Annual Action Plan Format (2023-24)

NATIONAL INNOVATIONS IN CLIMATE RESELIENT AGRICULTURE - TECHNOLOGY DEMONSTRATION COMPONENET

A. Basic information

S.No.	*Item*	*Detail*
1.1	Zone	Zone V
1.2	Name of KVK (district)	Puri
1.3	Name of Tehsil	Puri sadar
1.4	Name of Village	Jatipur
1.5	Climatic vulnerability	Flood affected

B. What are the promising resilient practices identified based on the last 6 years of work

S No	Module	Resilient practice
1.	**Natural Resource Management**	
2.	**Resilient varieties and systems**	
3.	**Livestock related interventions**	

- **Suitability with reference to farming systems such as rainfed/ irrigated/ horticulture, etc.**
- **It can be lowland/ medium land/ upland situations in the village**
- **It can be temporary or shallow flooding/ prolonged and deep water situations, etc.**

C. Predominant farming systems of the village and suitable low cost resilient practices for each of the farming situations

S No	Farming situation	Predominant crops grown	Extent of cultivated area in the village	% of the total cultivated area in the village	*Low cost resilient practices that can be scaled up	Proposed area to be covered during 2023-24
1.	**Rainfed midland**					**-**
	NRM				**Dry DSR**	**2.0ha**
	Crop	**Paddy**			**Demonstration of Paddy variety Bina Dhan11**	
	Crop	**Pumpkin**			**Cultivation of Frost and disease tolerant "Arjun" variety**	**0.4ha**
	Crop	**Sweet corn**			Short duration Sweet corn, Mishty	**0.4ha**
	Crop	**Marigold**			**Cultivation of African marigold variety "Seracole"**	**0.2ha**
	Crop	**Millet**			**Demonstration of millet variety "Arjun"**	**0.4ha**
	Crop	**chilli**			**Demonstration of variety VNR 377**	**0.1ha**

	Livestock	**Poultry**	**-**	**-**	**Rearing of day old Vanaraj poultry chicks**	**25 units (40 birds per unit)**
					Fodder Maize cultivation	**2.0ha**
					Feed management of poultry birds	**5 units (40 birds per unit)**
3	**Irrigated lowland**					
	NRM				**Wet DSR in Paddy**	**2.0ha**
					Mechanized Transplanting in Paddy	**2.0ha**
	Crop	**paddy**			Demonstration of Deep water Rice varieties var: CR 506, CR 508	**4.7ha**
	Fishery				**Fish farming in the renovated water storage structure viz., Catla, Jayanti Rohu and Amur carp @ 30 %, 40% and 30% respectively**	**0.5ha**
	Livestock	**Ducklings**	**-**	**-**	**Rearing of day old White Pekin ducklings**	**10 units of 25 birds each**
					Feed for ducklings and fish	**10 units**

***Indicate NRM, crop based and livestock based interventions for each of the farming situation**

D. Module-wise existing practice and climate resilient practice/technology to be demonstrated for the year 2023-24

S.No.	**Module**	**Climatic constraint addressed**	**Key intervention**	**Measurable indicator (s)**
1	**Natural resource management**			
		Flood	**Bund renovation**	**Water productivity (Kg/m^3), yield, B:C ratio**
		Drought	**Dugwell**	**Water productivity (Kg/m^3), yield, B:C ratio**
2	**Crop production**	**Drought**	**Cultivation of Pumpkin variety "Arjun"**	**Yield , Economics**
		Drought	**Pineapple variety " queen'**	**Yield, economics**
		Flood	**Cultivation of African marigold variety "Seracole"**	**Yield , Economics**
		Flood	**Demonstration of papaya variety "**	**Yield , Economics**

			Lunar"	
		Drought	**Drip irrigation in Brinjal hybrid " JK8031**	**Yield , Economics**
3	**Livestock & Fisheries**	**Flood**	**Rearing of day old Rainbow rooster poultry chicks**	**Mortality %, income per bird (Rs. /bird), body weight in 4 months, Meat yield, Egg yield, Economics**
		Flood	**Fodder maize in Hydrophonics as supplementary feed during flood**	**Economics, Health condition**
		Flood	**Rearing of day old Khaki Campbell ducklings**	**Mortality %, income per bird (Rs. /bird), body weight in 4 months, Meat yield, Egg yield, Economics**
		Flood	**Feed for ducklings**	**Meat yield , Health and Economics**
		Flood	**Introduction of sirohi buck for breed upgradation**	**Economics**
			Scientific management of Cow shed	**Milk yield , Health and Economics**
			Duck housing	**Meat yield , Mortality rate, Health and Economics**
			Shelter for Goat	**Meat yield , Economics**
4	**Institutional interventions**	**Flood**	**Mushroom cultivation(Paddy straw)**	**Yield and Economics (B:C)**
		Flood	**Seed bank**	**Seeds will be stored for distribution**
		Flood	**Fodder bank"**	**Fodder cuttings will be supplied**
		Losses due to climatic hazards	**Capacity building of farmers and farm women on Integrated farming system over the renovated bund structure**	**No. of farmers/ farm women trained**
		Flood	**Animal health camp**	**Treatment and prevention of disease**

2.0 Non-recurring contingencies – Equipment

Procurement of farm machinery/ implements for Custom Hiring Centre (CHC)

S.No.	*Item*	*Unit cost* (Rs)*	*No. of units*	*Amount (Rs)*
1.	**Tractor drawn Seed cum fertilizer drill**	**70,000**	**1**	**70,000**
2.	**Pre-germinated Paddy drum seeder**	**15,000**	**1**	**15,000**
	Total NRC	**85,000**	**2**	**85,000**

** Wherever possible, subsidy extended by State Government for the machinery to be utilized and accordingly rate adjusted. Wherever required, include equipment for village level small weather station, rain gauge and any other critical equipment for community interventions.*

3.1 Module 1 – NRM interventions

A) Repair / Renovation of existing water harvesting structures & drainage channels etc.

S. No.	*Intervention*	*Dimensions*	*No. of beneficiaries*	*Convergence value, if any (Rs)*	*Value of farmers share, if any(Rs)*	*Cost to project (Rs)*
1	Farm pond renovation	0.6ha	20		Labour 300 nos	60,000
	Sub-total 3.1					**60,000**

B) *In situ* conservation – Resource Conservation Technologies (RCTs)

Item (specify)	*Unit cost Rs/acre*	*No. of demos*	*Coverage*		*Amount (Rs)*	*Remarks*
			Area (acres)	*No. of farmers*		
	A	**B**	**C**	**D**	**A x C**	
Lime application	1600/-	10	-	10	16000/-	Adjustment of water quality for fish farming
Sub-total 3.1					**16000/-**	

3.2 Module II – Crop production interventions
A) Stress tolerant / improved varieties

Intervention	*Description*		*Cost (Rs)/acre*	*No. of demos*	*Coverage*		*Amount (Rs)*	*Remarks (purpose of intervention)*
	Crop	*Variety (s)*			*Area (ac)*	*No. of farmer*		
			A	***B***	***C***	***D***	***A x C***	
\Drought, frost and disease infestation	Pumpkin	Arjun	5600(seed cost)	05	1.00	05	5600	Drought and frost resistant
Flood	papaya	Lunar	20000(plant cost)	05	2.0	05	40000	Perennial plants for income

								during lean period
Short duration varieties (specify)	Sweetcorn	Mishty	9000(seed cost)	05	0.4	05	3600	Low water requirement and day neutral crop
	Marigold	African variety "Seracole"	13200(seedling cost)	17	0.2	17	3000	Income generation
Total							52200	

B) Improved agronomic practices and other crop interventions

Intervention		***Cost (Rs)/ acre***	***No. of demos***	***Coverage***		***Amount (Rs)***	***Remarks (Purpose of intervention)***
				Area (ac)	***No. of farmers***		
		A	***B***	***C***	***D***	***A x C***	
Water saving paddy cultivation methods	DSR	2000	10	10	15	20000	***Wet DSR***
	Aerobic						
	SRI						
Community nursery							
Critical inputs for Integrated crop management (specify crop)		2000	10	10	12	20000	Fertilizer and pesticide application
Other inputs (soil amendments, soil test based nutrient management, bio-fertilizers, other soil and plant health related etc)		2000	10	10	12	20000	FYM application and Dhanicha incorporation
Harvesting and post harvesting related interventions							
Facilitating insurance for crops (specify)							
Income generation activities (Mushroom etc)		50/- per bed	01	300 beds	15	15000	Community mushroom farming
Income generation activities (Vegetables etc.)							
Facilitation of marketing of farm produce							
Any other (specify), add rows if needed							
Total			***31***	***30acre/300 beds***	***54***	***75000***	

4.0 Module 3 – Livestock & Fisheries interventions

4.1 Year round fodder production strategies (annual/perennial fodder) in the village

Season	**Name of fodder**	**Variety**	**Area (ha)**	**Unit cost of demo (Rs)***	**No. of demos**	**Amount (Rs)***	***Remarks (purpose of intervention& farmers covered)***
Kharif	Fodder maize		0.4	4000	10	40,000	Fodder maize will be utilized as feed for large animals
	Total					**40,000**	

*if applicable

4.2 Feed demonstrations for crop residue management / stress management: silage / feed blocks/ mineral mixture (MM) blocks / feed enrichment

Details of feed demo*	**Unit cost of demo (Rs)**	**No. of demos**	**Amount (Rs)**	***Remarks (purpose of intervention& farmers covered)***
a) Poultry starter feed	1500/- per bag (20 no. of bags)		30,000	Feed to be provided to ducklings
b) Silage demos				
c) Feed block demos				
d) Mineral mixture demos	2000	10	20000	Mineral mixture feeding will definitely affect the milk yield of cow
e) Unconventional feed resources (eg., red gram stalks, cotton stalks etc) used in preparation of complete feed				
f) Any other (specify), add rows if needed				
g) Feeding management & disease control programme in livestock (Total Mixed Ration, Mineral block, medicines & disinfectant solution)				
Total			**50000**	

4.3 Improved housing /shelter for protection of livestock against extreme weather

Type of shelter improvement*	**Unit cost of demo (Rs)**	**No. of demos**	**Amount (Rs)**	***Remarks (purpose of intervention& farmers covered)***
Low cost portable poultry /duckery housing system (community)	60000/-	1	60,000	10, round the year income generation
Scientific management of cowshed	8000	05	40000	Proper vaccination and clean surrounding affects the milk ield
Total	**68000**	**6**	**100000**	

**Specify animal type and material used; Plan innovative demonstrations using locally available material*

4.4 Livestock / Fisheries units

A	B	C	D	E	F	G
Enterprise/unit*	**Unit cost (Rs)**	**Convergence share in unit cost, if any** (Rs)**	**Project share in unit cost (Rs)**	**No. of units**	**Cost to Project (D x E) (Rs)**	***Remarks (purpose of intervention& farmers covered)***
Rearing of day old Vanaraj poultry breed	1200		1200	25	30,000	Backyard poultry breeds to be provided to 25 farmers
Rearing of day old white pekin ducklings breed	1540		1540	20	30,800	Meat purpose duckling breeds to be provided to 20 farmers
Yearlings				10,000 (no. of yearlings)	28,800	Catla, Jayanti rohu and Amur carp fish farming @ 3: 4:3 ratio covering
				10,000	10,000	
				13,000	40,000	
Total					**139600**	

** Stress tolerant breeds/piggery/goatery/duckery/backyard poultry/ fisheries/bee keeping etc.*

5.0 Module 4 – Community interventions

5.1 Establishment of fodder banks (hay)

Name of the SHG	Fodder type	Quantity of storage (t)	Unit cost (Rs.)	No. of units	Amount (Rs.)	*Remarks (purpose of intervention& farmers covered)*
Maa saraswati SHG	**Hybrid Napier slips**	**4000 slips**	**4000/-**	**10**	**40000**	**Increase the milk yield and low ci=ost**
Total		**4000**		**10**	**40000**	

5.2 Establishment of Seed banks

Name of the SHG	Crop and variety	Quantity of storage (t)	Unit cost (Rs.)	No. of units	Amount (Rs.)	Remarks (No. of beneficiaries & Period of use)
Maa Saraswati SHG	**Paddy, CR505**	**0.1**	**6000**	**02**	**12000**	**20**
Total		**0.1**	**6000**	**02**	**12000**	**20**

6.0. Capacity Building & Training Programmes

6.1 Training Courses

Theme	Title of training course	Proposed month	No. of participants	Cost to project (Rs.)
ICM	Integrated crop management in rice under flood situation	August	25	1875
	Marigold Seedling raising	November	25	1875
	Off season mushroom cultivation	December	25	1875
	Soil sampling and soil health management	September	25	1875
	Use of traps and trap crop for Pest management	October	25	1875
	Scientific pond management	September	25	1875
	Mushroom cultivation under shade net.	May	25	1875
	Operation of drum seeder for wet DSR	December	25	1875
Total			**200**	**15000/-**

6.2 Field Days

Theme	Title of training course	Proposed month	No. of participants	Cost to project (Rs.)
Crop production	Field day on cultivation of CR505, CR 506	December	50	3000
	Field day on post flood potato cultivation	February	50	3000
	Field day on off season mushroom cultivation	September	50	3000
	Field day on Sweetcorn	September	50	3000
Total			**200**	**12000**

6.3 Exposure Visits

Place of visit	Purpose of visit	Proposed month	No. of participants	Cost to project (Rs.)
Kendrapara	Exposure to NICRA village	March	25	20000
Total				**20000**

7.0 Up-scaling of Successful Interventions (Practices which can be scalable with minimal cost are to be selected for scaling up)

Sl.No.	Name of technology	Unit cost/ha (Rs.)	No. of farmers covered	Cost to project (Rs.)	Remarks (justification)
1.	Mushroom unit	50/- per bed(50 beds)-2500/-	10	25,000	Mushroom cultivation throughout the year
2.	Vanaraja breed rearing in backyard	35/- per bird 20 nos – 700/-	20	15000	Lean season
3.	Napier cultivation	2000/-	10	20000	Low milk yield from CB cows, jersey cows
4	Wet DSR by drum seeder	2000/-	20	40,000	Summer paddy cultivation
5	Dry DSR by Tractor drawn SFD	4000/-	10	40,000	To avoid loss of paddy due to waterlogging and delay in transplanting
6	Stocking of Amur carp	5000/-	05	25,000	To stimulate the early growth
7					
Total		**16200**	**75**	**165000**	

8.0 Contractual Manpower (SRFs)

Category	Rate/month (Rs.)	No. of positions	No. of months	Amount (Rs.)
SRF	31,000 plus HRA	1	12	390600
Total	31,000 plus HRA	1	12	390600

9.0 Media Products to be developed (brochure/bulletin)

Item description	No. of copies	Amount (Rs.)
Flex board and flex	30	15000
NICRA VIDEO	1	20000
Publications	2	16000
Total		**51000**

Summary of budget Estimates for 2022-23 (Tentative)

S.N.	***Item***	***Amount (Rs)***
1.	Procurement of farm machinery/implements for CHC	85000
2.	Repair/ Renovation of existing water harvesting structures & drainage channels etc.	60,000
3.	*In situ* conservation – Resource Conservation Technologies (RCTs)	16000
4.	Stress tolerant/ Improved varieties	52200
5.	Improved agronomic practices and other crop interventions	75000
6.	Year round fodder production strategies (annual/perennial fodder) in the village	40000
7.	Feed demonstrations for crop residue management / stress management: silage / feed blocks/ mineral mixture blocks / feed enrichment	50000
8.	Improved housing /shelter for protection against extreme weather	100000
9.	Livestock/fisheries units	139600
10.	Establishment of fodder banks (hay)	40000
11.	Establishment of seed banks	12000
12.	Training courses	15000
13.	Field days	12000
14.	Exposure visits	20000
15.	Up-scaling of successful interventions	165000
16.	Contractual manpower (SRFs)	390600
17.	Media products to be developed	51000
18.	Any other contingencies (TA etc)	40000
	Grand total	**1363400**

Date: 30.4.2023 **Signature of PI/PC, NICRA- KVK**