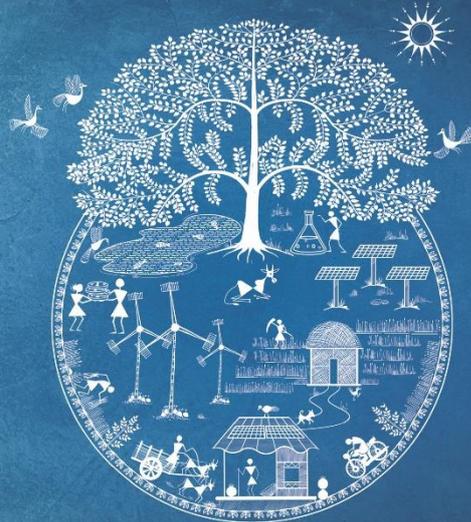




# WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2023

MAINSTREAMING SUSTAINABLE DEVELOPMENT AND CLIMATE RESILIENCE FOR COLLECTIVE ACTION

February 22-24, 2023  
New Delhi



## Achieving Food Security and Climate Resilience— Learning from Sustainable Agriculture Initiatives

### THEMATIC TRACK SUMMARY

Venue: Silver Oak II

Date: 23 February 2023

Time: 2:00 pm – 3:30 pm (IST)

#### Suggested Citation

World Sustainable Development Summit (2023), Achieving Food Security and Climate Resilience—Learning from Sustainable Agriculture Initiatives, Thematic Track Summary (Rapporteur: Shreya Rawat), New Delhi: The Energy and Resources Institute.

## Actionable Messages

**Message 1:** In terms of the need to build resilience and reduce vulnerability to climate risks, India and much of the tropical world face serious challenges. The higher temperatures of the tropics make sudden onset events frequent, more severe, and bring about destruction. But much of the dialogue has an underlying theme that tends to focus more on slow onset events. Therefore, the context of sustainable agriculture must be a factor in both the slow onset and sudden onset events.

**Message 2:** A shift in extension approaches to farmer-centric approaches is key to increasing the adoption rate, thereby enhancing the quality of women's participation. Also, digital tools offer several choices to reach the last mile.

**Message 3:** There is a lack of evidence and reliable data, which hampers the success of sustainable agriculture. Monitoring and social auditing are necessary for a just transition to sustainable agriculture.

**Message 4:** A dynamic understanding of sustainable and regenerative agriculture requires balancing socio-economic and ecological goals, considering time horizons of sustainability and the ability to take into account societal and farmers' demands.

**Message 5:** Continuous optimization is required and even then, a synergy between policy practice and research is needed. There is a need for policy support to undertake sustainable activities. Support from the state as well as the district and village-level communities is essential.

## Narrative

The thematic track session titled, “Achieving Food Security and Climate Resilience—Learning from Sustainable Agriculture Initiatives” was conducted as part of the World Sustainable Development Summit (WSDS) – the annual flagship initiative of The Energy and Resources Institute (TERI). The aim of the session was to explore the crop and farmer income resilience even in the environment of climate change. Special focus was given to the project undertaken in Odisha. The Indian agricultural sector is unique, with more than 50% of its population engaged in farming for their livelihoods. The agriculture sector contributed more than 17% of the Gross Value Added (GVA) during 2019-20. The sector has witnessed major paradigm shifts over the years after independence. With this context, the thematic track on achieving food security and climate resilience ensued.

On climate change affecting women far more severely than men due to socially constructed roles and gender norms, **Ms Martine A. Bottheim, Minister Counsellor & Deputy Head of Mission at Royal Norwegian Embassy**, in the welcome address, raised a pertinent point and said, “We should ensure that women are consulted and allowed to participate on an equal footing with men in the planning and implementation of projects. Because of climate change, smaller farmers in India will face a big transformation in the coming years, they will have to manage a transition to a green business as well as increased digitization.” She added how associations like FOLU (Food and Land Use Coalition) promotes better food and land use practice that promotes healthy diet for a growing population that is supported by Norway’s International climate and forest initiatives. Norway also pledged in COP26 to double its climate finance to developing countries – steps for which have started with the launch of a strategy for climate change hunger and vulnerability. Norway also recognizes the importance of small-scale farmers and women who are more vulnerable to climate change.

The current land systems are not geared up to meeting the environmental, economic, and social challenges, which is why, as pointed out by **Mr S. Vijay Kumar, IAS Retd. FOLU India Lead and Distinguished Fellow, TERI** in the opening address, “There are hidden environmental, health, and poverty costs associated with the current agricultural systems. The solutions to solve this hidden poverty cost include: diversity of Indian agriculture, healthy and sustainable diets, integrated farming system, improved agro- biodiversity, and prevention of food loss.”

Talking about the promotion of adaptation technologies based on local needs, **Ms Rengalakshmi R., Director, Ecotechnology, MSSRF, Chennai**, said, “We developed and facilitated field champions. The lead farmers who promoted adaptation technologies fine-tuned these to local needs and established community-based platforms. Plant clinics, which are farm-centric advisories use ICT, early warning systems,

especially climate information on both medium-range weather forecast and extreme events.” She gave examples of two districts – Cuttack and Ganjam –where knowledge management and gender are cross-cutting themes. She talked about promoting farmer-to-farmer learning through the creation of a field champion approach and developing this close connection with farmers. ICT services enabled access to sustainable agriculture, financial services, early warning systems, access to market, access to government schemes, and knowledge empowerment. She raised a pertinent point concerning the mainstreaming of plant clinics that is seen as a farmer-centric approach, which has brought about good response but Internet connectivity still remains a challenge. Local youth are being used to robustly implement the programme and overcome this challenge.

The resilience experience in Odisha was highlighted by **Mr A. K. Nayak, Director, ICAR-National Rice Research Institute, Odisha**. He explained how even though the country achieved food security, a lot must be achieved on the economic, social, and nutritional security of the country. He said, “It started from national food security and is now moving towards nutritional and income security with climate resilience as a key component. We are also implementing solutions like climate-smart rice varieties, direct seeded rice, ecological-specific diversification, nutrient management, etc.”

Continuing this sentiment, **Mr H. K. Sahu, Professor, Odisha University of Agriculture & Technology** added, “We adopted integrated nutrient manuring, poly mulching in vegetables, etc. Our capacity building measures were driven by district-level workshops and stakeholder advisory committees where we saw maximum participation from farmers.” Emphasizing the need to have the farmers’ voices heard, **Mr Manish Anand, Senior Fellow, TERI**, pointed out, “We are trying to look at it from a farmer-centric approach rather than a soil-centric one. We discovered that crop and livestock were interdependent. Livestock acted as a resilience-building activity and doubled up as a source of additional income.”

“Farmers have started to grow tomatoes, and there is more aspiration to scale up tomato production along with groundnut. Now, given that this is an impact region, the choice of crops as well as current cropping practices both raise serious questions about what it means for the ecosystem and water resources in this region,” said **Ms Nandini Agarwal, Programme Associate, CEEW**.

“The ecosystem service analysis allows for looking at enabling conditions, actor priorities, and cost research,” said **Dr Ruchika Singh, Director, Sustainable Landscapes and Restoration, WRI India**, about conducting surveys and consultations to identify key values in the system.

“Under the sustainable agriculture initiative, we have two flagship programmes. These two programmes have the same principles but follow different kinds of approaches. We are working with the government in four

districts to see how a government-led transformation in a sustainable and future-generative agriculture is possible,” added **Mr R. K. Sony, Manager, FOLU India.**

About formulating the national mission for natural farming, **Dr Jayahari K. M., Country Coordinator, FOLU India,** said, “We have to keep in mind that nothing should drastically change, rather we need to go slow so that progressive ways of reducing, distributing, and consuming food are found.”

## Making Words Count @WSDS 2023

“	<p>Norway has pledged to double the climate finance for climate change adaptation to combat hunger and vulnerability. There must be big transitions to green business to facilitate increased food consumption for large populations and to help small-scale farmers with knowledge, technology, and accessibility.</p> <p style="text-align: right;"><b>Ms Martine A. Bottheim</b> <i>Minister Counsellor &amp; Deputy Head of Mission, Royal Norwegian Embassy</i></p>
“	<p>Advances in agricultural practices during the Green Revolution increased income resources, but also increased challenges in nutrition, health, and social equity. The hidden costs are not evident and those contribute towards social inequity and poverty that must be analysed and computed.</p> <p style="text-align: right;"><b>Mr S. Vijay Kumar</b> <i>Distinguished fellow, TERI</i></p>
“	<p>Farmer-to-farmer (F2F) learning and unconventional methods were employed, like apps and social media, to deliver solutions and accessibility among farmers. By upscaling techniques and sharing reliable data with governments, an integrative platform can be created to build climate-smart villages.</p> <p style="text-align: right;"><b>Mr A.K. Nayak</b> <i>ICAR-National Rice Research Institute, Odisha</i></p>
“	<p>Emphasis on farmer-to-farmer (F2F) learning by recognizing field champions to promote sustainable activities can fine-tune the process. Continuous engagement in bringing ownership and increasing technology access are important.</p> <p style="text-align: right;"><b>Ms R. Rengalakshmi</b> <i>Director, M S Swaminathan Research Foundation</i></p>
“	<p>Climate-resilient varieties were used on drought-affected areas. Agroforestry techniques can reduce vulnerability to climate change.</p> <p style="text-align: right;"><b>Mr H.K. Sahu</b> <i>Professor, Odisha University of Agriculture &amp; Technology</i></p>
“	<p>There needs to be a transformation in the food system with proper planning and implementation to ensure nutritional security in India. The lack of evidence in the resilience-based agricultural system needs to be tackled via transparency of data through social auditing.</p> <p style="text-align: right;"><b>Mr R.K. Sony</b> <i>Manager, FOLU India</i></p>
“	<p>Circular invention models can create circular economy by investing in increasing ecosystem services and farmers' livelihoods. Decentralized storage and processing units can generate entrepreneurial opportunities to increase the market produce.</p> <p style="text-align: right;"><b>Ms Nandini Agarwal</b> <i>Programme Associate, CEEW</i></p>
“	<p>Problems can be identified by a field-and-farm approach via SWOT analysis to generate community-led solutions. There is a need for a holistic approach for socio-economic-ecological growth in sustainable and resilient agriculture.</p> <p style="text-align: right;"><b>Mr Manish Anand</b> <i>Senior Fellow, TERI</i></p>
“	<p>Restoration Opportunities Accessibility Method (ROAM) can be adapted to agricultural initiatives. Intervention plans and transformational agricultural practices start from the bottom up – from farmers to cluster levels to gram panchayats to the district level.</p> <p style="text-align: right;"><b>Dr Ruchika Singh</b> <i>Director, Sustainable Landscapes and Restoration, WRI India</i></p>
“	<p>We need to learn step by step, instead of adapting a drastic change from our past knowledge and apply to our present. The national mission for family goals should be a slow progression of production, distribution, and consumption for a large population.</p> <p style="text-align: right;"><b>Dr Jayahari K.M.</b> <i>Country Coordinator, FOLU India</i></p>