Federal Ministry for Economic Cooperation and Development

SODI!

Shibani Murmu

Building a Climate-Resilient Livelihood Through Integrated Farming Practices



Farmer	Shibani Murmu, woman farmer	**Family**	6 members
Village	Bhuyadi	**Gram Panchayat**	Simla-Dhanera
Block / District	Kashipur / Purulia	**Joined project**	2024
SHG	Adibashi Gelbar Paris Mahila Samity	**Farmer group**	Sarnadharam Samity
Supported by	DRCSC	**Livelihood**	Rainfed agriculture + occasional masonry

Metric	Explanation	Metric	Explanation
₹900–1,000	Saved / month from bio-fuel	**0.5 bigha**	Fallow land revived
₹9,500	Total biogas savings till today	**≈ 8**	Types of local variety of seed preserved
₹1,400	Saved / month on vegetables	**≈ 87 kg**	Vermi-compost made worth of Rupees 1740 (20/kg)
2 → 9	Goats in herd at present (₹5,000 from sale of 1 goat this year)	**3 kg**	Fish fingerlings stocked
8–9	Households benefit indirectly from the farm pond		

Background: Farming on the Edge of Rain

Shibani liveswith her family of six in Bhuyadi village, Simla-Dhanera Gram Panchayat, Kashipur block, Purulia district. The family depended mainly on agriculture, but Purulia is predominantly rainfed, and inadequate, irregular rainfall often caused crop losses and hurt farm income. The family occasionally did masonry work to supplement earnings.

In 2024 Shibani joined the DRCSC-supported SHG Adibashi Gelbar Paris Mahila Samity and the farmer group Sarnadharam Samity. Training and support covered group strengthening, nutrition management, livestock rearing, ecological agriculture, seed preservation, and awareness of government social security schemes and livelihood support programmes. The family diversified its livelihoods, adopted more sustainable farming, and, most significantly, began integrating its livelihood components so that resourcesfrom one activity feed another.

Aspect	Before	Now
Income	Agriculture, occasional masonry	Crops, goats, hens, ducks, fish, vegetables
Crop risk	Irregular rain, crop losses	Mixed cropping; hapa water; double/triple cropping
Land / seeds	Fallow land; external seed	0.5 bigha revived; own repository of ≈ 8 seed types
Inputs / energy	External inputs; firewood, smoke, drudgery	Own vermicompost and manure; biogas
Food	Market vegetables bought	Fresh, diverse home-grown vegetables

Integrated Farming: How Resources Flow

Different activities complement one another, reducing external inputs, improving resource efficiency and strengthening resilience.

From	To	Purpose
Green and dry crop residues (fields, nutrition garden)	Vermicompost pit	Composting
Livestock manure	Fields; biogas unit; vermicompost	Fertility, fuel, compost
Biogas slurry	Vermicompost pit	Productive reuse of organic resources
Homestead ditch (hapa)	Fish + water storage	Water for farming
Ditch embankments	Spinach, bottle gourd, ridge gourd	More from available land
Seeds from past harvests	Next season's planting	Local seeds, less outside dependence

Seven Livelihood Components: What Changed

Component	What the family did	Result and why it matters
1. Nutrition Garden	Garden on ≈ 3 decimals of homestead land supplying fresh vegetables.	Saves ≈ ₹200 every 4 days (≈ ₹1,400/month). Fresh, diverse, nutritious diet; less reliance on costly market produce.
2. Livestock Rearing	Received 2 goats; herd grown to 9; sold 1 goat for ₹5,000. Also keeps 10 hens and 3 ducks.	Extra asset and income when needed. Manure goes to fields, biogas and vermicompost: nutrient recycling, less waste.
3. Ecological Agriculture	Brought ≈ 0.5 bigha fallow land into mixed cropping of oilseeds and pulses; single-stick paddy method; indigenous paddy varieties.	Diversified production, lower single-crop risk, better soil fertility, more use of local seeds. Harvest figures on page 3.
4. Seed Preservation	Saves seeds from past harvests and uses them seasonally; personal repository of ≈ 8 seed types.	Assured planting material, less purchased seed, crops suited to local conditions, self-planned seasons.
5. Homestead Ditch (Hapa)	Project-supported ditch for water; embankments grow bottle gourd, pumpkin, ridge gourd; stocked ≈ 3 kg fish fingerlings.	Shift from single-season to double/triple cropping; fish income opportunity; benefits ≈ 8–9 other households indirectly.
6. Vermicomposting	After training at the project service centre, makes compost from crop residues and biodegradable waste.	≈ 87 kg produced, applied on 2 bighas (fields + garden). Less purchased soil input; links ecology with livelihoods.
7. Biogas	Biogas unit fed by livestock waste replaces firewood for cooking.	Saves ₹900–1,000/month (₹9,500 so far). Less time and labour collecting firewood, less smoke; slurry recycled to vermicompost.





Ecological Agriculture: Harvest Record

Season	Crop	Quantity	Area
Kharif (previous)	Indigenous Keralasundari paddy	≈ 60 kg	0.45 bigha
Kharif (previous)	Roselle	≈ 15 kg	0.5 bigha
Kharif (previous)	Pigeon pea	≈ 20 kg	0.5 bigha
Rabi	Mustard	≈ 80 kg	1 bigha (all Rabi crops)
Rabi	Linseed	≈ 4 kg	1 bigha (all Rabi crops)
Rabi	Pea	≈ 12 kg	1 bigha (all Rabi crops)
Rabi	Chickpea	≈ 14 kg	1 bigha (all Rabi crops)

THIS SEASON *Roselle is grown again from preserved seed, intercropped with pigeon pea on 0.5 bigha. Harvest yet to be assessed.*

Conclusion: Towards an Integrated and Resilient Livelihood

Shibani Murmu's experience shows how integrating multiple livelihood components strengthens a rural household's capacity to manage climatic and economic uncertainties. With DRCSC's support the family has diversified agriculture and livestock, brought fallow land into cultivation, set up a nutrition garden, conserved seeds, started fish cultivation, produced vermicompost and adopted biogas.

The connections matter most: crop residues and manure are reused as resources, the homestead ditch serves several purposes, and seed preservation keeps cultivation going across seasons.

Reduced expenditure	Vegetables ≈ ₹1,400/month; cooking fuel ₹900–1,000/month from bio-gas
Improved nutrition	Fresh, diverse, home-grown vegetables
Diversified livelihoods	Goats, poultry, ducks, fish, multi-season crops
Better resource use	Waste recycled across compost, biogas and fields
Self-reliance	Own seeds, own compost, own water source
Wider benefit	Hapa indirectly benefits ≈ 8–9 households
Sustainability	Indigenous varieties, ecological farming, nutrient recycling

CLOSING LINE *The family's journey illustrates the potential of integrated, climate-resilient livelihood practices to strengthen household self-reliance while supporting ecological sustainability.*





