

State-level Consultation Workshop on Policy Coherence in the Food, Land, and Water Systems: Case Study of Odisha, India

Garima Taneja, Upasana Negi, Shashwat Shukla, Tejaswi Joshi, Kangkanika Neog, Suparana Katyaini, Archisman Mitra, Suchiradipta Bhattacharjee, Nitin Bassi and Shilp Verma

Background

The CGIAR Initiative on National Policies and Strategies (NPS) has been co-created with national and international partners with the main objectives of building policy coherence and integrating policy tools at national and subnational levels in six countries in Africa, Asia, and Latin America. Under this initiative, the Council on Energy, Environment and Water (CEEW) has been engaged as a partner by the International Water Management Institute (IWMI) to collaboratively research the policy landscape at the National level in India in the food, land, and water (FLW) space.

The national-level consultation drew on state-level examples concerning specific policies. Odisha emerged as an interesting case for further exploring the policy coherence in the food, land, and water sectors through a deep dive. Therefore, in continuation of our efforts at the national level, we are deep-diving into the case of the Indian state of Odisha in this phase to derive context-specific recommendations for policy coherence at a state level. The consultation was organised in this context.



Objectives

The state-level consultation was organized to meet the following objectives:

1. To share the key findings from the case of Odisha to seek feedback from the stakeholders on finding solutions to the complex challenges of the food, land, and water systems.
2. To facilitate deliberations and knowledge exchange on policy coherence in the following nine important policies governing Odisha's food, land and water systems.
 - Pradhan Mantri Matsya Sampada Yojana (PMMSY)
 - Watershed Development Component-PMKSY 2.0 (WDC-PMKSY 2.0)
 - Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
 - Rashtriya Krishi Vikas Yojana - Per Drop More Crop (RKVY-PDMC)
 - Mission on Integrated Development of Horticulture (MIDH)
 - Odisha Millet Mission (OMM)
 - Odisha Integrated Irrigation Project for Climate Resilient Agriculture (OIIPCRA)
 - Krushak Assistance for Livelihood and Income (KALIA) and
 - Canal Lining and System Rehabilitation Programme (CLSRP)
3. To bring together the policymakers, implementing agencies, academics, and civil society organisations to reflect jointly on context-specific challenges and opportunities in enhancing policy coherence.

Session Opening and Inaugural Ceremony



The anchor welcomed all the participants on behalf of Council on Energy, Environment and Water (CEEW), the International Water Management Institute (IWMI) and the Department of Agriculture and Farmers' Empowerment in Odisha. The session commenced by presenting tokens of gratitude to Dr Arabinda Kumar Padhee, IAS (Principal Secretary, Department of Agriculture and Farmers' Empowerment, Government of Odisha), Smt. Guha Poonam Tapas Kumar IAS, Chief Executive Officer, Odisha Rural Development and Marketing Society (ORMAS) and Shri Rohit Kumar Lenka, IFS, Director, Directorate of Horticulture. Three publications of CEEW – the G20 Compendium on Best Practices for Water Management, Ripples: India's Sustainable Water Management Story, Millet Mantra: The Culinary Centrepiece of India's G20 Presidency were also introduced and copies handed over to them. Dignitaries and CEEW senior team members inaugurated the session by watering

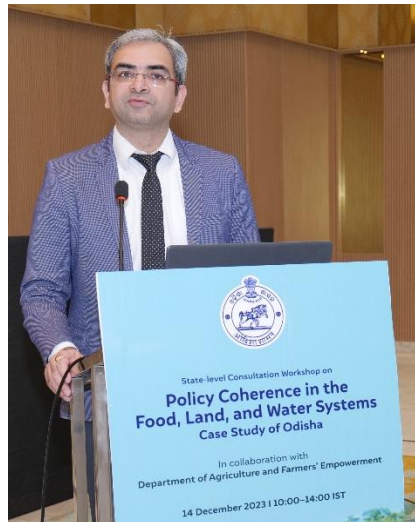
a plant.

Welcome Remarks and Introduction to the Collaborative Study

Mr Shilp Verma (Senior Researcher, Water-Energy-Food Policies, IWMI) welcomed the participants and introduced NPS initiative, and the work done at the national level, with the guidance of NITI Aayog in India. Described ongoing works in Odisha to gain insights into policy coherence. He highlighted the objective of gathering key lessons from the state-specific context of Odisha, and its importance for other states of India with similar context as well as cross-country collaboration.

Mr Nitin Bassi (Senior Programme Lead, Sustainable Water, CEEW) elaborated on their engagement in the NPS initiative. He emphasised on Odisha's pioneering role in implementing relevant interventions and explained the workshop's aim as gaining feedback on preliminary policy coherence analysis in Odisha for the final report.

Mr Saahil Parekh (Programme Lead, Sustainable Food Systems, CEEW) gave a brief overview of the other initiatives undertaken by CEEW in Odisha with reference to the transition towards millets, climate-smart agriculture practices, green economy, and cleaner energy.



Presentation of Key findings

Mr Archisman Mitra (Water Resources Researcher, IWMI) and Dr Suparana Katyaini (Programme Lead, Sustainable Water, CEEW) delivered the presentation on the project in Odisha.

Mr Mitra initiated the presentation by explaining the context of the study including food, land and water interlinkages and methodology for in-depth analysis of the policy coherence in Odisha.

Dr Katyaini outlined the key objectives of nine policies, their intended impacts and their geographic coverage. She highlighted the key analysis emerging from the study and further presented the key findings and proposed recommendations based on the analysis. The emphasis was on important examples of convergence efforts, and lessons learnt in terms of policy coherence, and the opportunities identified for further improvements drawing on these lessons.

Key analytical findings on policy coherence which were gathered through consultations with stakeholders were presented. These were classified into lessons learnt and best practices for enabling policy coherence among nine policies which are being implemented in Odisha. Some of the proposed recommendations are: - There should be a paradigm shift from output-based impact evaluation towards outcome-based, with the coverage of impacts on the common impact area of poverty reduction, livelihood, and job creation. Further, it would be crucial to expand the focus to include other important impact areas such as climate change adaptation and resilience, and how sustainable development goals can enable policy coherence. The evaluation process should understand outcomes from a holistic perspective, by aiming the synergies and trade-offs between policies using relevant indicators that cover food-land-water interlinkages such as irrigation efficiency, soil health, and farmers' income. Convergence on marketing provides an important avenue for coherence between policies, as well as value addition to

enhance farmers' income. Additionally, there is potential for further convergence with policies on fisheries and horticulture through establishment of dedicated departments for market-oriented skilling and formation of Farmer Producer Organisations.

The participants were requested to share their thoughts on the presentation during the moderated session.

Keynote Address

Dr Arabinda Kumar Padhee, IAS (Principal Secretary, Department of Agriculture and Farmers' Empowerment, Government of Odisha)



Dr Arabinda Kumar Padhee stated that the nexus and systemic thinking and integrated solutions have gained significant momentum in policy research and implementation. It is an emerging area as it requires a shift from thinking in silos, to a more holistic perspective, thereby seeking integrated solutions to guide the policy decisions. For the food, land and water nexus, access to land and water resources is key to scaling up agricultural efficiency and productivity. He also noted the importance of looking at the nexus to include energy, in spite of energy usage for

agriculture being in a nascent stage in Odisha. He highlighted Odisha's focus on leading a science-lead and evidence-based policy space. He further emphasised on the need to recognise the collaboration with research institutions and think tanks to support evidence-based policymaking, and encouraged private organisations, CSOs, and other entities to contribute to this transformative change.

He spoke about three critical stories from India on resource use and (in)efficiency - how sugarcane in Maharashtra has only four per cent crop area but utilises 60 per cent of irrigation water; high virtual(embedded) water exports especially through rice exports; and groundwater depletion in Punjab due to exploitative use for agriculture since the Green Revolution. Finally, he highlighted some solutions to address the nexus like solarisation of agriculture, volumetric pricing of water, improved efficiency of utilisation of green water through watershed-based planning, soil moisture retention, prioritising soil health, studying nutritional outcomes through crops like pulses and crop diversification. Encouraging crop diversification towards water-efficient crops, particularly millets, through incentives and creation of new markets, has had positive impact. The successful implementation of the Odisha Millet Mission serves as a notable example of the efforts to promote crop diversification. The millet procurement and value chain creation has set up a positive move in Odisha. Incentivising farmers to adopt these changes and raising consumer awareness as well as encouraging behavioural changes are critical; at the same time, keeping income generation as a key focus.

Address

Smt Guha Poonam Tapas Kumar IAS, Chief Executive Officer, Odisha Rural Development and Marketing Society (ORMAS)

She emphasised on the importance of Farmer Producer Organisations for market-led livelihoods and poverty reduction. She stressed the need for comprehensive value chain development, by including quality assurance, sustainable practices, branding, marketing and effective implementation of business plans and detailed project reports (DPRs). She too emphasised on the importance of strengthening the agriculture value chain. She highlighted that interdepartmental convergence at the district and state levels are crucial to effectively unlock these potentials.

Odisha Millet Mission, is a successful example, showcasing how convergence has taken place. She also proposed that watersheds can act as the platforms where all the schemes like MGNREGS and livelihood missions can converge. She recommended utilisation of poverty mapping indicators and door-to-door surveys to set targets and assess achievements of convergence efforts.

This approach can lead to policy coherence on water and soil adaptability, ultimately resulting in effective policy outcomes. The Rural Industrial Parks at the block level are suggested as a point of convergence. The importance of market linkages through partnerships like facilitating movement of raw materials to markets within the same block, integrating initiatives like poultry farms, utilising agricultural produce from MGNREGS, ensuring good quality packaging and branding were emphasised as important steps.

Shri Rohit Kumar Lenka, IFS, Director, Directorate of Horticulture

Shri Rohit Kumar Lenka reflected on horticulture policies and schemes being operated in the state and existing provision for coherence and convergence; and specific focus of these policies and schemes on prioritising marginal farmers and women beneficiaries, aiming to uplift their livelihoods. He further acknowledged the study's recommendations to improve coherence. With specific reference to Odisha Millets Mission, he indicated that diversification of crops is happening from water-intensive crops like rice towards less water-intensive and climate resilient millets. This also provides income and market access.

He highlighted the success of several missions in the state like the Spices Mission, the Mushroom Mission, the Jackfruit Mission which are centred on enhancing farmers' income. The Special Programme on Agriculture Production Cluster in Tribal Regions of Odisha is another such initiative that emphasises on convergence from different schemes across ten directorates and departments. Thereby bringing together diverse departments and civil society organisations (CSOs) to empower women farmers. CSOs are active partners and in collaboration with women producer groups and companies to boost the income of women farmers.

He highlighted the role of three technological centres under the Jackfruit Mission which invites partnerships, prioritising gender equality and social inclusion. In Odisha, efforts are also underway to secure the agriculture production value chain under state sector schemes to focus on post-harvest of horticultural produce through collaborations with 30 agricultural marketing agencies to secure better prices. He emphasised on the solar cold rooms which are being set-up through the National Horticulture Mission, targeting a minimum of 1000 numbers covering each cluster. Further Operation Greens scheme provides 70 per cent subsidy as transportation assistance and for storage. He emphasised that the state-specific policies complement central government policies to address local needs.

Suggestions and Recommendations from participants received in the moderated discussion

Smt Sarita Dhanwar, Additional Secretary to Government, Department of Agriculture and Farmers' Empowerment, Government of Odisha



Smt Dhanwar emphasised that effectively utilising limited land and water resources for agricultural production involves implementing strategies like precision farming, crop rotation, and water-efficient irrigation techniques. Creating proper markets for agricultural produce includes establishing farmer markets, direct marketing channels, and supporting infrastructure for transportation and storage facilities. She also said that encouraging the cultivation of climate-resilient crops that are adapted to local conditions and require fewer resources is crucial. Additionally,

investing in storage facilities and promoting value addition methods for perishable goods through techniques like processing, packaging, and preservation can significantly reduce post-harvest losses and increase the shelf life of agricultural products, ensuring better returns for farmers.

Prof Prasanjit Mishra, Dean Extension Education, Odisha University of Agriculture and Technology



Prof Mishra highlighted that transfers of new technology to KVKs in Odisha by utilising farmers' field for testing and capacity building initiatives are the primary focus areas at OUAT. They showcase new technologies in various districts sourced from diverse organisations and countries, including those related to climate-resilient agriculture. Additionally, the focus is on prioritizing soil health and implementing related policies and ensuring micronutrient supply to farmers. Further, it involves, transfer of soil health knowledge to KVKs and Government of Odisha. He suggested that exploring cost-effective methods for nutrient supply to farmers is also a priority. He further shared that OUAT has addressed the challenge of plastic waste in horticulture crops through promotion and expansion of the use of biodegradable containers in 9 districts of Odisha.

Dr Sangram Keshari Swain, Dean of Research, Odisha University of Agriculture and Technology



Dr Swain highlighted the OUAT's role in technology innovation and solutions for the Odisha government, including genomics and nanotechnology. He spoke of seven commodity research stations under OUAT working on commodities like jute, sugarcane and pulses. He mentioned that a state level council meeting is held every year where information on transferable technology is shared. He highlighted that the Odisha Millet Mission has successfully reintroduced and commercialised various millet varieties, promoting their integration into the food system through market mechanisms and value chain development. The Mission is actively exploring the potential of mechanisation, genomics, and nanotechnology to address challenges in millet farming, improve yields, and enhance product quality.

Shri Debananda Bhanja, Managing Director, Orissa Pisciculture Development Corporation Limited, Department of Fisheries and Animal Husbandry, Government of Odisha

While the state government's umbrella scheme focuses on investing in tanks and ponds, prioritising larger water resources like rivers and canals might offer broader benefits. Enhancing accessible water bodies within fields through such investments could also unlock potential livelihood opportunities and benefit many vulnerable people economically. The current umbrella scheme's emphasis on smaller water bodies like tanks and ponds is commendable. However, considering the potential of larger resources like rivers and canals through strategic investments could expand the scheme's impact and additionally create livelihood opportunities by revitalising open water bodies. Further, it is crucial to include in policies a deliberate effort to assist and benefit individuals without land ownership to earn livelihoods through fishing in open water bodies, thereby ensuring everyone has fair opportunities.

Dr Santosh Kr Khatua, Joint Director, Directorate of Soil Conservation & Watershed Development, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Dr Khatua highlighted that focusing on watershed areas is the central platform for converging different programs. It enhances synergy and maximises impact. Through various policies, FPOs are being provided market access and integration of technology. A programme called Rejuvenating Watersheds for Agricultural Resilience through Innovative Development (REWARD) implemented in seven rainfed districts using WDC-PMKSY scheme, will be used for building the National Technical Standard by National Rainfed Area Authority. The project also aimed at strengthening of FPOs.

Shri Himanshu Mohan Mishra, Joint Director, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Shri Mishra spoke about how the engagement of women farmers in various stages of agriculture, including cultivation, production, and selling are crucial for holistic agricultural development. Participation of women groups is essential in promoting cultivation of millet and expanding its presence in various industries. In Odisha, women farmers make significant contributions to millet production, ethical farming practices, and playing a crucial role in cultivation.

While creating awareness among consumers is essential, and there is also a need to encourage and support marketing and procurement initiatives. Encouraging the establishment of millet production facilities at the district level could also significantly contribute to value addition. This could be done in convergence with rural industrial parks. Furthermore, research plays a vital role in developing improved millet varieties that are resilient to drought and water efficient.

Smt Sangitarani Sahoo, Additional Director (Monitoring), Department of Water Resources, Government of Odisha

Smt Sahoo spoke about the benefits of irrigation systems and the need for awareness generation among farmers. She highlighted how mega lift irrigation projects benefit the upland population as well as helps increase irrigation coverage. However, awareness programmes are essential at farmer-level to apprise them about water use as per requirements of crops.

Dr Sangram Keshari Pattanaik, Deputy Director cum Coordinator CRC, Directorate of Agriculture and Food Production, Department of Agriculture and Farmers' Empowerment, Government of Odisha



Dr Pattanaik highlighted the uniqueness of KALIA. The scheme targets 'farm family' or 'farm household' rather than farmer alone. When multiple members of a family apply for the KALIA assistance, the women beneficiary is given the preference. The Landless Agricultural Households have been provided the assistance for livelihood activities. The scheme objective is that no eligible beneficiary can be left behind. So, the assistance has been provided to all sectors of the society. KALIA, is perhaps the 1st Universal Basic Income (UBI) scheme in India.

Financial assistance has been provided to the children of the KALIA beneficiaries for pursuing Professional courses. The scheme envisages better access to Higher Education for children of small & marginal farmers, and landless agricultural households. The support to the children of KALIA beneficiaries is in the form of facilitating access to both government and private educational institutes. KALIA also has an online provision for inclusion of new beneficiaries by allowing three months' time after providing a tranche of assistance to the beneficiaries. This is a good practice that can be replicated. He mentioned that each district plans to establish a KALIA-center dedicated to addressing the various challenges faced by these beneficiaries comprehensively. These centres not only provide assistance for KALIA, but also all support to the farmers.

Shri Ved Prakash Mohapatra, Deputy Director, Planning, Department of Water Resources

Shri Mohapatra observed that to address groundwater depletion amid increasing industrialisation, robust policies should focus on its conservation is important. Efforts are underway to mitigate seepage losses through improved canal lining techniques which could be further replicated. In addition to canal lining initiatives, the development of underground pipeline systems is also underway. Promoting water use efficiency is a priority, with a shift towards canal pipeline systems to reduce evaporation and prevent wastage. Mapping flood occurrence zones at the block level can provide valuable insights for mitigating flood risks.

Smt Madhusmita Panda, Assistant Horticulture Officer, Directorate of Horticulture, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Smt Panda mentioned how the integration of three Directorates—Fisheries, Agriculture and Food Production, and Horticulture—has been instrumental in driving the development of farmers' income. Initiatives introduced in 2020 included area expansion of hybrid vegetable cultivation, promotion of vermi-compost units, mushroom cultivation, training and capacity building of farmers etc. She highlighted that under OIIPCR, focus is on enhancing agriculture productivity and ensuring stability in farmers' income of the MIP areas. Various infrastructures are being established to support farmers in their agricultural activities. Training and capacity building programs are also being organised to train farmers about modern techniques and best practices. Additionally, integrated pack houses, pre-fabricated onion storage structure, mushroom preservation units have also been introduced to improve post-harvest facilities in the MIP areas. Training sessions are being planned for both farmers and horticulture officers, with a goal of improving agricultural productivity and resilience to climate change. Through these efforts, it aims to stabilise farmers' income and overall agricultural productivity.

Smt Ipsita Nayak, Assistant Director Horticulture, Directorate of Horticulture, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Smt Nayak mentioned that MIDH advances social inclusion through involvement of scheduled castes (SC), scheduled tribes(ST)/ women, etc. She suggested that missions on Jackfruit, Mushroom and Floriculture are important inclusion when it comes to converging initiatives, and advancing social inclusion, as these missions provide additional opportunities for people belonging to all social groups specially women farmers to engage in agricultural activities and enhance their livelihoods. She also highlighted the coverage of MIDH in all 30 districts; and the role of the state in planning the implementation of MIDH.

Shri Akshaya Sahoo, Assistant Executive Engineer, Directorate of Horticulture, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Shri Sahoo highlighted his recommendations for three policies. He recommended that in case of most of the activities under MIDH; watershed should be taken as a unit where convergence of policies takes place. The second level of convergence could be through farmer producer organisations (FPO), but each one with their specific focus on one aspect of the value chain. FPOs play a crucial role in aggregating, processing, storage, value-addition and marketing of agricultural produce. It is also important to impart specific skills and knowledge-based training to selected FPOs to enhance their effectiveness and productivity.

In the case of RKVY-PDMC, Shri Sahoo mentioned that big farmers predominantly adopt drip irrigation systems due to their resources and capabilities. Subsidies provided for small and marginal farmers, are more than big farmers, still found not to be attractive, therefore, increasing subsidies specifically for SC and Scheduled Tribe (ST) farmers would be important incentive to adopt drip irrigation methods and to ensure equal access for all farmers. For development of tribal farmers, the existing Odisha PVTG Empowerment and Livelihoods Improvement Programme (OPELIP) and Odisha Tribal Empowerment & Livelihoods Programme plus (OTELP Plus) would be an important avenue of convergence. This is in consideration that the programme adopts an integrated approach for capacity building of tribal communities at micro watershed level for improved access to land, natural resources, agricultural technologies, financial services, markets and essential social services.

Shri Sahoo also suggested that, subsidies that are being provided under different policies should be equal. For example, most of the beneficiaries-oriented infrastructure activities under MIDH & State Horticulture Mission Plus are about to get 70% subsidy for all category of farmers but under OIIPCRA the subsidy is 95% for similar activities. Also unskilled labour rate for MGNREGS works for the State fixed by GoI should be at par with the unskilled labour rate of Odisha.

Smt. Kalpana Pradhan, Assistant Agriculture Officer (AAO), Department of Agriculture and Farmers' Empowerment, Government of Odisha

Smt Pradhan mentioned that policies should prioritise inclusivity of farmers and stakeholders specifically focusing on marginalised tribal communities and gender equality through engagement of women Self-Help Groups (SHGs).

There is a need for extensive research on millet varieties that are suitable for tribal areas and their integration into existing programmes. Research focus should be on sustainable land management practices for millet cultivation, particularly for local landraces of millets that could fetch high demand, and strategies to mainstream them in market. Establishing decentralised processing units is crucial to enhance income and livelihood security for small and marginal farmers. She said that enhancing consumer awareness to increase millet consumption and exploring marketing strategies constitute essential considerations. Effective marketing strategies should be developed to ensure adequate market access not only for Ragi but also for non ragi millets beyond government procurement programs. She emphasised the necessity of implementing long-term social activities that would benefit marginalised and tribal farmers beyond government programmes. She stressed on recognising their contributions through initiatives like " Millet Shakti" not only at the sun-national and national level but also at the global level.

Shri Deepak Kumar Das, Assistant Director, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Shri Das highlighted the significant role of the Panchayat in decision making on various activities. This would be helpful in active involvement in minor irrigation projects to promote climate-smart agriculture practices at the field level with the inclusion of farmers. Furthermore, providing training to farmer producer organisations (FPOs) on climate-smart practices would be important. Additionally, he mentioned that there needs a dedicated budget for agriculture and marketing executive to improve market access to the FPOs. This is drawn from his experience of conducting training programmes for extension officers on climate-smart agriculture practices. Custom hiring centres are set-up to improve access to resources for farmers with small landholdings. Lastly, he emphasised on the crucial role of Pani Panchayats (water user associations) in decentralised water governance.

Dr. Tushar Ranjan Mohanty, Agro-meteorologist and Technical Expert, Climate Resilience Cell (CRC), Directorate of Research, Odisha University of Agriculture & Technology (OUAT)

Dr. Mohanty highlighted that convergence itself as an initiative, for example between the agriculture and water resources department which involved in improving the drainage network across nine districts in the state to enhance water resources. A study conducted in a village revealed a 15-year-long issue of drainage channel congestion leading to water stagnation impacting paddy cultivation. Although this falls under the purview of water resources policy, these efforts had a positive impact on agriculture and aim to support climate resilience in remote and vulnerable districts of Odisha. Incorporating case studies can further illustrate these impacts.

Shri Nagendra Kumar Mallik, Assistant Director cum nodal officer CRC, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Shri Mallik highlighted the necessity of a holistic consideration of all policies - especially the concerns over excessive groundwater extraction and transfer of groundwater from one place to another which are unsustainable practices impacting soil, water, and agriculture as a significant focal point. Thereafter, he emphasised the need for considering agricultural practices basing upon the carrying capacity of environment and managing resources. He also brought forth the problems that may be posed by the decline in farming population. It is important to consider how to promote environmental sustainability, addressing climate change issues and manage migration to develop a green economy. He emphasised on the need for policy focus on addressing disasters, provision for protection of resources, promotion of crops that are more suited to future climate conditions. He suggested that analysis of whether a policy is pro climate change or not should be carried out in the planning stage. Migration needs to be considered as a parameter for effective policy formulation. Drafting policies that tackle these issues while ensuring the sustainability food production which is important and crops that are water thrift should be promoted.

Shri PK Rout, Director, Planning, O/CE, Planning, Department of Water Resources, Government of Odisha

Shri Rout highlighted how empowerment through training programs aimed at efficient water usage and crop diversification is crucial for agricultural development and sustainability.

Shri Ashok Kumar Amat, Agriculturalist, Department of Agriculture and Farmers' Empowerment, Government of Odisha

Shri Amat intimated that MGNREGS and KALIA, could have the potential to cover maximum areas and benefit to farmers. He said that leveraging these schemes can serve as a foundation for inclusive solutions addressing a wider spectrum of needs in rural areas.

Shri Gaurishankar Nanda, Additional Fisheries Officer, Directorate of Fisheries

Shri Nanda highlighted the role of both PMMSY and the Mukhyamantri Maschyajibi Kalyan Yojana (MMKY) in contributing to various policy coherence components. MMKY promotes intensive fish culture using biofloc technology by individual entrepreneurs and women SHGs. This enables WSHGs to take up pisciculture in community tanks of Gram Panchayats on long term lease basis and supports fisher folk by providing livelihood assistance in barren fishing period. These policies cover SDG 2 and 14. Including

this in the convergence study would explore potential synergies with other programs. Assessing the operational methods and effectiveness of this scheme would provide valuable insights for the study.

Arun Padiyar, Country Representative, World Fish



Shri Padiyar highlighted that in policy planning, it is essential to shift the focus beyond production infrastructure and direct attention towards understanding market chains, consumer behaviour, and consumption patterns. These areas are vital for achieving convergence and should be prioritised. Integrating consumer health considerations into policy design is essential to ensure sustainable food systems that benefits both producers and consumers. Recognizing and understanding this evolving consumption pattern becomes crucial in policy formulation to address

changing preferences and demands in the food industry. A comparative matrix exploring the community-level reach of various policies would be insightful.

Dr Pranay Swain, Associate Professor, Humanities and Social Sciences, National Institute of Science Education and Research (NISER)

Dr. Swain discussed that challenges can be achieved through perfect convergence, the state government has an existing system in place for planning, implementation and institutional support. However, opportunities to improve convergence and reduce duplication of efforts exists across these areas. The state government actively pursues convergence, though there's room for improvement in its planning, implementation, and institutional aspects. Identifying areas for better synergy and minimising overlapping of efforts can optimise resource allocation and effectiveness.

He also mentioned that an innovative approach called the "Rainbow Diet" has been initiated in Keonjhar, focusing on incorporating phytonutrients to alter the colors of various food products. This unique approach aims to measure dietary diversity by incorporating local land races, facilitating nutritional targeting for improved health outcomes.

Dr N K Mahakud, Advisor, SEWA, Jharsuguda

Dr Mahakud highlighted that there has been notably little emphasis on understanding consumption patterns, which is crucial to address. Efforts should be made to involve educated youth in bridging the gap between producers and consumers. He said that establishing rural marts can facilitate the distribution of produce to local communities, creating a direct relationship between producers and consumers benefitting our own people.

Smt Meena Das Mohapatra, General Manager, Foundation for Ecological Security (FES)

Smt Mohapatra highlighted that Odisha is a fore runner in terms of climate action, because of sustainable management and disaster risk management. There is a need for improvement in sensitising farmers and

Gram Panchayats regarding judicious use of soil, land, water, and forest. For this, it is essential to redesign curricula in training institutes to include soil conservation and green farming. There is also need of convergence of trainings institutions such as SIRD, WALAMI, IMAGE etc. Implementing water budgeting strategies to help manage water resources efficiently before crop planning and diversification. Establishing a district climate fund by utilising sources like CAMPA, DMF and other available funds could be beneficial for climate-related initiatives. Climate appropriate farming and sustainable agriculture practices, green farming policy can be thought of. Additionally, she emphasised the need to focus efforts on enhancing the trade of minor forest produce which would be advantageous for forest-dependent communities.

Shri Nirmalendu Jyotishi, Lead Karyashala, RO East, Foundation for Ecological Security (FES)

Shri Jyotishi highlighted the need of policy frameworks to address the management of forests and common lands which contribute to 12 per cent of Odisha's food supply, which are now degrading. He mentioned that neglected common lands require dedicated policy interventions as well as, empowering communities to manage these resources. Developing unique policies for managing common lands requires collaborative platforms at all levels (block, community, etc.). These platforms would facilitate planning, implementation, monitoring, and evaluation. Strengthening extension services is crucial for effective community-based resource management. A robust framework for community-level extension, addressing issues like landlessness, is essential for successful outreach and sustainable inclusive outcomes.

Vote of Thanks

Saahil Parekh, CEEW



Mr. Saahil Parekh closed the session by giving a vote of thanks to all present.

ABOUT THE AUTHORS

Garima Taneja, Suchiradipta Bhattacharjee, Archisman Mitra and Shilp Verma are affiliated with International Water Management Institute (IWMI), and Upasana Negi, Shashwat Shukla, Tejaswi Joshi, Kangkanika Neog, Suparana Katyaini and Nitin Bassi are with the Council on Energy, Environment, and Water (CEEW).

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State-level Consultation Workshop on Policy Coherence in the Food, Land, and Water sectors: Case Study of Odisha Thursday, 14 December 2023 10:00 -01:20 Tangerine Grand Hall, Lemon Tree Premier Bhubaneswar, Plot No-B/1334, Maitree Vihar Road, Chandrasekhar, Bhubaneswar, Odisha - 751023, India			
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2	Smt. Guha Poonam Tapas Kumar IAS	Chief Executive Officer, ORMAS	Odisha Rural Development and Marketing Society (ORMAS), Department of Panchayati Raj and Drinking Water, Government of Odisha
3	Shri Rohit Kumar Lenka, IFS	Director of Horticulture	Directorate of Horticulture
4	Smt Sarita Dhanwar	Additional Secretary to Government	Department of Agriculture and Farmers' Empowerment, Government of Odisha
5	Prof Prasanjit Mishra	Dean Extension Education	Odisha University of Agriculture and Technology
6	Dr Sangram Kesheri Swain	Dean of Research	Odisha University of Agriculture and Technology
7	Shri Debananda Bhanja	Managing Director	Orissa Pisciculture Development Corporation Limited, Department of Fisheries and Animal Husbandry, Government of Odisha
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9	Himanshu Mohan Mishra	Joint Director	Department of Agriculture and Farmers' Empowerment, Government of Odisha
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11	Dr. Sangram Keshari Pattanaik	Deputy Director cum Coordinator CRC	Directorate of Agriculture and Food Production, Department of Agriculture and Farmers' Empowerment, Government of Odisha
12	Ved Prakash Mohapatra	Deputy Director, Planning, O/CE, Planning	Department of Water Resources, Government of Odisha

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14	Smt. Ipsita Nayak	Assistant Horticulture Officer	Directorate of Horticulture, Department of Agriculture and Farmers' Empowerment, Government of Odisha
15	Shri Akshay Sahoo	Assistant Executive Engineer	Department of Agriculture and Farmers' Empowerment, Government of Odisha
16	Smt. Kalpana Pradhan	Assistant Agriculture Officer (AAO)	Department of Agriculture and Farmers' Empowerment, Government of Odisha
17	Deepak Kumar Das	Assistant Director	Department of Agriculture and Farmers' Empowerment, Government of Odisha
18	Dr. Tushar Ranjan Mohanty	Agro-meteorologist technical expert CRC	Directorate of Research, OUAT
19	Shri Nagendra Kumar Mallik	Assistant Director cum nodal officer CRC	Department of Agriculture and Farmers' Empowerment, Government of Odisha
20	Shri PK Rout	Director, Planning, O/CE, Planning	Department of Water Resources, Government of Odisha
21	Shri Ashok Kumar Amat	Agriculturist	Department of Agriculture and Farmers' Empowerment, Government of Odisha
22	Shri Gaurishankar Nand	Additional Fisheries Officer	Directorate of Fisheries
23	Arun Padiyar	Country Representative	World Fish
24	Dr Pranay Swain	Associate Professor, Humanities and Social Sciences	National Institute of Science Education and Research (NISER)
25	Dr N K Mahakud	Advisor	SEWA, Jharsuguda
26	Smt. Meena Das Mohapatra	General Manager	Foundation for Ecological Security (FES)
27	Sh. Nirmalendu Jyotishi	Lead Karyashala	Foundation for Ecological Security (FES)
28	Smruti Ranjan Nayak	Consultant	GIZ, Bhubaneswar

29	Bikash Das	WASSAN	Programme Officer (Seeds), OMM
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31	Archisman Mitra	Regional Researcher	International Water Management Institute (IWMI)
32	Garima Taneja	Research Officer (Economics)	International Water Management Institute (IWMI)
33	Suchiradipta Bhattacharjee	Policy Engagement Specialist	International Water Management Institute (IWMI)
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37	Dr Suparana Katyaini	Programme Lead	Council on Energy, Environment and Water (CEEW)
38	Saahil Parekh	Programme Lead	Council on Energy, Environment and Water (CEEW)
39	Kangkanika Neog	Programme Associate	Council on Energy, Environment and Water (CEEW)
40	Upasana Negi	Research Analyst	Council on Energy, Environment and Water (CEEW)
41	Shaswat Shukla	Research Analyst	Council on Energy, Environment and Water (CEEW)
42	Tejaswi Joshi	Intern	Council on Energy, Environment and Water (CEEW)
43	Sonam Gairola	Senior Communications Associate	Council on Energy, Environment and Water (CEEW)