOs and karyakarthis, FPOs and PPC, Alternate livelihoods, Monitoring and Evaluation.

All the staff we met, were open and transparent in responding to our questions and candid about their understanding and knowledge.

### 4.3.3 Active Women Workers

Each village has an active, educated woman karyakartha, (total 186) selected from among the SMG members of that village. This system came into place in 2021 to ensure that work with the women is also led by women as AFEC has seen a shift from working “for” women to development led by women. The karyakartha is selected by GSMS and given training inputs on the social and conceptual skills related to community organisation, bookkeeping, sustainable agriculture and livelihoods.

The karyakarthis are now playing a key role in facilitating the work of the SMGs in promoting sustainable agriculture and non-farm livelihoods and in accessing government programmes. They are the main actors in consolidation of women leadership, collective actions and building solidarity among women leaders.

Of the 186 karyakartha currently working, 65 are able to work independently, with minimal support from the field staff. AFEC is optimistic that this system will reduce field staff attrition and increase project efficiency.

## **4.4 Impact**

**Development Goal:** Small and marginal farmers, and farm labourers enhance their adaptability to droughts and reduce their vulnerability of livelihoods with improved gender equity and lead a life in dignity.

The impact of the project is derived from the outputs, outcomes and key findings listed in the sections above and reported against the stated Development Goal. The components are:

- Collectivisation of small and marginal farmers, and farm labourers
- Improved gender equity
- Life with dignity
- Enhanced adaptability to drought
- Reduced vulnerability of livelihoods
- Policy Advocacy

#### 4.4.1 Collectivisation of small and marginal farmers, and farm labourers - Strong, community-based organisations

The work done by AFEC over the years has resulted in 933 SMGs on the ground. Women, who form 95.4% of the membership, are able to collectively work for their common good. The self-confidence of the women is evident in the way that they participated actively in the Women's Day Celebrations and in the interactions with the evaluators at the village level. The women strongly identify with the SMGs.

AFEC are motivating people towards helping each other through their daily crises and problems in a humane way. Beyond savings and credits, the SMG members have taken up issues of drinking water, health emergencies of members, threats to girls, etc.

AFEC has designed its drought mitigation programme with a strong base of people's institutions and gradually built up their governance. Their strategies include innovation, investments, reviving traditional methods, using technology, necessary infrastructure and motivating communities to make more sustainable lifestyle choices.

#### 4.4.2 Improved gender equity

SMG members shared that their position in the family has improved as they bring in loans, relatively easily, to improve their livelihoods. They get more respect and a greater say in other decisions made by the family as well, such as choice of crops, sale of crops and health and education of the children.

The State Government has invited 5 women farmers as resource persons to present their learning and experiences at a State-Level conference and one of them has also presented to the Prime Minister virtually.

#### Women's Leadership

From the high level of participation in the ASMS meeting, the leadership of the women is evident. Women leaders spoke of the issues in their villages that need to be addressed in the coming years. They spoke of taking the lead in organising the International Women's Day celebrations in their villages. They also spoke of the many issues that they were able to solve at the village level by directly engaging with the department or organisation concerned. They take a lead in accessing government schemes for the women and for the village.

In the Women's Day Celebrations in Kalyandurg and Anantapur, the women leaders were vocal and active. At both events, there were more women wanting to share their experiences than time permitted. There is no hesitation or shyness to speak in front of the large audience which included women members from other mandals and invited eminent guests from Anantapur District.

#### 4.4.3 Life with dignity

##### Reaching the most vulnerable

AFEC are reaching the most vulnerable in terms of gender, caste and class by focussing on women, women-headed households, SC/ ST/ BC and the landless, small and marginal farmers. As against 14.3% SC and 3.8% ST population (2011 census) in Anantapur District, the percentage of SC members is 32.7 and that of ST members is 6.4. About 6.3% of the women members are women-headed households, who are amongst the most vulnerable in a community.

##### Dignity of women through improved economic status

The project is to be lauded for ensuring that all the landless women (2204 women) who are SMG members have received financial assistance for livelihoods on a priority basis. This has reduced their dependence on wage labour and increased their dignity and self-esteem.

#### 4.4.4 Adaptability to drought

##### Climate Resilience to address vulnerability of rainfed farmers in a drought prone district

The implementation of the Sustainable Agriculture programme is seen to be successful both on the ground and in influencing others at all levels, including State policy. 14,973 women farmers and 574 men farmers (total 15,547 farmers) have been through the awareness and training programmes for technical and practical knowhow on drought adaptive measures promoted by AFEC.

As part of the drought mitigation programme, AFEC has built up awareness about creating resilient production systems when a drought occurs. Through this, farmers are prepared, in a drought year, to use infrastructure facilities such as water tankers, protective irrigation measures, saving seeds, going in for crop diversity (e.g., mix of millets and groundnuts), agro-forestry, introducing perennial fruit species or trees, etc. This also contributes to an improved consumption of millets, pulses and vegetables.

The strength of the programme is also seen in the confidence with which the karyakarthas and women farmers are able to explain the processes and logic of each activity. One group of women farmers turned waste land into productive by following the advice of AFEC. They are able to explain the process of transformation, the indicators that measure their success and the economic benefits that accrued to them. Their confidence on making decisions about cropping, farming operations, harvesting and marketing is evident through the discussion.

#### 4.4.5 Reduced vulnerability of livelihoods

The skill development programmes contribute to reduced vulnerability of livelihoods by diversifying the livelihood options available. They have changed the lives of 1075 young women and 2889 young men (total 3964). The alumni of the Skill Development Programmes express a self-confidence that appears to have been built up during the programme. One set of alumni, the women auto drivers shared examples of instances where they have spoken to high level police officers, government officers and politicians.

The importance of professional networks, a social capital, for those who go for higher education or professional courses cannot be emphasised enough. Those who attend the Skill training programmes at the YRC are able to access such supportive networks due to efforts of the project.

Around 2200 women have been supported to ensure an additional source of income, with dignity, thus spreading the risk of their vulnerable livelihoods.

#### 4.4.6 Policy Advocacy

AFEC is influential in the district in terms of drought mitigation, sustainable agriculture especially natural farming, crop diversity. The focus of state supported drought mitigation projects, over the years, has been on green cover through plantations and improving the water table. However, the shift to a more wholistic approach is seen based on the work on the ground by AFEC and is being implemented across the state in drought prone areas.

AFEC is invited by the Government, at all levels, to provide advice and strategic guidance in policy formulation and implementation. AFEC closely work with the Regional Agriculture Research Station (RARS) and in convergence with government departments for inputs, infrastructure, information and policy advocacy (such as for setting up the Millets Board). This ensures that the activities are scaled up and continue in the long term. AFEC is successful in mobilizing resources from the Government which complements and creates synergic impact in the project villages.

AFEC was part of the implementation of Government projects such as Community Managed Seed System (CMSS), Andhra Pradesh Drought Mitigation Project (APDMP) and Andhra Pradesh Community Natural Farming (APCNF). It has been a member of Andhra Pradesh Government policy making bodies such as the State Water Conservation Mission, State Watershed Advisory Committee, State Water, Land and Trees Act Committee, State Commission on Farmers Welfare, State Agriculture Mission, etc. Thus, they have been able to influence policies on Protective Irrigation, Dry Land Horticulture, Millets Board, etc.

### **4.5 Sustainability**

#### 4.5.1 Community Based Organisations

Based on the village level interactions with CBO members and those at the Women's Day Celebrations in Kalyandurg, Anantapur and Atmakur, it is evident that the CBOs will continue to function with support from the members and facilitated by the karyakarthas. The members have a clear understanding about the processes for savings, selection of members to give loans and the repayment processes. The leadership is also strong to take up issues that come up in their communities. These inputs serve to enhance group cohesion and revive traditional practices such as mutual co-operation.

The isolation experienced during the pandemic has encouraged people to work together and helped AFEC to revive the concept of mutual co-operation groups. The SMG members were able to experience the positive aspects of this system including savings, sharing of vegetables and seeds from the kitchen garden in the last two years. It is likely to be adopted by others in the area and to grow.

The governance and functioning of the GSMS, MSMS and the ASMS will also need to be strengthened so that they are able to take a greater role in project planning, implementation and monitoring. They will also be able to ensure greater convergence with schemes from the Government and other organisations.

#### 4.5.2 Sustainable Agriculture Practices

Farmers understand the need for soil organic matter, soil microbes and soil moisture retention capacity in order to arrest and reverse soil degradation. As they experience the positive aspects

of natural farming, which are improved soil fertility, reduced input costs and improved productivity, they are likely to continue with the practices. They also see that the produce is nutritious and chemical free, ensuring better health in their families. The technology and the practices are cost-effective. So, the farmers would sustain them. Natural farming processes integrate the waste generated by livestock thus utilising resources readily available to farmers.

Instead of burning crop waste, they are able to use it as mulching material, which in turn leads to better soil and higher productivity. The practical benefits of each activity such as kitchen garden, with minimal additional effort, leading to better nutrition for their family and an added income is the factor that will motivate the farmers to continue with the activity. As more farmers move to millets and pulses based mixed crops and kitchen gardens, there is likely to be a change in eating habits and nutritional status, ensuring that these changes continue in the future.

Working with the Regional Agriculture Research Station (RARS) for weather predictions and introduction of drought resilient crop seeds to farmers played an important role in bringing crop diversity in large areas. Convergence with government departments for inputs, infrastructure, information and policy advocacy (such as for setting up the Millets Board) ensures that the activities continue in the long term.

Women farmers spoke at the meetings with conviction, understanding and knowledge about natural and organic farming practices whether it be about the 365-day green cover (Nithya Haritha Sedyam) or about agro forestry or contingency and relay crops. Farmers such as Unnoramma from Durdakonta are able to motivate other farmers, have been called as resource persons by agricultural institutions and had even spoken to the Prime Minister online.

The FPO shops procure farm inputs and implements at bulk prices and are able to sell it to the farmers at a cost lower than of other shops. These shops also stock natural fertilisers and pesticides, motivating farmers to try natural farming. If the FPO shops are run as a business with the inherent subsidies tapering off over time, they will continue for as long as the farmers need them.

The cycle weeder was introduced by AFEC and distributed free to some SMG members initially. The ARS has taken up the design and it is now available and used widely.

The impact of climate change and its changing face will necessitate further adaptation techniques to be developed in drought prone semi-arid areas. This will need to be done by farmers' organisations along with scientists, NGOs and the Government.

#### 4.5.3 Alternate livelihood options

The use of the cell phone for the mobilisation of trainees, the training programmes themselves, the job placements and follow-up through forming groups and connecting with them on a daily basis will ensure that those networks continue to function to provide support to the alumni.

The group members have carefully given loans to a range of businesses. They understand, for example, that there cannot be more than x number of women who can be given loans to start a sari business. If that critical number is exceeded, then all the women stand to lose as they will not even reach break-even. This was explained to the evaluator in several SMGs. Members are aware of the basic concepts of business, which will help them in future decisions as well.

## Chapter 5 - Recommendations

- Strengthen CBOs and Women Leaders: The SMG members are active and identify strongly with the SMGs. Over the next few years, the members should have a similar level of understanding, functioning and comfort with the GSMS, MSMS and the ASMS. The capacities of the women leaders will need to be built up so that they are able to take the vision of the collectives forward.
- Financial assistance to members: As the loan amounts increase based on need, women need to be made aware of their increased responsibility while taking loans from the SMGs, especially for consumption purposes. The total loan repayment that a family makes to all sources should ideally not exceed half the monthly income of the family i.e., if the average monthly income is Rs.10,000/- to Rs.12,000/-, monthly repayments to all sources should be in the range of Rs.5000/- to Rs.6000/-<sup>7</sup>.
- Nurture FPOs as business entities: Running the FPOs, value addition to the product and marketing, at scale, needs a set of business skills which is different from the work currently being done by AFEC. Key staff should be able to focus on both “social” and “enterprise” aspects while running the FPOs. This should also apply to the FPO outlets and the NPM shops, whose services need to be widened. To maximise prices for organic produce, appropriate value chains need to be set up. For women to become legal members of FPOs, families should be encouraged to register land jointly in the names of women.
- Promote Circular Economy: The FPO outlets should also sell the produce that they procure (millets, pulses, groundnuts, etc.), in the villages where they are situated and thereby create a circular economy. There are an additional 84,000 families in these villages who are potential customers. The FPO outlets and NPM shops will also become centres for exchange of local seeds amongst the members.
- Promote innovative models in Natural Farming: Agro-ecology innovations such as agro-forestry, 5-layer crop models, integrating food crops in tree crops, landscape agro-ecology models, 365-days green cover models along with natural farming should be integrated and tailored based on needs of the farmers and further expanded to cover more farmers and areas. These models have good potential to enrich soil resources, agro-biodiversity, climate resilience, food and nutritional security besides providing assured incomes to the small farmers.
- Need of robust enabling eco-system for input supply and marketing for natural farmers: Farmers are shifting to Natural Farming practices as recommended by the organisation. However, lack of ready-made availability of inputs required for Natural Farming is slowing down the process of adoption. The services of NPM shops or Bio-resource centres need to be expanded and strengthened. They can be centres for exchange of local seeds amongst the members. Also, it is essential to build market linkages for natural farm produce, so that they realise better price.

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<sup>7</sup> [https://www.rbi.org.in/Scripts/BS\\_ViewMasDirections.aspx?id=12256](https://www.rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=12256) – These guidelines came about because of the distress seen when women are members of several SHGs and take multiple loans. One of the principles of responsible lending is to prevent over indebtedness of borrowers.

- Need of capacity building on Natural Farming and Agro-ecology: There is a deficit of trained staff on natural farming and agro-ecology, not only in AFEC but in other NGOs too. AFEC can focus on building trained human resources in natural farming and agro-ecology models. Newly recruited agriculture graduates too need intensive trainings for a length of time to get equipped. There is a need for special training on climate resilient production systems and ecological consciousness to interested farmers for confidently adopting agro-ecology models with natural farming practices.
- Capacity building on Business skills: Systematic capacity building needs to be taken up for all those who want to run a business – SMG members who take loans to start or expand a business, Skill Development Programme alumni who start their own business, those who are involved in FPOs, run FPO and NPM outlets, etc. Some inputs in terms of Income & Expenditure analysis, calculating working capital, maintaining basic accounts, etc. will help the members become better at business decisions.
- Actively Encourage Women entrepreneurs: In any population, about 20% are termed as innovators and are quick to grasp new ideas and concepts. They are the entrepreneurs who are willing to take risks and come forward to take loans in the groups. Another 20% of the population are “early adopters”. Once they see the positive results from the innovators, they are then ready to set up small enterprises themselves. Thus, the audience for business or alternative livelihood loans are these 40% of the groups. (other than traditional work such as agriculture, livestock, horticulture, etc.) Women can be encouraged to set up small businesses in non-traditional areas, as well as FPO outlets, NPM, etc. A separate group should be formed for the entrepreneurs in the groups so that their need for practical inputs can be met.
- Skill Development Programmes for young women and girls: Skill development programmes should be created for women including non-traditional livelihoods such as auto driving, driving LMV, repairing home appliances and cell phones, etc. Given the increase in use of cell phones for both communication and information, during the pandemic, women members should be trained in using it to its potential (to subscribe for weather updates, market rates for produce, etc.)
- Nurture growth of Karyakarthis: It is universally seen, that in an effort to include more women, they are often brought in at the lowest rung of the organisation at terms that are not entirely favourable to them. Care should be taken by AFEC to ensure that this does not happen while creating a cadre of karyakarthis. To ensure transparency, the policies specific to karyakarthis should be spelt out clearly with the rationale. While all the karyakarthis are women, there need to be more women at all levels to ensure development led by women. The organisational policies need to be adapted so as to be more conducive for women to be recruited and retained.
- Measuring the work: To address the intertwined and deep-rooted issues in the project area, a complex and nuanced programme has been designed and implemented. The measurement of such work needs to be equally nuanced, using both quantitative and qualitative indicators. For example, the implementation of the project is based on strong CBOs. It is important to define this, both through the numbers, as well as the processes that result in strong CBOs. We recommend a workshop before the next strategy is finalised, with senior team members and PME experts to rework the indicators so as to be able to capture the project outcomes and impact from a broader perspective.

- Share the learning: AFEC has worked consistently on Sustainable Agriculture and Diversified Livelihoods, since 2007. It is not common for an NGO to receive support to work on an issue for this period of time (even though it takes that time for change to take place). AFEC should now document the process of implementing, learning, making course corrections and moving forward. This will capture the changes in the communities as well as chart the progress of an established organisation that has been pathbreaking and influential in many ways.



## Chapter 6 - General Conclusions

The SADLP is a rare example of a project that has been strategically designed to address all aspects of a drought mitigation strategy, and then implemented from 2007 systematically through its strong foundation of community based organisations. The donor, BftW, deserves credit for supporting AFEC through this period to ensure lasting change in the lives of communities dependent on rainfed agriculture in a drought prone area in times of climate change.

The three main components on any drought mitigation strategy are sustainable agriculture, diversified livelihoods and conserving rainfall. AFEC works on all three components in an integrated manner through SADLP and other projects such as the watershed projects, etc. The belief of the communities in AFEC, as well as that of other stakeholders such as the Government, other NGOs, research institutions, etc. points to the quality of the work done by AFEC. There is much to learn from the way AFEC has strategized, implemented and learnt from its work over the years.

AFEC has received several awards for its work. Amongst the recent ones are:

- Dr.Y.V.Malla Reddy, Director, AFEC, Anantapur received Dr.I.V.Subba Rao Rythu Nestham Award from the Vice-President of India, Mr.M.Venkaiah Naidu organised by the Muppavarapu Foundation and Rythu Nestham, in 2021
- The Andhra Pradesh State Bio-Diversity Board gave the Andhra Pradesh State Bio-Diversity Conservation Award to AFEC in 2021
- Federation of Indian Chambers of Commerce and Industry gave the award for “Best Outstanding Sustainable Agriculture Development Programme” to AFEC in November 2022

## **List of Appendices**

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## Appendix 1 - Terms of Reference for External Evaluation

**Project:** Promotion of sustainable agriculture & diversified livelihoods in Anantapur District.

**Project Period:** 01.04.2021 to 31.03.2024

**Project Number:** N-IND-2021-0142

**Finance Partner:** Bread for the World, Germany

### External Evaluation Commissioned by:

Accion Fraterna Ecology Centre,

Upparapalli Road,

Anantapur – 515 002

Andhra Pradesh

### 1. Introduction of Organisation and the Project:

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#### 1.1 Accion Fraterna Ecology Centre (AF EC)

Accion Fraterna Ecology Centre is an NGO working on strengthening rural livelihoods and conserving ecology since 40 years in drought prone district of Anantapuramu in Andhra Pradesh state. AF EC is currently implementing multiple projects related to sustainable agriculture, natural farming, agro-forestry, rural livelihoods and watershed development benefitting more than 30,000 households of rainfed farmers and farm labourers.

AF EC implemented largest participatory Watershed Development programme, from 1986 to 2006, spread over 300 villages in Anantapur District covering 60,000 farmer families treating 135,000 ha of degraded land. In the year 2006, the Government of India has extended National Rural Employment Guarantee Scheme (NREGS) to all the villages in the district. Hence to avoid duplication, since 2007, AF EC shifted its primary focus to promoting sustainable agriculture and diversified livelihoods.

Please visit our website [www.af-ecologycentre.org](http://www.af-ecologycentre.org) for more information.

#### 1.2 Sustainable Agriculture and Diversified Livelihoods Programme (SADLP)

SADLP is funded by Bread for the World (BftW), Germany. The programme is being implemented in 3 year phases. The first phase was implemented from 01.04.2015 to 31.03.2018 and the second phase from 01.04.2018 to 31.03.2021. Currently the programme is in its third phase from 01.04.2021 to 31.04.2024.

SADLP works directly with approximately 18,000 households of small & marginal farmers and farm labour which are organized into approximately 900 Sasya Mitra Groups (SMGs) in 230 villages in 8 mandals of Anantapuramu District. The programme focuses on **reducing drought and climate vulnerability** and **enhancing livelihood security** for its target groups through promoting sustainable agriculture and diversifying their income sources.

SADLP is the core programme of AF EC. It acts as a hub for attracting other short projects that are complimentary and supplementary to its objectives. *Alternate Livelihoods Project*, funded by Mrs. Anupama Nadella from USA, provides financial assistance to members of Sasya Mitra Groups for strengthening livelihoods is an integral part of SADLP 3rd phase. Also, *Community Natural Farming Project*, funded by Azim Premji Foundation, which promotes natural farming in 35 SADLP villages is also part of SADLP, 3rd phase. Another project that is complimentary to SADLP is *Agri Value Chain Development* financed by ICRISAT, which is enhancing market gains for farmers through value addition.

AF EC has been commissioning external evaluation once in every three years. As per the contract with the financing partner BftW, an evaluation is obligatory for SADLP for each period of funding (i.e., 3 years). The last one, for the project phase 2015 to 2018, was done in April 2017 by Ms. Kavitha Kuruganti, an expert on sustainable agriculture & rural livelihoods. The external evaluation for the second phase 2018-2021 could not be conducted due to Covid-19 lock down.

The proposed external evaluation for SADLP, planned in February and March 2023, is in accordance with the project contract and covers the 3rd project phase (2021 – 2024).

## **2. Cause and objective of the evaluation**

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### **2.1 Causes for Evaluation:**

AF EC understands that promoting sustainable agriculture and securing livelihoods is a very challenging and long-term process given the harsh agro-climatic conditions and backwardness of Anantapuramu District. The climate change is worsening the problem of vulnerability to drought caused by low and uncertain monsoon conditions. It invariably involves promoting Drought mitigation and Climate Resilience in Rainfed Agriculture as well as creating supplementary income opportunities in order to achieve a degree of livelihood security. This kind of work at this magnitude has been rarely attempted by any NGO and so there are hardly any proven strategies and recipes available to be replicated. A deeper understanding of the local agro-climatic and socio-economic conditions as well as historical perspective is essential. It calls for a continuous research, experimentation and action-reflection-learning process combining indigenous knowledge, wisdom of farmers and latest scientific innovations.

AF EC has made a substantial contribution in this direction through experimentation and participatory research with farmers on various technologies and practices related to drought mitigation, climate resilient agriculture, natural farming and improving rural livelihoods. These were done in participatory manner through community institutions led by women.

AF EC has organised and facilitated a strong community based institutional system of Sasya Mitra Groups, their federations and Farmer Producer Organisations (FPOs). It trained, campaigned, demonstrated and introduced drought mitigation and climate resilient cropping designs and practices with farmers. It raised awareness and voiced the issues of rainfed agriculture, drought, desertification, groundwater depletion and gender among the public and

Government authorities. Public opinion was mobilised effectively and lobbied for favourable policy environment for rainfed agriculture & rural livelihoods. In the process, AF EC has been on its toes, constantly learning and adapting itself to changing scenarios.

## 2.2 Objectives of the External Evaluation:

Now AF EC commissions an external evaluation of SADL project in order to assess its relevance, effectiveness, efficiency, impact and sustainability. The proposed evaluation is expected to do an outcome and impact chain assessment and evaluate whether the strategies and activities are effectively and efficiently leading to desired outcomes. The results of the evaluation will contribute to the learning and improves performance of the project and the organization.

### The specific objectives of the evaluation are to:

1. Evaluate the project design including its objectives. Review the approach and design implemented in achieving the project outcomes.
2. Assess factors (in design and implementation) that have contributed to or impeded achievement of outcomes.
3. Assess the appropriateness and effectiveness of the project management processes followed.
4. Assess the peoples institutions (SMGs, their federations and FPOs) and their participation in the programme
5. Examine the relevance, efficiency, effectiveness, impacts and sustainability of the project
6. Provide actionable and strategic recommendations and lessons from the findings to improve the implementation.

The approved objectives & indicators of SADLP, 3<sup>rd</sup> phase (2021-2024):

Project Objective(s)	Indicator(s)
Objective 1: In 230 villages of Anantapur District the vulnerability to drought is reduced.	Indicator 1. 1 60% of small/marginal rainfed farmers (out of 15000 farmers - 80% women) have adopted atleast 4 drought mitigation measures (out of 7 introduced by the project) reducing their vulnerability to drought.
Objective 2: In 230 villages of Anantapur District the livelihood security is improved.	Indicator 2.1 40% of farmers and farm labour (out of 15000 - 80% women) have reduced 15% costs in agriculture operations through reduced vertical dependence.
	Indicator 2.2 75% (out of 8000 rural youth – 80 % women) have additional monthly income of Rs 3000 to 6000.

### 3. Key questions & Scope

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The evaluation follows OECD-DAC standards and thus is expected to answer the following questions.

#### 3.1 *Relevance*

- a) To what extent are the problems identified still valid and relevant? Have there been any major developments in the socio-political or socio-economical context affecting the projects' relevance?
- b) To what extent are the objectives, planned activities and planned outputs still valid to achieve the intended outcome and impact? Are there changes between the time when the project was designed and today?
- c) Do the projects' achievements among the target communities align with the outcomes outlined in the project proposals and project reports?
- d) How well did the project interventions reflect the needs of their respective target groups? How far is the target group appropriate in relation to the problem analysis and objectives? Are the activities adequate to achieve the project objectives?
- e) Do the indicators specified in the project proposal prove to be relevant for the measurability of the outcomes in the evaluation? Would other/additional indicators have been better to measure the projects' outcome?
- f) Were synergies as well as strategic and thematic alliances between the AF EC and other stakeholders in the area established? How can these be strengthened and used more in the future?
- g) How successfully did the project respond to gender-specific aspects in the target region?
- h) What are the recent trends/changes observed in local climatic conditions? Have they affected the agriculture and rural livelihoods?
- i) Does the project remain relevant in building the community resilience to climate change like improving food security and creating resilient livelihoods?

#### 3.2 *Effectiveness*

- a) What were the outcomes of the project? To what extent were the intended outcomes (use of outputs and outcomes) achieved?
- b) To what extent did the project generate unintended (positive or negative) outcomes? What outcomes are yet to be achieved or have been under-achieved?
- c) To what extent are there any early indications of changes in the lives and the future prospects for the target groups in terms of livelihood security and reduced vulnerability? To what extent were the target groups reached?
- d) What has been the effectiveness of providing inputs and support and capacity development / skill building for improved livelihoods?
- j) To what extent are the project interventions effective in bringing in climate adaptability among target groups? How successfully did the project respond to climate change issues in the region?

- e) Identify effectiveness of climate adaptive technologies/interventions toward reducing vulnerabilities of the target groups highlighting women
- f) What were the factors that supported or impeded the success of this project? – analyse from the perspective of the community, local Government and other stakeholders
- g) Is the project monitoring effective? How has it improved the implementation?

### ***3.3 Efficiency***

- a) To what extent are the projects interventions been executed in an efficient manner? Were the projects objectives / targets achieved on time? Were the indicator targets realistic given the scale of operations?
- b) To what extent has the project been cost-effective? What has been the project's value for money? Do the overall results justify the costs?
- c) Did the project track and monitor outputs and outcomes in a credible, systematic manner? If yes, how? If no, why?
- d) What mechanisms (formal or informal) had been put into practice to capture and use outputs, outcomes, experiences and lessons (allowing for adaptive management/plan adjustments)?

### ***3.4 Impact***

- a) Is the project contributing to the attainment of overall development goals?
- b) Is the project contributing to attain intended primary and secondary objectives?
- c) Are the project interventions adopted and upscaled by other agencies?
- d) Are the project outcomes addressing the core problem of livelihood vulnerability?
- e) Are the project outcomes addressing the climate issues in the region?
- f) Any unintended positive and negative changes occurred?

### ***3.5 Sustainability***

- a) To what extent are the effects, outcome and impacts, achievements or changes brought by the project likely to continue after the project?
- b) What are the main factors that promoted the sustainability of outcomes of the project?
- c) What are the main factors that reduced the sustainability of outcomes of the project?
- d) What measures have been implemented in order to support post project sustainability?
- e) How do peoples institutions at Village, Mandal & Project level enhance sustainability?
- f) What were the missed opportunities? How can the project address gaps in the remaining year(s)?
- g) Has there been any change in the enabling environment during the implementation?
- h) What are the recommendations and lessons learned that can be applied to improve outcomes for the next phase of programme?

### **3.6 Scope of Evaluation:**

The evaluation has to assess the progress achieved in the following key components in the project area of 230 villages:

1. Functioning of community institutions and their participation in the project.
2. Women leadership, gender and social inclusion in community institutions.
3. Change in awareness, knowledge, skills and practices adopted among target groups
4. Adaption of the drought mitigation and climate resilient technologies and practices by Rainfed farmers
5. Sustainable Agriculture interventions both in Rainfed and Irrigated Agriculture.
6. Alternate/additional livelihoods and income generation initiatives.
7. Networking, mobilizing public opinion and policy advocacy.
8. *Cross cutting themes*: Gender equality, Social equity and Environmental sensitivity.

#### **4. Evaluation design/methods**

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The External Evaluation follows the OECD-DAC standards which include a) impartiality & independence b) usefulness c) viability d) fairness e) precision of the data f) competent Evaluators and g) stakeholder participation.

The Evaluator is expected to adopt a participatory approach in evaluating the project providing for active and meaningful involvement of personnel, beneficiaries and other stakeholders. Stakeholder participation is to be an integral component of design, planning, data collection, data analysis and development of findings and recommendations.

#### **5. Process of the evaluation & time frame**

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The process of evaluation and scope of work includes the following:

- Finalise and sign the ToR with specific roles and responsibilities of each Evaluator along with detailed timetable.
- Study and Review project related all documents such as project application, reports, budgets, baseline study, operation plans, annual reports, website etc.
- Participate in the planning meeting at the beginning of the study with relevant stakeholders and finalize evaluation design, methodology, sampling and timelines.
- Submit an inception report that captures the evaluation design and methodology and provides an outline of the final report.
- Discussions/interviews with management, board members and key staff to receive detailed briefing including clarification of all issues deemed necessary before start of the fieldwork and obtain necessary data and information.
- Develop qualitative and quantitative data collection tools including the guidelines and train the data collectors. Collect data ensuring the quality.
- Meetings/interviews with beneficiaries, community organisations, other institutions and Government functionaries to get relevant information.



- Analyze both qualitative and quantitative data using appropriate software, interpret and draw conclusions.
- Prepare and present the draft evaluation report with findings, suggestions and recommendations to the project team for feedback.
- Prepare final report based on feedback and submit to AF EC and BftW.

The Project Evaluation would be carried in the months of February and March 2023. The draft or interim report will be shared to AF EC in last week of March 2023. The final report will be shared latest by 15th April 2023.

**The tentative time frame of evaluation will be as follows:**

<b>Tasks</b>	<b>To be completed by (Date)</b>	<b>Evaluators work (No of days)</b>
Call bids online	26.01.2023	-
Obtaining Offers / Bids	10.02.2023	-
Selection of Evaluators (in consultation with BftW)	20.02.2023	-
Sign the assignment contracts (agreeing on the timelines)	25.02.2023	-
Preparatory work, study literature; Prepare and share a draft inception report	01.03.2023	4 days
Kick-off meeting; Presentation of inception report & Finalizing the work plan with methodology	03.03.2023	1 day
Field work / Data collection / Travel Debriefing after completion of field work	20.03.2023	8 days
Analysis and Preparation of draft report	25.03.2023	3 days
Presentation of draft report	27.03.2023	1 day
Preparation and submission of final report – within two weeks after receipt of comments from AF EC	15.04.2023	3 days
		<b>20 days</b>

**6. Expected products**

A final report will be produced latest by 15, April 2023. One copy of the final report each will be submitted to the project partners AF Ecology Centre and Bread for the World. The report shall be written in English. The sample structure of the final report is enclosed in Annexure.

**7. Key qualifications of the evaluators**

The evaluation will be carried out by a team of *two senior consultants* who have experience in conducting evaluations of similar projects and have a proven performance record.

One of them will be an expert on Community Organisations, Gender and rural livelihoods, especially off-farm & non-farm livelihoods.

Another evaluator will be an expert on drought mitigation, climate change adaptation, sustainable agriculture and natural farming, particularly in drought prone areas.

Atleast one of them should have knowledge of Telugu language and have understanding on the context of Anantapuramu district.

They both will work as a team with one of them as team leader. They share work among themselves with defined roles and responsibilities and have a timetable with each single step until handing in of the final report. The team leader be responsible for overall coordination and timely submission of the final report.

AFEC and BftW together will select the evaluators for the assignment from the list of applied consultants.

## 8. Content of the evaluator's offer

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Interested consultants are requested to submit their bid for the evaluation through email with the following documents:

1. Detailed and updated CV of evaluator (Share some previous evaluation reports)
2. A one page note on their area of expertise and eligibility
3. Are the indicated timelines more or less acceptable?
4. Willing to work as team leader?
5. Provide complete cost estimate with breakup

The bids/quotes should be sent to email: [mallareddy@accionfraterna.org](mailto:mallareddy@accionfraterna.org) with a copy to [brahmesh@accionfraterna.org](mailto:brahmesh@accionfraterna.org) before 5pm on 10.02.2023.

For further queries, please call: Brahmeswar Rao, Team leader, Planning, Monitoring and Evaluation on 9390506020.

**Annexure:** The sample structure of the final report.

### Sample structure for the evaluation report

The points set below are the minimum components of an evaluation report; cross-cutting issues should be taken into account where practicable

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#### Cover sheet with

- Project title
- Project number
- Implementing organisation
- Evaluator (author)

- Report date
  - Region/country
  - Possibly project period
- 

## **Table of contents**

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### **List of abbreviations**

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#### **Summary**

- Short presentation of the subject matter of the evaluation, possibly including key framework conditions
  - Brief information on the evaluation: Cause and objective, assessment period
  - Key findings
  - Key recommendations
- 

#### **1. Short description of the subject matter of the evaluation**

- Project/programme/instrument (idea, target group, formulated objectives)
  - Implementing organisation, term, donors
- 

#### **2. Framework conditions (only as far as relevant to the subject matter of the evaluation)**

- Political, economic, ecological, societal and socio-cultural factors
  - Risks to project success, assumptions/prerequisites
  - Relevant activities of other organisations/private-sector companies
  - Role of government actors
- 

#### **3. Description of the evaluation and the methodology used**

- Timing of the evaluation within the course of the project
  - Composition/expertise of the evaluation team
  - Methodology
  - Groups of people involved, number of participants
  - Potential difficulties in conducting the evaluation and how to deal with them
- 

#### **4. Results**

- 4.1 Relevance
  - 4.2 Effectiveness
  - 4.3 Efficiency
  - 4.4 Impact
  - 4.5 Sustainability
- 

#### **5. Recommendations (based on findings, realistic, specific and addressed)**

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#### **6. potentially: General conclusions (lessons learned)**

- for the project type (including exemplary nature)
  - regarding the procedures and instruments
- 

#### **7. Appendix**

- Travel and working procedure
- Sources (discussion partners, documents, specialist literature, field research etc.)
- Overview chart/map
- Terms of Reference

## Appendix 2 - Schedule of Visits

Date	Activity	Place
09.03.2023	<ul style="list-style-type: none"> <li>• Women's Day celebration at Kalyandurg</li> <li>• Meeting with women leaders</li> <li>• Planning field visits with the core team</li> </ul>	Kalyandurg
10.03.2023	<ul style="list-style-type: none"> <li>• Visit AF Youth Resource Centre &amp; interact with Muthoot Finance, an employer</li> <li>• Women's Day celebration at Anantapur</li> <li>• meeting with women leaders</li> <li>• Visit to Ryuthu Neshtam Food Processing Centre, Muddalapuram, Kuderu Mandal</li> <li>• NHS Plot, Jayapuram village, Kuderu Mandal</li> <li>• SMG meeting, Kalagalla village, Kuderu Mandal</li> </ul>	Anantapur and Kuderu Mandal

Two teams were formed for further field visits, one for each evaluator.

**Team 1 Evaluator** – Ms.Gouthami

**Theme:** Institutions, Gender, Skill building, Alternate livelihoods

**Team members to accompany:** Ms.Rizwana, Bhaskar Babu and Shankar Naik

Date	Activity	Place	Team members
11.03.2023	Alternate Livelihoods Mutual Cooperation Village Records SMG & GSMS & FPO	Settur Mandal Mucharlapalli Kanukooru Parlachedu	Rizwana Shankar Naik Jana Ramesh, MTL
12.03.2023	Alternate Livelihoods Covid Relief Contingency crops Best SMG Farmer Shop	Dharmavaram Mandal Nimmalagunta Pothukunta Dharmapuri	Rizwana Shankar Naik Bhaskar Babu Ramesh, MTL
13.03.2023	Livelihood training beneficiaries Alternate Livelihoods Village Records	Atmakur Mandal V E Thanda P Yaleru + Siddharamapuram Beluguppa Mandal Gangavaram	Rizwana Bhaskar Babu Shankar Naik Ramanjaneyulu, MTL Atmakur Obulapathy, MTL Beluguppa
14.03.2023	Staff and Karyakartha Women's Day Celebration	Atmakur	Rizwana
15.03.2023	AF Youth Centre Alumni meeting Current programme participants	Anantapur	Siva Shankar

	Meeting with alumni at their work place Meeting with project core team		
13.04.2023	SMGs, GSMS, Women Leaders	Gotukuru Karutlapalli Atmakur Y.Kothapalli Thopudurthi	Bhaskar Babu Rudraiah
14.04.2023	SMGs	Subbaraopeta Marur	Bhaskar Babu Rudraiah
15.04.2023	ASMS Meeting	Anantapur	

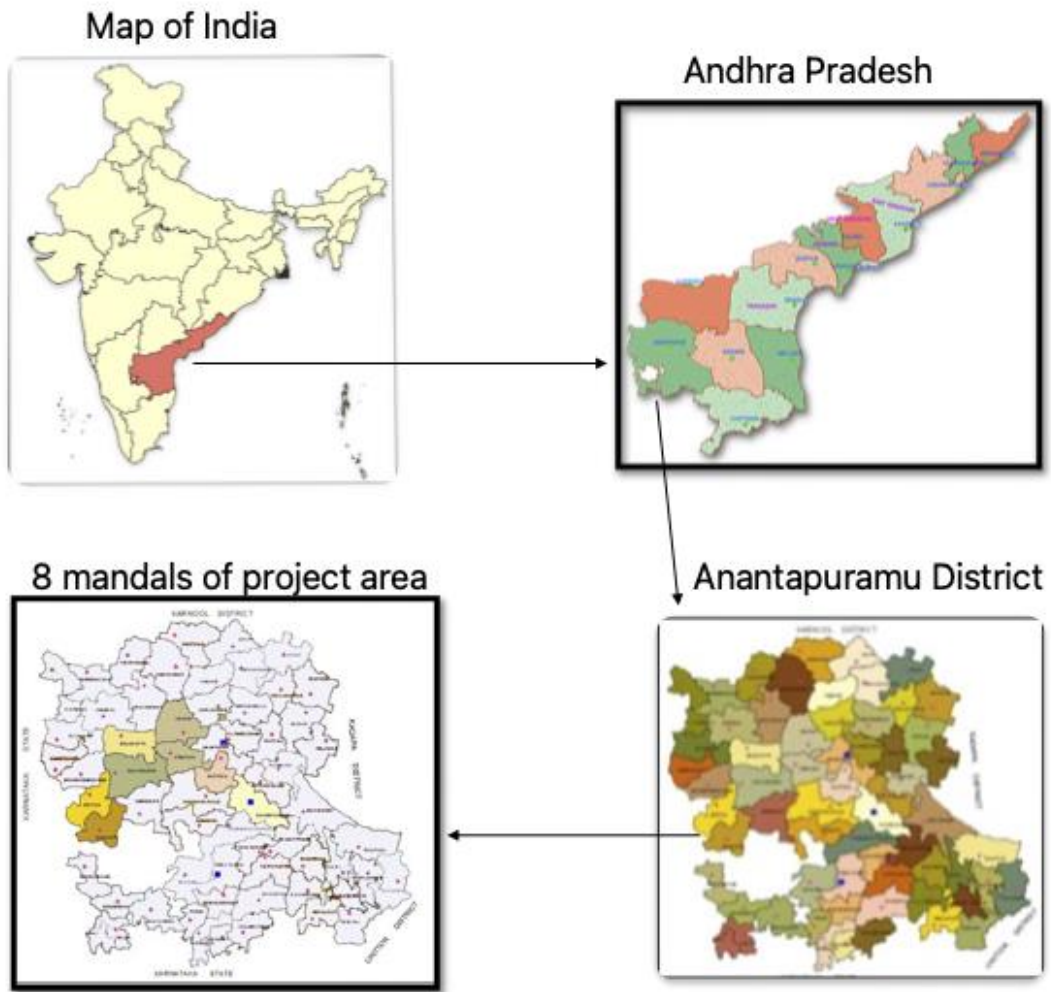
**Team 2 Evaluator** – Ms.Padma Koppula

**Theme:** Sustainable Agriculture, Natural Farming, Agro ecology and Watersheds

**Team members:** Rudraiah, Veera Bhadra Reddy, Khaleel and Yerriswamy Reddy

<b>Date</b>	<b>Program / Activity</b>	<b>Place</b>	<b>Team members</b>
11.03.2023	100% NF village - Thammayadoddi Agro ecology block- Apilepalli NABARD Watershed works NPM Shop	Kundurpi & Settur Mandals	Khaleel / Brahmesh Veerbhadra Reddy Yerriswamy Reddy MTLs
12.03.2023	SA activities 5-layer models NHS plots Interaction with Natural Farmers	Rapthadu Mandal	Rudraiah Veerabhadra Reddy MTLs
13.03.2023	Visit to ARS, Rekulakunta Meet CCD, Natraj Watershed Impact – Battuvanipalli Vannuramma plot – Durdakunta	Kalyandurg Mandal	Rudraiah Veerabhadra Reddy MTLs
14.03.2023	Staff and KK Women's day	Atmakur	Rizwana

### Appendix 3 - Locating the project area on the Map



## Appendix 4 - Checklists used

### Checklist for groups, external stakeholders – SMG, GSMS, MSMS, FPO

1. Problem analysis – is there a change post pandemic?
2. Suggested interventions
3. Areas of strength of AFEC
4. Any suggestions for AFEC

### **Farmers Field Schools**

#### Check list

1. No of villages covered, area, farmers F/M covered, crops practiced for FFS season and master trainers
2. Who conducts the FFS/ are they trained/ local farmers
3. On farm demonstration/ area in acres/ crops/ practices followed
4. Course design/ material/ sessions customised as per the requirement
5. ESA conducted to assess the training requirements
6. FFS conducted weekly, fortnight, monthly
7. Land Preparation identified gaps rectified and practiced
8. Sowing identified gaps rectified and practiced
9. Weeding operations gaps identified and practiced
10. Fertilizers and pesticide application gaps identified and rectified
11. Harvesting
12. Post harvesting practices/ precautions/ drying/ grading/ sorting/ filling bags/ storing
13. Crop residual burnt/ used for mulching
14. Marketing linkage
15. Field day conducted
16. Records maintained
17. What are the observations while practicing FFS in the field, ploughing, sowing, weeding, fertilizer and pesticide application, any improvement
18. Production - yield improved/ labour reduced/ cost reduced/ quality production
19. The neighbouring farmers have been influenced by the practice and did they practice
20. Are the farmers willing to follow for the next season?

### **Crop diversification**

#### Check list

1. How did the farmers get motivated to crop diversification?
2. Assistance provided to farmers - Land Development, Seed, Critical inputs, protective irrigation, market support, value addition
3. Shift from which dominant crop
4. When did crop diversification shift start
5. To improve soil health/ increase productivity/ income/ food security/ biomass/ fodder - which one is considered priority by farmers
6. To restore the soil fertility through cultivation of leguminous crops that generates heavy biomass and consumes lesser nutrient, intake crops.
7. **improving yield / reducing the cost of cultivation/ increase the net income realized by the farmers - To refer baseline and at the field discussion with farmers**
8. Input cost reduced/ application of fertilizers and pesticides
9. Did diversification help to achieve food security and improved human nutrition, impact on soil fertility and pest incidence?
10. Market/ buyers/ traders/ price
11. Problems faced - labour, buyers, price

12. Seed stored/ stored bins for next season/ seed bank
13. Fodder availability
14. Next season farmers willing for crop diversification, if yes why, If no why

### **Protective Irrigation**

#### Checklist

1. PI was provided to farmers having Irrigation source/ Rain fed
2. Water sources - lifted from farm ponds/ borewell/ canals
3. PI provided by tanker/ pipes/ lifting by motor
4. PI provided once/ twice
1. During which stage of the crop PI was provided
2. Impact - withstand flowering/ fruit/ yield

### **Contingency and Relay Crops**

#### Checklist

1. Assistance provided to farmers - Land Development, Seed, Critical inputs, protective irrigation, market support, value addition
2. Reasons for taking up contingency crop - coping mechanism, long spell, withering of crop, delayed monsoon
3. Was it Farmers' choice of crop for contingency
4. Relay crops - what are the standing crops, name them/ which crop used as relay
5. In relay crop how farmers were mobilised
6. The crop yield of contingency verses normal season sowing Relay crop yield/ farmers benefits from relay crop in terms of yield/ income/ labour/ input cost reduced
7. Market buyers came forward/ self-consumption/ change in the price

### **Farm Implements**

#### Checklist

1. Do women feel it is labour saving implements/ time saving/ easy to operate /environmentally friendly/ minimise drudgery
2. Which age group of women are using the cycle weeders?
3. Enhance the output of the women labourers with reduced drudgery
4. Increase productivity at reduced expenditure
5. To cultivate light and medium soil up to a depth of 3 cm.
6. Evaluating field capacity, weeding efficiency, field efficiency, traveling speed.
7. Effectiveness of three layers bags/ socio economic benefits/ storage for seed/ better price
8. Timely use of tarpaulins for drying the produce and covering
9. Before tarpaulin what material used for drying and covering the farm produce
10. Benefits in using tarpaulin
11. Is tarpaulin given for rent

### **Input supply systems**

#### Checklist

1. Selection criteria in providing cow urine pits/ size of the pit
2. Motivational factor for farmers to come forward to take cow urine pits
3. **Raw cow urine shelf-life**
4. Major crop, cow urine is sprayed
5. Demand for cow urine in the villages
6. During non-crop season how it is used/ stored/ preserved
7. Price of urine of one litre
8. Benefits of Cow urine/ impact of cow urine



9. The cost of cultivation reduced and increases the cost of production
10. During which crop operations cow urine is used as fertilizer and pesticides
11. Yield/ cost of inputs/ income/ quality of produce

### **Natural Farming**

#### Checklist

1. Crop cover for bio-mass mulching and bio-mass incorporated
2. Selection of farmers/ continuity/ material provided/ trainings
3. No external inputs
4. Local seeds (use of local varieties),
5. On-farm produced microbial formulation for seed treatment (such as bijamrita),
6. On-farm made microbial inoculants (Jivamrita) for soil enrichment,
7. Mixed cropping
8. Managing diversity on farm through integration of trees - what trees planted - crops grown
9. Management of pests through diversity and local on-farm made botanical concoctions (such as neemastra, agniastra, neem ark, dashparni ark, etc.)
10. Water and moisture conservation
11. Recycling of on-farm generated biomass
12. Use of locally developed and refined practices based on plant, animal and microbial source as raw materials
13. Do farmers prepare on their own/ purchase from NPM shop
14. Preparation of natural base Bio - is it cost effective/ labour intensive/ time consuming /accessible material
15. Effectiveness of natural farming in terms of increase in production, sustainability, saving of water use, improvement in soil health and farmland ecosystem.
16. What are the benefits of Natural farming - Improve Yield, Ensures Better Health, Environment Conservation, Increased Farmers' Income, cost reduction, reduced risks, similar yields, incomes from intercropping, Reduced Water Consumption, Minimized Cost of Production, Rejuvenates Soil Health, biology of soil - on microbes and other living organisms such as earthworms

#### **Points to note:**

- The check list prepared for 7 Agriculture activities implemented in the project area
- The check list will be revised during first day field visit as per the actual implementation
- The AF- Ecology team can delete any irrelevant points in the check list.
- Any points missed in the check list can be added by the team
- The information/ data provided by the team, require extra data to be added related to Socio economics (Landholdings, social category, gender)
- The check list covers in each activity the relevance, Effectiveness, Efficiency, Impact and Sustainability

## Appendix 5 - Some examples of ALP borrowers

Gangamma in Mucharlapalli village was trained in aari work in Anantapur by RUDSETI through AFEC. She already has 3 sewing machines, teaches sewing to others and takes orders for stitching. With this additional skill she will also do the aari embroidery before stitching the blouses. When asked what she would do if others in the village also learnt aari embroidery, she thought for a bit and then replied that she had the advantage of having more practice than them and of having good design and colour sense. She is looking to buy a sewing machine that will help her do the embroidery on the machine itself. A single blouse can fetch up to Rs.3000 during the wedding season.

A group of 30 women have come together to start a Garments unit and have opened an outlet in Kalyandurg. This shop is run by 2 of the members, Lakshmidevi and Kulsumbi. AFEC staff member Jyotirmai supports them in accounting and Rizwana from the Anantapur office provides overall support. The 30 members have paid up share capital of Rs.5000 each. They stitch underskirts and blouses and also take orders for other clothing. They get bulk material from Rajasthan to stitch as nighties. They also sell saris, dresses, salwar kameez, children's clothes, etc. The rent for the shop is Rs.20,000 per month.

Kavitha set up a food centre on a pushcart in Nimmalagunta village. Her husband makes pani puri and gobi manchurian and she helps him. They have taken the front of a shop to permanently base their pushcart. After meeting all expenses, they make Rs.200 to 300 per day.

Also, in Nimmalagunta, two families are involved in the leather puppet business. They have taken loans for working capital to expand their business and diversify into home decor items. (Family 1 - Rangamma (world renowned puppeteer), Anasuya and Venkatramudu; Family 2 - Shivamma (National Award winner) and Durgesh) The latter have built a large shed so that others also can come and work on various aspects of the craft.

Narayanamma and Manohara opened a shop a little outside Nimmalagunta. When asked why they chose the location, they replied that a lot of shops had come up near their earlier location. So, they had moved to this location which is on the main road bringing in business from passers-by, especially in summer when it is hot, and people stop for soft drinks from the fridge. The impact of competition on their business is understood well by the couple, as it is by other SMG members across the project area.

Vijayalakshmi and Lingamurthy run a grocery shop in Mucharlapalli village. The shop was initially being run by Vijayalakshmi with very few items, mainly the snacks that children eat. They took a loan from the SMG and expanded the shop to include more grocery items. They also installed a fridge so that they could stock milk, curd, soft drinks, etc. They have also started selling bangles, bindis and other women's accessories. On further enquiry, they said that they have taken loans from all the groups that they belong to, amounting to about Rs.5 lakhs.

One SMG member in P Yaleru village explained that she had bought 4 sheep for Rs.30,000. After about 6 months, she sold them for Rs.80,000. Her main inputs in the interim were mainly in terms of her labour.

## Appendix 6 - Data on ALP Borrowers

Income of women who head households who have taken assistance from ALP  
For the period April 2021 to 10<sup>th</sup> March 2023

	SC	ST	BC	Others	Total	Percentage
Less than Rs.1000	0	0	0	0	0	0%
Rs.1001 to Rs.2000	0	0	6	0	6	5%
Rs.2001 to Rs.3000	7	0	9	0	16	12%
Rs.3001 to Rs.4000	13	1	14	7	35	27%
Rs.4001 to Rs.5000	9	3	15	4	31	24%
Rs.5001 to Rs.6000	3	2	16	0	21	16%
More than Rs.6000	8	0	11	1	20	16%
<b>Total</b>	<b>40</b>	<b>6</b>	<b>71</b>	<b>12</b>	129	
<b>Percentage</b>	<b>31%</b>	<b>5%</b>	<b>55%</b>	<b>9%</b>		

Income of all women who have taken ALP loans  
April 2021 to 10<sup>th</sup> March 2023

	SC	ST	BC	Others	Total	Percentage
Less than Rs.1000	0	0	0	0	0	0%
Rs.1001 to Rs.2000	9	3	18	3	33	2%
Rs.2001 to Rs.3000	60	9	146	5	220	10%
Rs.3001 to Rs.4000	162	41	317	34	554	25%
Rs.4001 to Rs.5000	164	40	324	40	568	26%
Rs.5001 to Rs.6000	94	25	197	18	334	15%
More than Rs.6000	157	32	247	46	482	22%
<b>Total</b>	<b>646</b>	<b>150</b>	<b>1249</b>	<b>146</b>	<b>2191</b>	
<b>Percentage</b>	<b>29%</b>	<b>7%</b>	<b>57%</b>	<b>7%</b>		