

Post-flood Soil Reclamation, Crop Diversification and Scientific Water Management Tripled Farm Income



Post-flood visit of IIWM scientists



Land reclamation by adding sand in the clayey soil to make the land suitable for groundnut cultivation



Cultivation of Hybrid Okra



Cultivation of Hybrid Sunflower



Receiving IARI Innovative Farmer Award from Union MOS Ag Minister

Contributed by

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CONTEXT

- Shri Radhashyam Biswal (Village- *Lokapala*, Block- Kanas, Puri, Odisha).
- Mr. Biswal, with an area of 2 ha, reported flooding and submergence of his fields during the rainy season and sediment deposition in the fields, making it difficult to grow good crops in the *rabi* season.
- After interaction with the scientists of the Index Based Flood Insurance (IBFI) project of ICAR-IWM, Mr. Biswal learned about the post-flood management practices to promote agriculture resilience on his farm and in the village.

INTERVENTIONS

- As part of the post-flood soil reclamation strategy, over 80 ha of the village were de-silted, and the silts were added to clay soils nearby to make the soil more fertile.
- Submergence-tolerant paddy varieties, namely, Swarna Sub-1, Samba Masoori Sub 1, CR 1009 Sub, were introduced during the *kharif* season, and groundnut and high-value vegetable crops were introduced during the *rabi* season as a crop diversification strategy.
- The adoption of water management practices such as piped irrigation conveyance, sprinkler irrigation, polyethylene mulching and dry leaf mulching in vegetable crops increased water use efficiency and yield.
- Mechanization helped complete activities on time and Mr. Biswal adopted enterprise diversification by adding dairy, poultry, pisciculture (1.6 ha), and paddy straw mushroom units (200 beds/month).

OUTCOMES

- Paddy yield increased to 4.5-5 t ha⁻¹ (B:C ratio 2.70) from his flood-prone fields as against 2.5-3 t ha⁻¹ earlier. Net farm income increased from ₹2,16,000 per annum in 2015-16 (pre-intervention period) to ₹7,40,000 per annum in 2021-22, indicating a 3.43-fold increase.
- Achievements and leadership of Mr. Biswal were appreciated and recognized as a progressive and innovative farmer, and he received the '*ICAR-IARI Innovative Farmer Award 2023*'.
- Mr. Biswal hand hold other farmers of the village to enhance their livelihood by adoption of validated technologies.