



# Towards **Climate Smart Villages** (Phase II)

Promotion of affordable and replicable adaptation and mitigation practices to enhance livelihoods of vulnerable communities in the Sri Sathya Sai District of Andhra Pradesh, India

# BACKDROP

**Mahila Abhivruddhi Society (APMAS)**, began its journey on 14 June 2001 in erstwhile Andhra Pradesh with a purpose of strengthening the SHG movement and subsequently expanded its horizon programmatically and geographically across the country. APMAS has been currently operational in Andhra Pradesh, Bihar and Telangana with a focus on strengthening SHG Federations to undertake higher order functions such as WASH, education and enterprises development; promotion and strengthening of farmer institutions as business entities and for enhancing yield and income by adopting climate resilient practices.

The project “**Towards Climate SMART Villages**” was conceptualized in 2019 with the aim to reduce the vulnerabilities of the small landholders through promotion of affordable and replicable climate resilient measures in the semi-arid region of Sri Sathya Sai district in Andhra Pradesh. The Phase 1 was implemented in 10 villages of 6 GPs in Gudibanda and Nallamada mandals covering 800 farmers during February 2019 to March 2022 with the focus on five SMART components (Agriculture, Nutrition, Energy, Institutions, and Knowledge). The GHG audit (external) was conducted at the end of the project by 4K earth Science Private Limited which applied the “Golden Standard Afforestation/Reforestation (A/R) GHG Emissions Reduction & Sequestration Methodology”.

## Key Achievements of Phase 1



849 farmers adopted climate resilient practices (composting, navadhanya, millets, drought tolerance varieties, five layer, micro irrigation, fodder promotion) in 1018 hectares and the income of 650 farmers increased by 20%



Planted 24,370 trees in 192 ha of agriculture land and the survival rate was 79%



Achieved energy efficiency through promotion of improved cook stoves to 437 households, solar based tamarind processing units, insect light traps, fruit-vegetable dryer, sprayers and street lights

195 HHs benefitted with 40% additional income through alternate livelihoods



6 Gram Panchayats, 2 Farmer Producer Organisations and 10 Village Organisations are sensitive on the impact of climate change and the importance of adopting resilient practices

Farmers reported decrease in production costs by 34%; decrease in fertilizer use by 34%; and 96% farmers expressed the desire to continue sustainable agriculture practices



The project resulted in 970 tCO<sub>2</sub> emission reductions and 2,972 tCO<sub>2</sub> GHG removals

# Phase II (April 2022 to January 2026) Goal and Objectives

**Goal:** Ensure that 1400 vulnerable families located in 18 habitations, including all the smallholder farmers in 4 habitations as saturation villages, significantly improve their livelihoods on a long-term sustainable basis by adopting proven and innovative climate resilient (agricultural) practices resulting in reduced vulnerability and risks to climate change by the end of the year 2025

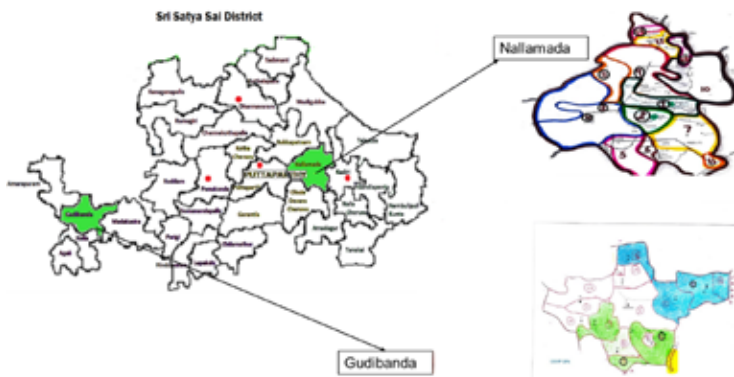
## Objectives

- Build adaptive capacities of community institutions to plan and implement climate smart activities resulting in significantly improved coping with drought and water crisis
- Build resilience of 1400 vulnerable families through innovative adaptation strategies and practices in the agriculture sector
- Enhance resilience to drought through mitigation and adaptation practices in rainfed lands while mitigating climate change effects
- Promote knowledge management and sharing of experience on climate resilience practices in other districts /states for large scale dissemination

## Geography

Gudibanda Mandal			Nallamada Mandal		
Gram Panchayat	Village	Target families	Gram Panchayat	Village	Target families
C.C.Giri	C.C.Giri	117	Gopepalli	Gopepalli	77
	P.C. Giri	67		Raganipalli	93
	Bairepalli	100	Pathabathalapalli	Pathabathapalli	110
Konkallu	Konkallu	102		Tholetivaripalli	58
	Poojaripalli	82		Kothabathalapalli	8
Muthukuru	M.S.Thanda	58	Reddipalli	Bapanakunta	100
	Vadrahatti	29		Vellamaddhi	K.P. Thanda
	Kurabarapalli	87	Yerravankapalli	Yerravankapalli	125
Rallapalli	Rallapalli	123			
<b>4 GPs</b>	<b>9 Villages</b>	<b>765 Families</b>	<b>5 GPs</b>	<b>8 Villages</b>	<b>602 Families</b>

1400 families from 18 villages of 9 GPs in 2 Mandals of Sathya Sai district, Andhra Pradesh



# Project Outreach

- 1400 direct beneficiaries out of which 50% will be women
- 3000 indirect beneficiaries from within and outside the project area

## Project Components

### 1. Climate Resilient Agriculture



#### Improved Soil Management

- Soil testing
- Bio dynamic units
- Living soil units
- Vermi composting units
- Compost pits
- Green leaf manuring
- Mulching
- Farm yard manure

#### Improved Water Management

- Micro irrigation systems
- Farm ponds
- Protective irrigation
- Recharge borewells
- Repair of water harvesting structures
- Repair of feeder channels

#### Smart Cropping and Fodder Development

- Demo plots
- Crop diversification
- Millet promotion
- Five layer model
- Agroforestry
- Fodder development
- Bio pesticides and bio fertilizers
- Sticky, pheromone and light traps
- Nutri gardens
- Weather, crop, livestock advisory services

### 2. Climate Smart Institutions

- Village Climate Risk Management Committees (VCRMC)
- Mandal level Climate Risk Management Committee
- 9 Gram Panchayats, 3 Farmer Producer Organizations, 18 Village Organizations & 5 Educational Institutions

### 3. INNOVATIONS



### 4. KNOWLEDGE MANAGEMENT

- Capacity building to institutions (GPs, FPOs, VO's and Schools)
- Capacity building to farmers
- Workshops and farmer melas
- Case studies, video documentation, resource materials
- Baseline, mid term and endline survey
- Partnership with NGOs, Agricultural universities, KVVKs, and Departments
- Expert Advisory Committee

## Expected Outcomes of Phase II Project

- 1,400 families implemented climate resilient adaptation practices
- 50% women farmers implement all practices
- 4 out of 18 villages are named as “Smart Villages” undertake climate resilient activities in a saturation mode
- 700 farmers (50%) cultivate multiple crops
- Natural farming practices adopted in 560 hectares
- 550 farmers developed fodder plots cultivating 3 varieties of fodder species
- 5000 trees planted in farmers’ land and educational institutions
- 9 GPs, 3 FPOs and 18 VOs set up climate adaptation plans
- 18 VCRMcs formed & functional in 18 habitations for ensuring “climate smart villages”
- Adoption of three innovative ideas
- 900 farmers (30%) of indirect beneficiaries adopted three resilient practices
- Partnership established with 10 NGOs, 2 Agricultural Universities and 3 Departments
- Contributes to achievement of SDG 2 (Zero Hunger); SDG 5 (Gender equality); and SDG 13 (Climate Action)
- Dissemination of experience and best practices within the state of Andhra Pradesh and across the country
- Contribution to policy engagement nationally and internationally on the importance of empowering local communities and their institutions to manage climate change impacts at farm level through community based adaptation



## IEC Materials Developed

1. CSVP brochure: [csvp-brochure.pdf](http://apmas.org/pdf/padipantalu/csvp-brochure.pdf) ([apmas.org](http://apmas.org))
2. Guli Ragi: <http://apmas.org/pdf/padipantalu/guli-ragi.pdf>
3. Foot Rot: <http://apmas.org/pdf/padipantalu/footrot-flyer.pdf>
4. Navadhanya system: <http://apmas.org/pdf/padipantalu/navadhanya-flyer.pdf>
5. Nutri/Kitchen Garden: <http://apmas.org/pdf/padipantalu/kitchengarden.pdf>
6. Tomato Early Blight: <http://apmas.org/pdf/gic/tomato-early-blight.pdf>
7. Tomato Late Blight: <http://apmas.org/pdf/gic/tomato-late-blight.pdf>
8. Tomato Powdery Mildew: <http://apmas.org/pdf/gic/tomato-powdery-mildew.pdf>
9. Tomato best package of practices: <http://apmas.org/pdf/gic/tomato-package-of-practices.pdf>
10. Lumpy Skin Disease: <http://apmas.org/pdf/padipantalu/lumpy-skin-disease.jpg>
11. Nutri/Kitchen Garden: <http://apmas.org/pdf/padipantalu/nutri-garden-poster.jpg>



## Video Films

- Miyawaki (Part 1): <https://www.youtube.com/watch?v=ul3uAkl-bSM&t=15s>
- Miyawaki (Part 2): <https://www.youtube.com/watch?v=oAtHWWJ5P7A&t=143s>
- Living Soil Somposting: <https://www.youtube.com/watch?v=Mw9UCLr00zU&t=98s>
- Bio Dynamic Composting: [https://www.youtube.com/watch?v=A\\_TcpBTJFmc&t=65s](https://www.youtube.com/watch?v=A_TcpBTJFmc&t=65s)



## Demo plots



## Seed Balls - Preparation and placement



## Miyawaki Plantation



## Improved Cook Stove



## Solar Drying - Chilli & vegetables



## Kitchen Garden



Tamarind processing unit



Solar Sprayer



Solar Street light



Small ruminants



Green Manure



Protective irrigation



Fodder plot



Chaff Cutter



Five Layer Model



Silage preparation



Bio fermenter unit



Cattle sheds with cement lining





## Funding Partners

### Phase 1

Luxembourg Ministry of Environment, Climate and Sustainable Development,  
The Mangrove Foundation and AEIN Luxembourg

### Phase 2

Luxembourg Ministry of Environment, Climate and Sustainable Development and  
AEIN Luxembourg (82%); DGRV (8%) and Farmers & Other Sources (10%)

### APMAS Head Office

Mahila Abhivruddhi Society, Andhra Pradesh (APMAS)  
HIG 11 & 12, Huda Colony, Taneshanagar, Manikonda, Hyderabad - 500089  
Tel: +91 8413403118 / 120; Mail: [info@apmas.org](mailto:info@apmas.org); [www.apmas.org](http://www.apmas.org)

### APMAS Nallamada

Mahila Abhivruddhi Society, Andhra Pradesh (APMAS)  
Opposite Kasturibha School, Nallamada FPO Office, Kandruvaripalli Road, Nallamada  
Sri Satya Sai District, AP - 515501. Tel: 8374739673; 8332983586  
Mail: [c.rajasekharreddy223@gmail.com](mailto:c.rajasekharreddy223@gmail.com)

### APMAS Gudibanda

Mahila Abhivruddhi Society, Andhra Pradesh (APMAS)  
Mandalapalli, Gudibanda Office, Behind Gowardhan Theater, Sri Satya Sai District  
AP - 515271. Tel: 7893995231; 6305743481; Mail: [anilreddy6511@gmail.com](mailto:anilreddy6511@gmail.com)



