



Enabling socio-economic empowerment and resilience of smallholder farmers and women's self-help groups for sustainable household food and nutrition security in Odisha

KVK,GANJAM-I & II



Background:

- ❖ Climate change impacts: **delayed monsoons, erratic rainfall, heat stress, and droughts.**
- ❖ Adverse effects on **food security, ecosystems, and biodiversity.**
- ❖ Farming communities face **disruptions in crop yields** and traditional practices.

Gender Inequality and Climate Resilience

- ❖ Women lack access to **resources, decision-making, and education.**
- ❖ Inequalities limit their capacity to **adapt to climate change** despite key roles in agriculture.

Government Initiatives

- ❖ **Gender-sensitive plans** to double farmers' incomes.
- ❖ Promotion of **climate-responsive practices** through Women's Self-Help Groups (WSHGs).

Challenges and Capacity Building

- ❖ Women face barriers to **access programs and resources.**
- ❖ Need for **empowerment, collectivization, and value chain participation.**

Objectives:

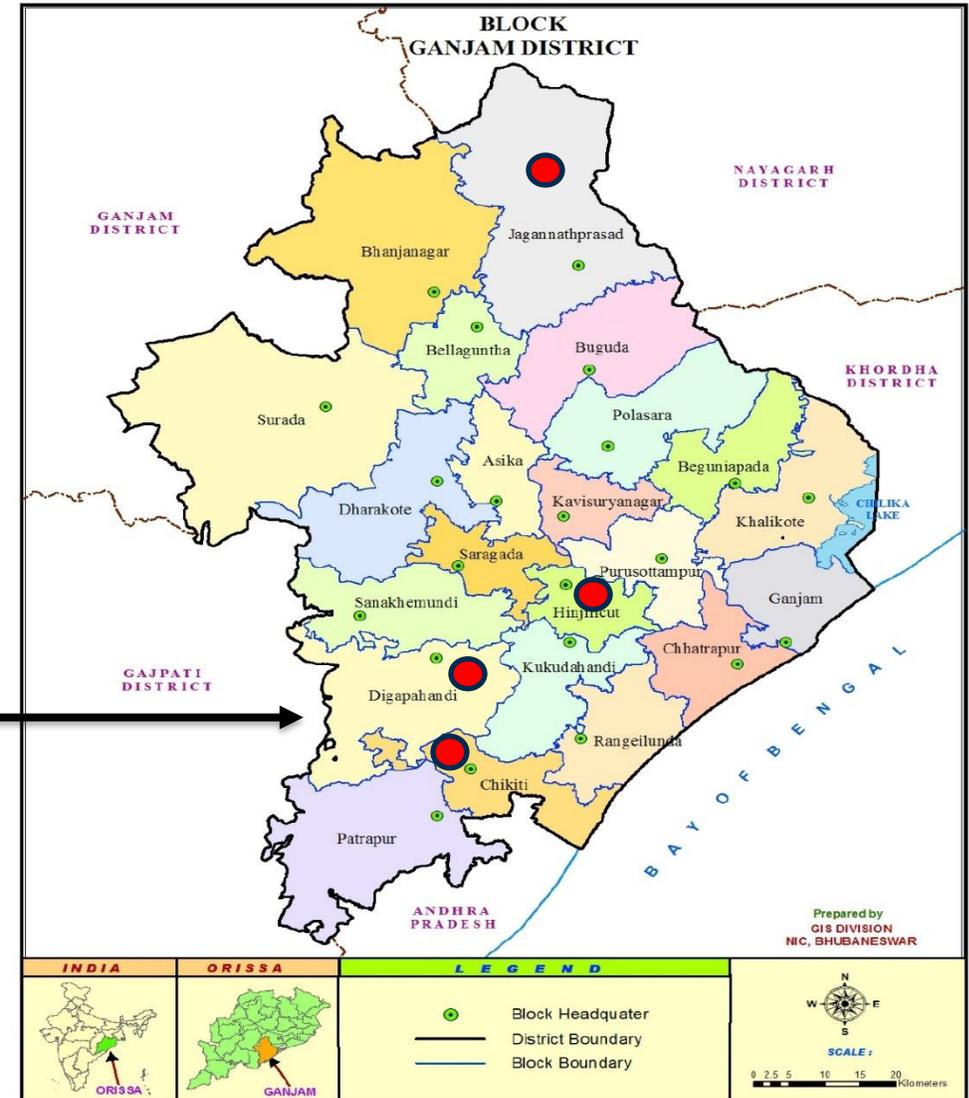
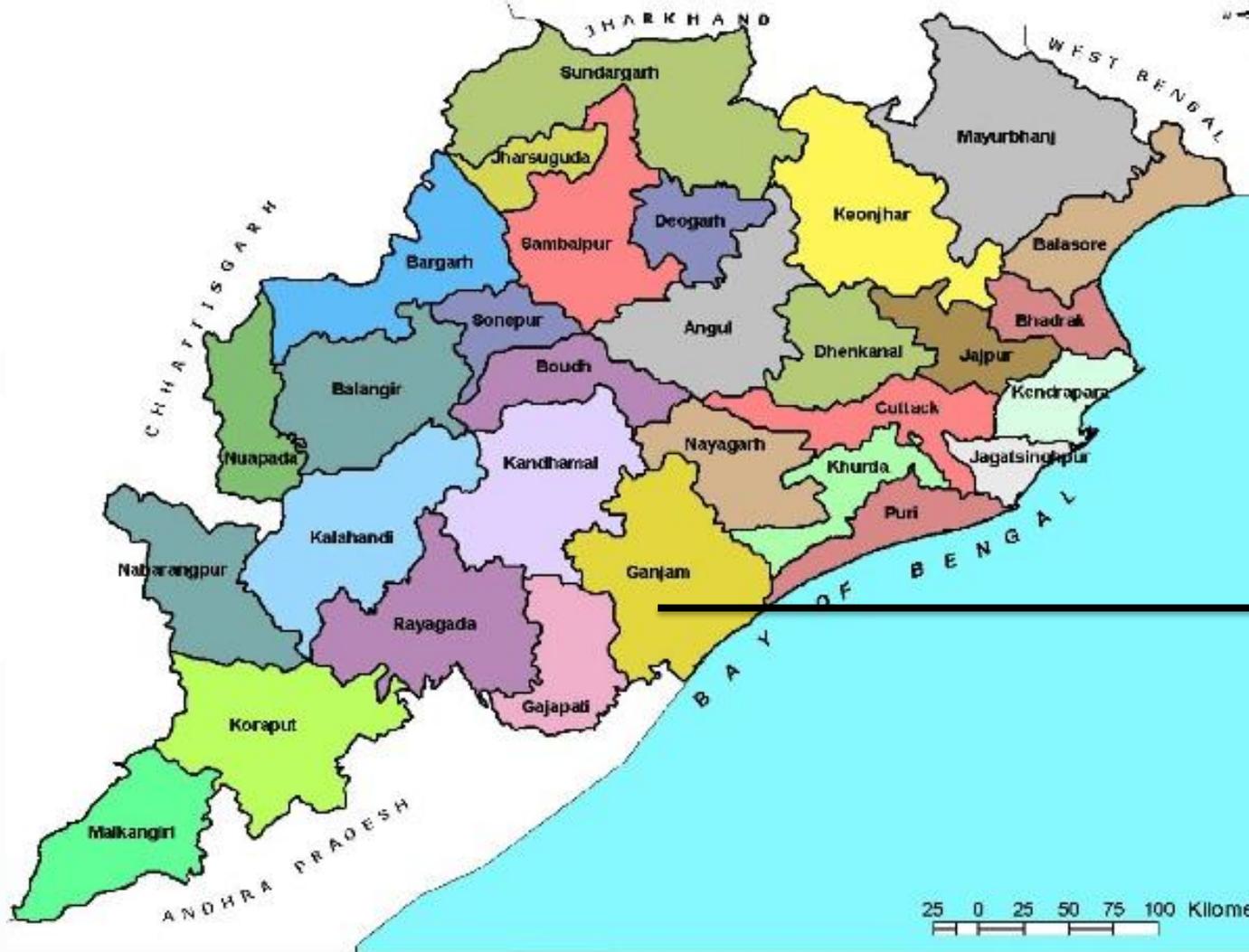


To improve the livelihoods of farmers and farmwomen through diversified and climate-resilient income sources.

To promote sustainable agricultural practices that conserve natural resources and enhance productivity.

To increase the resilience of small and marginal farmers/farmwomen to climate variability and extremes.

Geographies & Methodology:



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29 VILLAGES

10 GRAM
PANCHAYATS

5,517 FARMERS

03

02

04

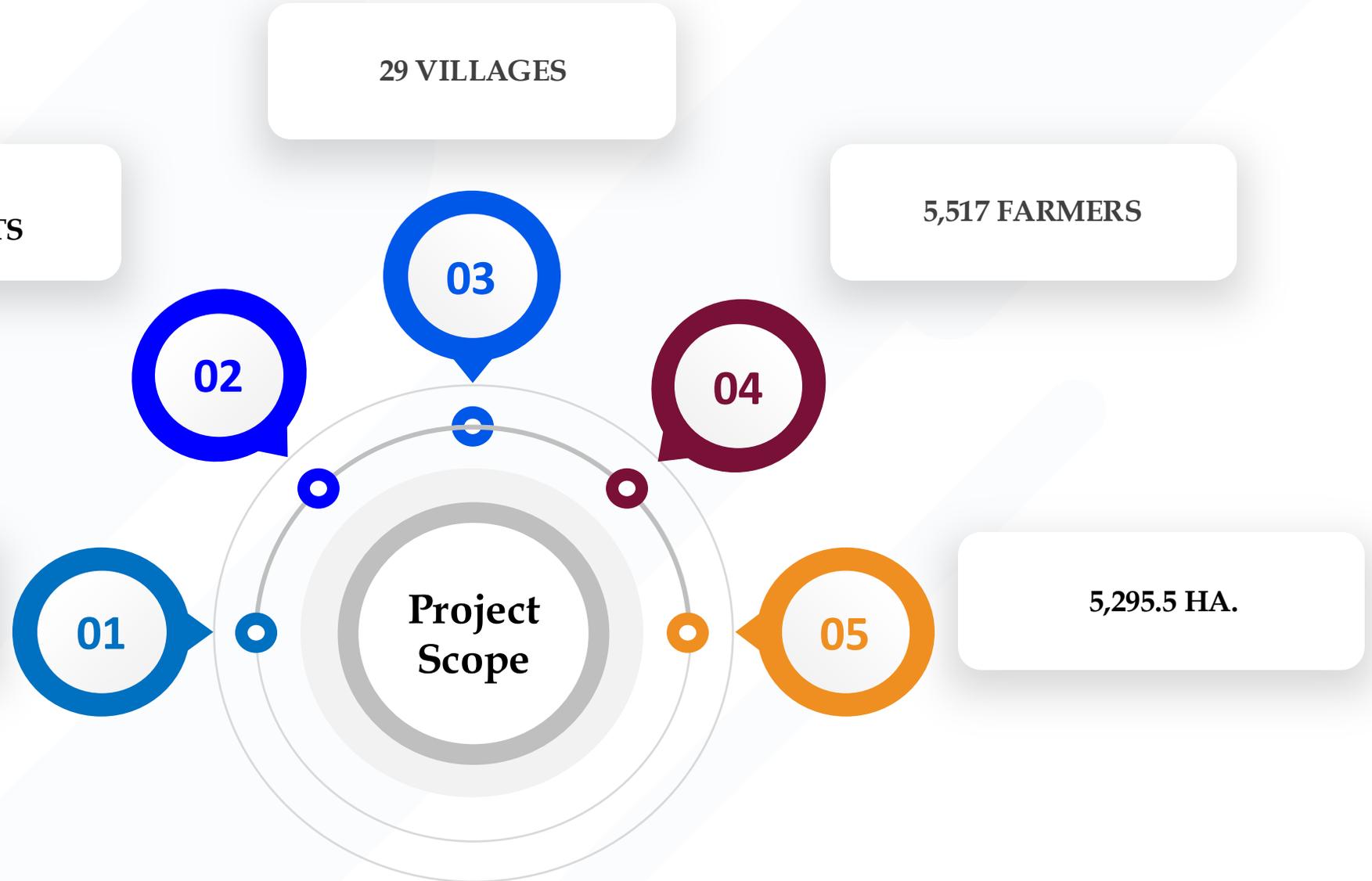
4 BLOCKS

01

Project
Scope

05

5,295.5 HA.



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B1

JAGANNATH PRASAD

Agro Climatic Zone:

North Eastern Ghat Zone.

Agro Ecological Situation:

Laterite, moderate rainfall and irrigated

AES Features:

Soil type- Laterite Soil

Avg. Rainfall -1276.2 mm

Major crops – Rice, Ragi, Greengram, Blackgram, Vegetables and Groundnut

B2

HINJILICUT

Agro Climatic Zone:

East and South East Coastal Plain zone.

Agro Ecological Situation:

Rainfed & Laterite

AES Features:

Soil type- Sandy loam to clay loam

Avg. Rainfall -1350 mm

Major crops - Rice, Greengram, Blackgram, Vegetables, Groundnut and Mustard

B3

DIGAPAHANDI

Agro Climatic Zone:

East and South East Coastal Plain zone.

Agro Ecological Situation:

Rainfed & Laterite

AES Features:

Soil type- Laterite. Sandy loam to clay loam

Avg. Rainfall -1360 mm

Major crops - Rice, Greengram, Blackgram, Vegetables, Groundnut and Mustard

B4

CHIKITI

Agro Climatic Zone:

East and South East Coastal Plain zone.

Agro Ecological Situation:

Coastal Alluvial Saline

AES Features:

Soil type- Alluvial, Sandy loam to clay loam

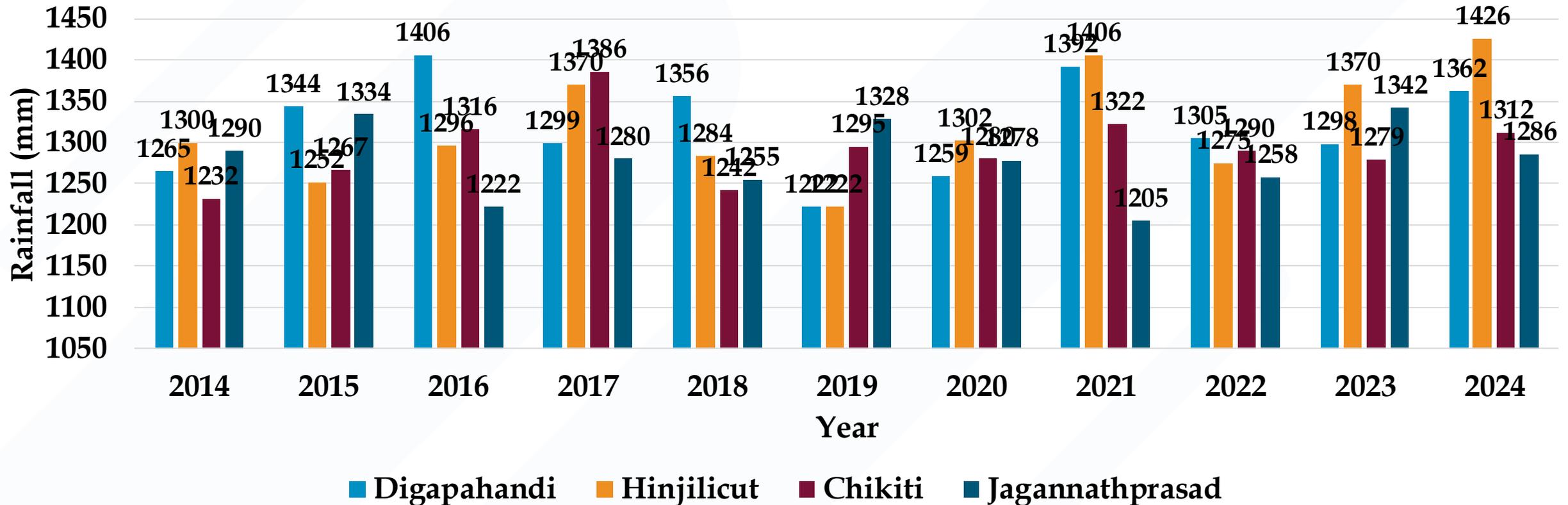
Avg. Rainfall -1360.2 mm

Major crops - Rice, Ragi, Greengram, Blackgram, Vegetables and Groundnut

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Decadal rainfall data



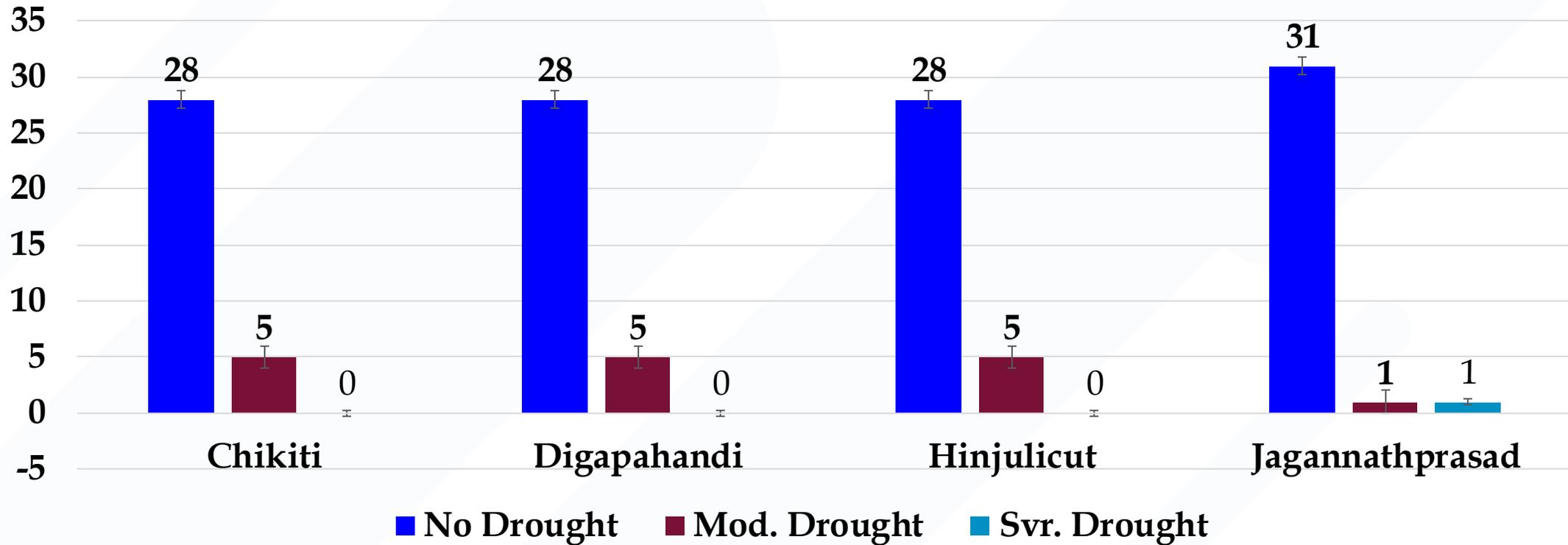
❖ **Hinjilicut** has shown consistently high rainfall levels across most years, with a peak of **1426 mm** in 2024 & Low rainfall in **Jagannath prasad** block

❖ **2021** exhibited the highest variability in rainfall among blocks, with rainfall ranging from **1205 mm** (Jagannathprasad) to **1406 mm** (Hinjilicut).

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Drought chart (33 years)



❖ Moderate drought occurred in 5 years in Chikiti, Digapahandi, and Hinjulicut, while Jagannathprasad reported moderate drought in 1 year.

❖ Severe drought was recorded only in Jagannathprasad, affecting 1 year out of the 33-year period, highlighting its rarity and localized nature.

Activities : Capacity Strengthening of WSHGs and Smallholder Farmers



1



Establish Climate Adaptation Information Centres (CAICs):

Initiate the setup of **4 centers in selected blocks**, equipped with ICT tools and managed by trained teams to deliver agro-met advisories , Plant health clinic & climate training.

2



Develop and Finalize Training Modules:

Design and refine modules on Last Mile Climate Services (LMCS), agro-met advisories, and alternate livelihoods to address community-specific needs.

3



Conduct Stakeholder Training:

Organize district and village-level training sessions focused on climate-smart agriculture, cropping options, and digital literacy for SHGs and FPOs.

4



Launch Agro-Met Advisory Services:

Start dissemination of simplified and localized IMD weather advisories through apps, IVRS, and social media, involving farm women, farmers and lead farmers.

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Establishment: Four Climate Adaptation Information Centres (CAICs) will be set up in strategic locations, one in each selected block of Ganjam district.

Collaboration: Formed through a partnership between OUAT, KVKs, Line Departments, local NGOs, and Panchayats.

Management Team:

- ❖ Includes OUAT/KVK scientists, NGO facilitators, Village Agriculture Workers, Community Resource Persons, and trained youth volunteers.
- ❖ Each CAIC will be headed by one Field Assistant.

Infrastructure:

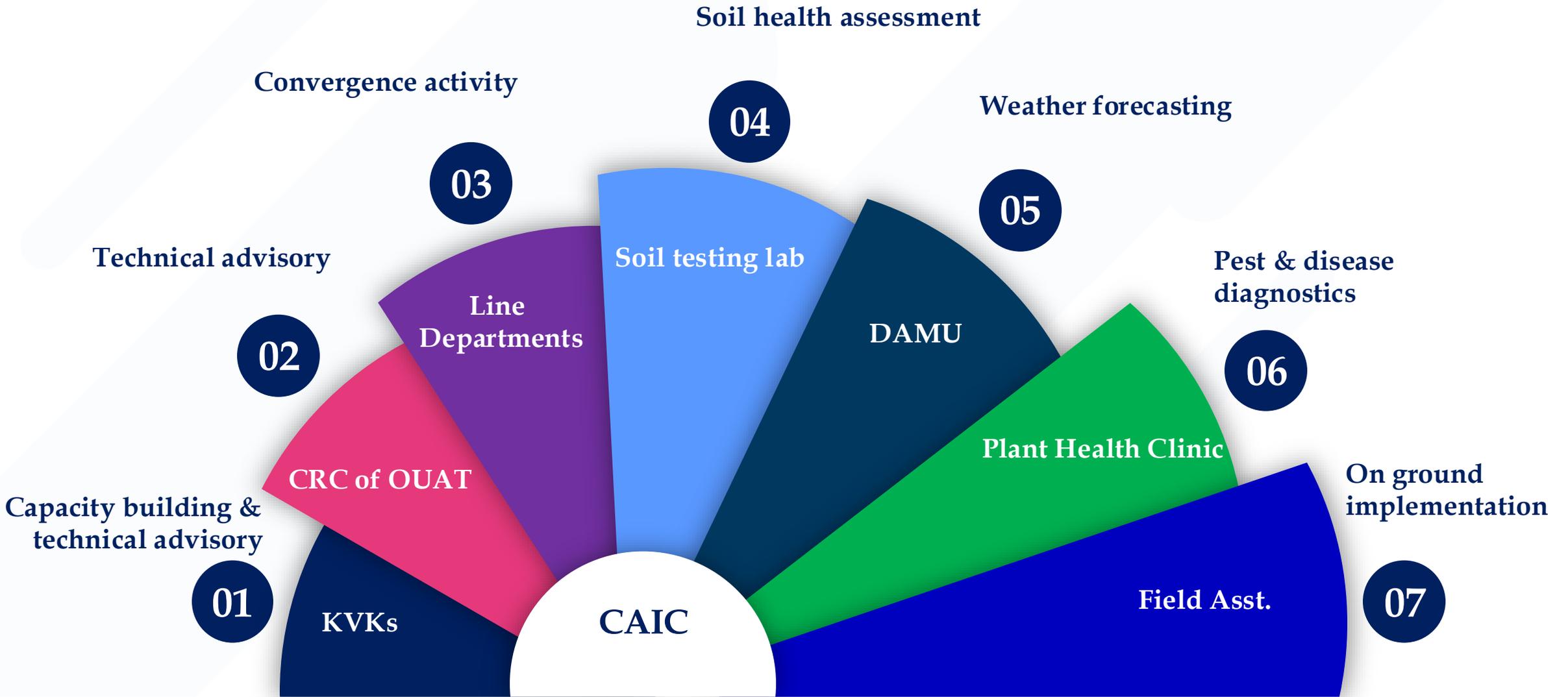
- ❖ Equipped with tables, chairs, IT equipment (desktops), and other logistical support.

Functions:

- ❖ Provide **Last Mile Climate Services (LMCS)**.
- ❖ Disseminate agro-met advisories.
- ❖ Offer custom support services in collaboration with line dept.
- ❖ Conduct training on climate-resilient agricultural practices.

Operational Support: OUAT will support the Facilitating Agency in managing the CAICs' day-to-day activities.

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Activities: Adoption of Climate Resilient Livelihoods



Sl. No.	Activity	Relevance to resilient practices/	Expected benefit	Aligned SDGs	Area (Ha)
1	Stress-Tolerant Greengram (Var. Virat)	Resistance to Yellow Mosaic Virus under pest-prone conditions.	Reduces 30% yield loss due to YMV.	SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being)	40
2	Mechanized Groundnut Cultivation	Enhances climate resilience by improving efficiency and resource use.	Increases productivity and reduces labor costs by 40%.	SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action)	20
3	Maize/Sweet Corn + Cowpea Intercropping	Encourages soil health improvement and reduces monocropping vulnerabilities.	Enhances soil fertility, diversifies income sources.	SDG 2 (Zero Hunger), SDG 13 (Climate Action)	08
4	Bacterial Wilt-Tolerant Brinjal (Var. Swarna Shyamali)	Ensures productivity under bacterial wilt impacts.	Reduces yield loss by 28%.	SDG 2 (Zero Hunger), SDG 15 (Life on Land)	-
5	Triple Disease-Resistant Tomato (Var. Arka Rakshyak)	Mitigates losses from curl virus, bacterial wilt, and blight.	Increases yield by 22%.	SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being)	-

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Sl. No.	Activity	Relevance to resilient practices/	Expected benefit	Aligned SDGs	Area (Ha)
6	Chilli Leaf Curl Virus-Resistant Variety (Var. Arka Saanvi)	Maintains yield in pest-affected zones.	Reduces 18% yield loss.	SDG 2 (Zero Hunger), SDG 13 (Climate Action)	-
7	Poly Mulching in Vegetables	Reduces evaporation, preserves soil moisture during dry spells.	Conserves moisture, reduces weed growth, enhances yield.	SDG 2 (Zero Hunger), SDG 13 (Climate Action)	08
8	Trellis System for Vegetables (Cucurbits)	Reduces fungal infections, supports healthy crop growth.	Improves air circulation, reduces disease risk, and increases yield.	SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production)	08
9	Kitchen Gardening for Nutrition	Sustains food security under variable production conditions.	Provides year-round nutrition.	SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being)	-
10	IFS & Renewable Energy for Agriculture	Promotes sustainable farming, reduces fossil fuel dependency.	Supports eco-friendly pest and crop management.	SDG 7 (Affordable and Clean Energy), SDG 13 (Climate Action)	04

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Demonstration on
Groundnut
(Fully mechanized)

01

Land Preparation
and Sowing

Tractor mounted rotavator for land preparation
Seed drills for precise sowing, for proper spacing and depth

02

Intercultural Operations
(Weeding and Spraying):

Use of power weeders for efficient weed removal.
Drone for uniform spraying of fertilizer pesticides .

03

Harvesting

Groundnut diggers or combine harvesters to uproot and collect pods efficiently.

04

Post-Harvest Operations
(Threshing and Shelling)

Groundnut threshers for separating pods from plants.





Special activities :

CLIMATE
SMART
VILLAGE

NUTRITION
SMART
VILLAGE

IFS VILLAGE

NATURAL
FARMING
VILLAGE

Implementation Steps for All Models

- 1. Baseline Mapping:** Village-specific challenges through participatory rural appraisals will be identified.
- 2. Resource Mobilization:** Funds from relevant schemes like RKVY, PMKSY, MNREGA, MIDH and department-specific subsidies will be pooled.
- 3. Training & Capacity Building:** Regular trainings with KVKs, NGOs, and line departments will be conducted.

Activity wise proposed budget (A):



Sl. No.	Climate Resilient Technology	Area (ha.)	No. of farmers	Unit Cost/Ha (Rs.)	Total cost (Rs.)
1	Stress tolerant Greengram var. Virat	40	120	6000	240000
2	Mechanized Groundnut Cultivation	20	60	3000	60000
3	Maize/Sweet corn + Cowpea (1:1) based intercropping system	08	40	7500	60000
4	Poly mulching in vegetable crops (Tomato, Brinjal, Chilli) with stress tolerant var.	08	40	20000	160000
5	Improved trellis system in vegetable (With stress tolerant var.	08	40	15000	120000
6	Integrated farming system (with Solar insect trap, Sprayer)	16	32	10000	160000
	Total (A)	100	332		800000

Activity wise proposed budget (B):



Sl. No.	Activity	No.	Unit Cost/Ha (Rs.)	Total cost (Rs.)	Remarks
1	Engagement of Young Professional-1 at PMU, Office of the DEE, OUAT	1	@ Rs. 25,000/ month	100000	Dec.2,024-March,2025
2	Engagement of Field Assistant (FA) for blocks	4	@ Rs 15,000/ month	240000	Dec.2,024-March,2025
3	Hiring of vehicles at PMU Office of the DEE, OUAT and District units	-	70,000	70000	@ 30,000 for PMU & 40,000 for District unit
4	POL for district unit	-	50,000	50000	Fuel for District unit
5	TA/DA for PMU & District unit	-	40,000	40000	@ 10,000 for PMU and 30,000 for District unit
			Total (B)	500000	

Activity wise proposed budget (C):



Sl. No.	Activity	No.	Unit Cost/Ha (Rs.)	Total cost (Rs.)	Remarks
1	A state level workshop at DEE, OUAT involving all stake holders (100 participants)	1	70000	70000	Workshops at the PMU level
2	A district level workshop at KVK, Ganjam II involving all stake holders of the districts. (100 participants)	1	30000	30000	Workshop at district level
3	1 no. capacity building training at each CAIC	4	10000	40000	To enhance the skills and knowledge
4	Rental charge of 4nos. CAIC establishment at Panchayat level	4	@ 5000/- per month/ CAIC	80000	Dec.2,024- March,2025
5	Electricity charges of CAIC	4	@ Rs. 1,000 per month per CAIC	16000	Dec.2,024- March,2025
6	Logistics (Table, chair, etc.) for 4nos CAIC	4	@ 30000/ CAIC	120000	Essential furniture and logistics

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Sl. No.	Activity	No.	Unit Cost/Ha (Rs.)	Total cost (Rs.)	Remarks
7	IT equipment (Laptop& desktops with peripherals)	5	@60000/Deskto p/Laptop	300000	One (1) laptop for the KVK and four (4) desktops with peripherals for the CAICs
8	Miscellaneous cost for PMU	-	30000	30000	To cover unforeseen or incidental expenses at the PMU level
			Total (C)	686000	

Grand Total (A+B+C) = 8,00,000 + 5,00,000 + 6,86,000 = Rs. 19,86,000

Time line



Sl. No.	Activity	December, 2024	January, 2025	February, 2025	March, 2025
1	Engagement of YP-1 & FA				
2	Establishment of CAIC				
3	Procurement of IT equipment's				
4	Procurement of furniture				
5	District level workshop				
6	State level workshop				
7	Demonstrations				



THANK YOU.