

ENHANCING CLIMATE RESILIENCE

Insight from the ECRICC Project in Odisha

ISSUE 1 | JANUARY - JUNE 2025

Shri Ganesh Ram Singhkhuntia
Hon'ble Minister Forest,
Environment & Climate Change Department
Government of Odisha



Odisha, a coastal state, is highly vulnerable to climate change. Safeguarding our communities and improving their lives is our utmost priority. I extend my heartfelt congratulations to the ECRICC (Enhancing Climate Resilience of India's Coastal Communities) team for their commendable efforts in bolstering the climate resilience of coastal communities in Odisha. I commend the collaborative efforts of Green Climate Fund, Ministry of Forest, Environment & Climate Change, Government of India, United Nations Development Programme (UNDP) and the Department of Forest, Environment & Climate Change, Government of Odisha in driving this initiative forward.

The Government of Odisha is committed to safeguarding the lives of the coastal communities and ensuring a sustainable and climate-resilient future for all.

Ganesh Ram Singhkhuntia
Ganesh Ram Singhkhuntia

In this issue

ECRICC at a Glance

Key Focus Area

District Overview

Editorial Team

EDITOR

Tazeen Qureshy
Communications
Associate, ECRICC, SPMU
Odisha (UNDP)

SUB-EDITOR

Bhabna Mohanty
Monitoring & Evaluations
Associate, ECRICC, SPMU
Odisha (UNDP)



Shri Satyabrata Sahu
Additional Chief
Secretary
Forest, Environment
and Climate Change
Government of Odisha



Shri Prem Kumar Jha
Principal Chief Conservator
of Forests, (WL) & CWLW,
Odisha and State Project
Director ECRICC Project,
SPMU Odisha

It is my pleasure to introduce the inaugural newsletter of the ECRICC initiative (Enhancing Climate Resilience of India's Coastal Communities). It fills me with immense pride to note that the ECRICC Odisha project was awarded the first prize in the Government sector at the Seafood Expo Bharat 2025 held in July 2025 in Chennai, Tamil Nadu. This accolade stands as a testament to the project's unwavering commitment to coastal sustainability and community resilience.

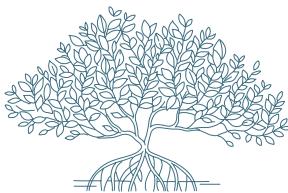
I convey my sincere appreciation to all the stakeholders for their continued support of this critical initiative.

Satyabrata Sahu
Satyabrata Sahu

Launching our inaugural newsletter fills me with immense pride for our team's achievements. From restoring fragile mangroves and coastal watersheds to promoting sustainable livelihoods through System of Rice Intensification (SRI), mud crab farming, and ornamental fisheries, our work demonstrates a deep commitment to the cause. I extend my deepest appreciation to our state and district teams, technical partners, facilitating NGOs, climate champions and the communities who have placed their trust in us.

On behalf of the ECRICC Odisha team, I reaffirm our commitment to delivering impactful work for the people living in the coastal communities.

Prem Kumar Jha
Prem Kumar Jha



ECRICC AT A GLANCE

The Enhancing Climate Resilience of India's Coastal Communities (ECRICC) project is transforming Odisha's coast by restoring ecosystems, strengthening livelihoods, and empowering communities to tackle climate change.

ECRICC is a collaborative initiative between the Green Climate Fund (GCF), Ministry of Forest, Environment and Climate Change, Government of India, Department of Forest, Environment and Climate Change, Government of Odisha and United Nations Development Programme (UNDP).

Key Focus Areas

Resilient Coastal Ecosystems

Mangrove Restoration : India is home to vast mangrove forests which act as a natural barrier against cyclones, storm surges and tidal waves by stabilizing shorelines and preventing erosion. The ECRICC project has undertaken comprehensive mangrove restoration along Odisha's coast to reduce the vulnerability of extreme weather events. The initiative includes mangrove plantation, fishbone channel creation, creek deepening and the establishment of mangrove nurseries to restore and fortify the coastal environment.



Project Period

January 2019 to June 2027

4 DISTRICTS

7 LANDSCAPES

13 BLOCKS

167 GRAM PANCHAYATS

968 VILLAGES

9.18 LAKH POPULATION IN PROJECT AREAS

Seagrass and Saltmarsh restoration: The ECRICC project in Odisha is pioneering the restoration of seagrass and saltmarsh ecosystems through an innovative, science-community partnership model. With technical support from IIT Bhubaneswar, it combines advanced research on coastal hydrodynamics and carbon stock assessment with community-led restoration practices, ensuring climate resilience while enhancing biodiversity and blue carbon storage



Watershed Restoration: Watershed restoration is a key component of the ECRICC project to enhance water conservation, improve soil stability and protect local biodiversity. Through strategic interventions such as loose boulders check dams, sunken pits, earthen bunds and urban plantations, the initiative is significantly enhancing the region's climate resilience.



Climate-Adaptive Livelihoods

Mud crab farming: ECRICC project is revolutionizing crab cultivation as a sustainable livelihood option for coastal communities through training programmes, provision of essential resources and improved market linkages. The project also plans to establish Odisha's first crab hatchery to support local fishing community with high-quality and affordable crablets.



System of Rice Intensification (SRI): The project encourages farmers to adopt System of Rice Intensification, a climate-smart agriculture practice that simultaneously increases rice yields while reducing greenhouse gas emissions. The ICAR-National Rice Research Institute is leading key research including quantification of GHG emissions from SRI cultivation. Field results show SRI delivers multiple benefits including higher yields, reduced water dependency and improved soil health.



“At ECRICC, we are committed to restoring fragile ecosystems while developing climate-friendly livelihoods. This award validates our approach in benefitting coastal communities. ”

- Spandita Kar
State Project Manager
ECRICC Odisha

Ornamental Fisheries: The ECRICC project promotes freshwater ornamental fish farming as a climate-adaptive livelihood, supporting farmers and aggregators, with technical expertise from Central Institute of Freshwater Aquaculture (CIFA). The beneficiaries are provided with handholding support on species selection and breeding, water quality and disease control, sustainable feeding practices, tank and pond management and market access.



Strengthened Governance

Under the project, 304 climate champions have been trained across 7 landscapes to drive positive change in the grassroots. The champions are identified from within the community and receive training in climate adaptation, livelihood resilience and ecosystem restoration. The project also supports women-led self-help groups to implement activities.

ECRICC Bags Top Award at Seafood Bharat Expo 2025

ECRICC Odisha was awarded first prize in the Government Sector at the Seafood Expo Bharat 2025 (SEB-25), held in Chennai in July. Organized by the Marine Products Export Development Authority (MPEDA), the event featured a 14-member Odisha delegation. The group, comprising officials, climate champions, and crab farmers, highlighted the state's efforts in promoting climate-resilient aquaculture and inclusive community-based development.



KENDRAPARA

Kendrapara district, situated in Odisha's Central Coastal Plain, encompasses a 48 km coastline along the Bay of Bengal from Dhamra Muhan to Batighar. The region is ecologically significant for housing Bhitarkanika National Park, India's second largest mangrove ecosystem that serves as both a biodiversity hotspot and natural coastal defense system.

The district faces acute climate vulnerabilities, including frequent high-intensity cyclones (Phailin, Fani, Yaas) that cause widespread damage to coastal communities. Rising sea levels have accelerated shoreline erosion and salinity intrusion, threatening both agricultural productivity and Bhitarkanika's ecosystem.

With the majority of livelihoods dependent on agriculture and fisheries, this reliance on ecosystems makes the region particularly susceptible to compounding climate impacts.



Blocks and GPs covered: 3 Blocks, 51 GPs

Beneficiaries Reached: 7812

Climate champions: 106

FNGO providing support: Nature's Club

I organize community meetings to discuss climate change impacts and solutions, from plastic-free campaigns to sustainable farming. Having lived through the harsh realities of climate change, I now help my community to make informed choices. „

- Mamata Mai
Climate Champion



Success Story

Climate-Smart SRI transforms farming in Kendrapara

In Kharinasi village, teacher Subrat Kumar Roul first learned about climate-adaptive livelihoods through the ECRICC Odisha initiative. Guided by Climate Champion Samikshya Priyadarsini Nauri, he received detailed technical assistance on the System of Rice Intensification (SRI) method, including raised nursery beds, Bijamruta seed treatment, and single-seedling transplantation techniques.

Though initially skeptical, Subrat implemented SRI on a demonstration plot with ECRICC's support, which provided organic fertilizers and coriander seeds. Despite facing challenges like low rainfall, his careful adherence to the guidance yielded transformative results - his SRI fields consistently outperformed conventional cultivation methods.

Today, Subrat champions sustainable agriculture in his community, demonstrating how climate-adaptive strategies like SRI can simultaneously ensure food security while protecting natural resources.

GANJAM

Ganjam district, situated in Odisha's southern coastline, encompasses a 60 km coastline along the Bay of Bengal characterized by low-lying areas, river mouths, and deltaic regions.

The district faces severe climate vulnerabilities, including frequent high-intensity cyclones that trigger storm surges, coastal erosion, and flooding. Rising sea levels accelerate shoreline erosion – severely impacting areas like Ramayapatnam (Bahuda) and Podampeta (Chilika) – alongside erratic rainfall causing drought and salinity intrusion. Rising temperatures further intensify cyclonic risks.

With livelihoods heavily dependent on fisheries and agriculture, this reliance on climate-sensitive sectors compounds vulnerabilities, leading to land loss, displacement, and threats to food security. The ECRICC Project operates in Rangeilunda, Chikiti, Ganjam, and Khallikot blocks to address resilience.

Block and GPs covered: 4 Blocks and 40 GPs

Beneficiaries Reached: 2989

Climate Champions: 42

FNGO: LIPICA & Pallishree

“We are getting a lot of support, both financially and technical expertise. For the first time, I am raising hatchery-bred crablets and am confident of a good harvest. ”

- Debraj Behera
Crab Farmer



Success Story

Bharati Sethi champions sustainable livelihoods Solutions for Community

Bharati Sethi's journey from a tutor to a Climate Champion showcases remarkable resilience. Joining the ECRICC project in February 2025, she received comprehensive training in scientific crab culture and SRI, which empowered her to guide local farmers. Though she faced initial resistance from community members, she developed a strong rapport after conducting regular meetings. Gradually, she mobilized a cluster of 12 crab farming units and 25 SRI farmers. In July this year, she was part of the award-winning Odisha delegation at the Seafood Expo Bharat 2025, where she shared her success story.



BALASORE

Balasore district in northern Odisha spans 3,800 sq km along the Bay of Bengal, featuring low-lying coastal plains, sandy beaches, and the fertile deltas of Subarnarekha and Budhabalanga rivers. This geography makes it highly vulnerable to climate impacts.

The district faces frequent cyclones like Phailin (2013), Fani (2019), and Yaas (2021), which cause widespread damage to infrastructure and livelihoods. Coastal erosion, exacerbated by rising sea levels and human activities, threatens blocks like Bhograi and Baliapal.

The dense population depends heavily on climate-sensitive agriculture and fishing, which are threatened due to recurrent flooding in riverine and coastal areas.

Blocks and GPs covered: 2 Blocks and 15 GPs

Beneficiaries reached: 4564

Climate champions: 37

FNGO: Balasore Social Service Society

“*ECRICC has brought a new hope to our climate-vulnerable communities. We now practice climate-smart livelihoods – SRI for water-efficient rice, profitable mud crab farming, and ornamental fishery. Our mangroves act as a natural barrier against cyclones. As a climate champion, I am proud to guide this transformation towards a sustainable future. „*

- Mamata Mai
Climate Champion



Success Story

Mud crab farming turns tide for Basanta Mangal

In Kirtania village, rampant shrimp farming had degraded the coastal ecosystem. Basanta Kumar Mangal, a farmer residing in the village decided to try mud crab cultivation through the ECRICC initiative. With support from experts, climate champion and other stakeholders, he was given handholding support on pond preparation, water quality management and feeding schedules.

The initiative yielded transformative results, and his crab farm became more profitable, ensuring a higher income that he could use to fund his children's education. Basanta now champions the climate-adaptive livelihood option and has inspired others.



PURI

Puri Forest Division has a total forest area of 80.967 sq.km (4.57% of its geographical area), comprising Reserved, Proposed Reserved, and Village Forests. It is bounded by the Bay of Bengal, Devi River, Rajnagar Wildlife Division (east), Chilika Wildlife Division and Khordha Forest Division (west), and City Forest Division (north). The region spans a 150.40 km coastline characterized by flat coastal plains and geological formations such as alluvial deposits, raised beaches, laterites (Pleistocene), and Tertiary beds (Miocene).

Forests primarily consist of planted species like Casuarina, Cashew, Eucalyptus, and Acacia auriculiformis, alongside natural vegetation. The coastline faces cyclones, erosion, and sand dune shifts, exacerbated by climate change. Casuarina plantations help mitigate sea rise impacts, while mangroves near Devi Mouth act as natural barriers, protecting coastal areas from storms and erosion.

The local economy is predominantly dependent on agriculture and fishing, both of which face significant challenges due to erratic rainfall, frequent floods, prolonged droughts, soil and water salinization, and sand casting of coastal farmlands.

Success Story

From Chemical Farming to Sustainable Practices

Maharani Sahoo, a farmer from Panasapada village in Puri, once relied on chemical farming like most of the farmers in her area. However, the rising input costs and degrading soil condition forced her to seek alternatives. The ECRICC program introduced her to SRI and she got hands-on training on planting methods, water management, soil health, and pest control strategies.

She decided to experiment with SRI on a 0.1 hectare plot in the 2024 Rabi season. The results were remarkable; she harvested 1,275 kg (12.75 quintals) of rice, doubling her previous yield of 600 kg under chemical farming. Her success has inspired fellow farmers to explore SRI methods.

Blocks & GPs covered: 2 Blocks & 59 GPs

Beneficiaries Reached: 10,074

Climate Champions: 102

**FNGO: Humara Bachpan Trust (HBT),
Society for Women Advancement**

“With the support of ECRICC project, our SHG took up crab farming in brackish water. By leasing the pond of a local villager, we transformed unused land into thriving source of income and hope. In just one season, we earned a profit of Rs 1.65 lakh,” Member, Maa Adina SHG in Astaranga, Devi Mouth Landscape. ”

- Bijaylaxmi Muduli
SHG Member





ECRICC Odisha and IIT- Bhubaneswar, signed an MoU to design and implement restoration and conservation efforts for seagrass and saltmarsh ecosystems.



An MoU was signed between SPMU-ECRICC and Brahma Kamal Research LLP to enhance planning, implementation and scaling of seaweed farming initiatives.



The ECRICC Odisha team at the Seafood Expo Bharat 2025 in Chennai, demonstrating resilient aquaculture practices like mud crab farming.



State Project Management Unit
Gol-GCF-GoO-UNDP Project

Enhancing Climate Resilience of India's Coastal Communities

Administrative Building, 1st Floor, RPRC Campus
Bhubaneswar-751015 | ecrcc.spmu@odisha.gov.in



www.ecricc.org