DIALOGUE ON PRIVATE SECTOR OPPORTUNITIES IN REGENERATIVE AGRICULTURE FOR SUSTAINABLE INDIA

Unlocking Growth and Driving Sustainbility

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Strategic Inputs and a Summary Report from the Dialogue on Private Sector Opportunities in Regenerative Agriculture for a Sustainable India: Unlocking Growth and Driving Sustainability

CONTEXT AND BACKGROUND

Regenerative agriculture is an innovative approach to farming that focuses on enhancing and revitalizing the natural resources of the land. It goes beyond sustainability by aiming to restore soil health, promote biodiversity, and mitigate climate change. India, with its vast agricultural landscape and diverse ecosystems, stands to benefit greatly from the adoption of regenerative agricultural practices. There is a growing recognition that private sector engagement can play a pivotal role in driving the adoption of regenerative practices and scaling their impact. The private sector, including agribusinesses, food companies, financial institutions, and technology firms, can contribute by investing in research and development, providing access to innovative technologies, creating market incentives for regenerative products, and facilitating knowledge sharing among farmers and other stakeholders.

United Nations Global Compact Network India (UN GCNI) in partnership with YARA International and Ecociate organized a dialogue on the theme "Unlocking Growth and Driving Sustainability: Private Sector Opportunities in Regenerative Agriculture for a Sustainable India, in Hyderabad on the 12th of October, 2023. The event was attended by more than 30 participants from the public sector, private companies, NGOs, research institutions and farmer producer organizations. The participants deliberated on the opportunities, challenges and enabling factors for scaling regenerative agriculture and the potential role which can be played by the various stakeholders in this transition.

The stakeholder consultation aimed to create a collaborative platform for addressing the need for regenerative agriculture practices, fostering soil health, enhancing biodiversity, and promoting resilience in the farming community. The event encouraged open dialogue and knowledge sharing among participants. The workshop was addressed by Mr Sanjiv Kanwar, Managing Director, of Yara International and Mr Ratnesh, Executive Director, of UNGCNI. There have also been 2 panel discussions during the workshop. The first panel discussion had a detailed discussion and deliberation on the '**role of the private sector in creating a conducive production system for regenerative agriculture'** while the second panel discussed the key enablers and initiatives for scaling up regenerative agriculture in India.

Regenerative Agriculture as a Pathway for Supporting Smallholder Farmers and Addressing Challenges in Indian Agriculture

Indian agriculture, especially the smallholder farmers faces several challenges that only hinder its sustainability and resilience but there are now growing concerns about the diminishing returns from agriculture for farmers and large-scale environmental consequences. Some of major challenges of Indian Agriculture that needs immediate action are as follows.

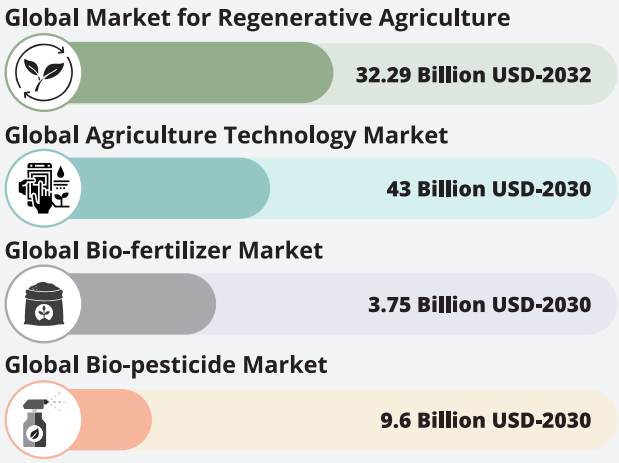
- **Degraded Soil Health:** Soil degradation due to intensive farming practices, erosion, and chemical inputs is a significant issue. Loss of soil fertility affects crop productivity and long-term agricultural sustainability. In India, about 29 % of the Total Geographic Area of the country is undergoing land degradation; Soil erosion, organic matter decline and loss of top soil among others. Nearly half of the world's topsoil has been lost in the last 150 years due to these same unsustainable agriculture methods.
- **Water Scarcity and Depletion:** India's agriculture is heavily reliant on groundwater, leading to over-extraction and depletion of aquifers. Erratic rainfall patterns and inefficient water management exacerbate water scarcity issues. About 65% of groundwater is used to produce half of the country's food. However, the prospects of climate change indicate a negative impact on the future availability of water resources and a threat to India's food security. Sixty per cent of India is classified as dryland, i.e. arid and semi-arid, where water is already scarce. The continued growth of intensive agricultural production in these regions, coupled with growing water demand from population growth and industrial sectors, is likely to result in severe water scarcity in India shortly .
- **Climate Change Vulnerability:** Climate variability and extreme weather events such as droughts, floods, and heatwaves pose threats to crop yields and livelihoods. The increasing cost of cultivation to farmers due to increasing input costs coupled with high frequency of extreme climatic events puts smallholder farmers, in particular, vulnerable to climate-related risks in the events of intensive farming practices.
- **Loss of Biodiversity:** Monocropping and use of chemical pesticides have contributed to the loss of biodiversity in agricultural landscapes. Declining populations of pollinators and beneficial insects disrupt ecosystem services essential for crop pollination and pest control. Although there are at least 7000 edible plant species that have been used and cultivated as significant food sources at some point in time, six crops dominate what is grown on the planet: maize, rice, wheat, sugar cane, soybeans and oil palm. Of those, maize, wheat and rice represent over half of the global food supply .
- **Rural Poverty and Farmer Distress:** Despite agriculture being the primary source of livelihood for a significant portion of the population, rural poverty and farmer distress persist. Debt, lack of access to credit, remunerative markets and inadequate support systems contribute to the vulnerability of farming communities in India.

Private Sector Opportunities in Regenerative Agriculture

Regenerative agriculture is an innovative approach to farming that focuses on enhancing and revitalizing the natural resources of the land. It goes beyond sustainability by aiming to restore soil health, promote biodiversity, and mitigate climate change. India, with its vast agricultural landscape and diverse ecosystems, stands to benefit greatly from the adoption of regenerative agricultural practices. There is a growing recognition that private sector engagement can play a pivotal role in driving the adoption of regenerative practices and scaling their impact. The private sector, including agribusinesses, food companies, financial institutions, and technology firms, can contribute by investing in research and development, providing access to innovative technologies, creating market incentives for regenerative products, and facilitating knowledge sharing among farmers and other stakeholders. Some of the key opportunities for the private sector to scale up regenerative agriculture and develop synergetic partnerships to create a meaningful impact are as follows. Platforms and organizations like UN-GCNI can play a catalytic role in such initiatives.

- **Partnership with Farmer Producer Organizations (FPOs):** Collaborate with FPOs to promote regenerative agriculture practices among farmers. This can involve providing training, resources, and incentives to FPO members to adopt sustainable farming techniques. Additionally, work with FPOs to develop sustainable supply chains that connect regenerative farmers with markets for their produce.

GROWTH POTENTIAL IN REGENERATIVE AGRICULTURE



- **Support for Women Farmers and Self-Help Groups (SHGs):** Implement initiatives specifically targeting women farmers and SHGs to encourage their participation in regenerative agriculture. This can include providing training programs tailored to their needs, facilitating access to resources such as seeds, and equipment, and offering financial support or incentives to adopt regenerative practices.

- **Partnership with Government Agencies:** Collaborate with government agencies such as the National Rural Livelihood Mission (NRLM) and State Rural Livelihood Missions (SRLMs) to integrate regenerative agriculture into their programs and initiatives. This can be done through public-private partnerships that leverage the resources and expertise of both sectors to support regenerative farming practices among rural communities.

- **Technology-led Solutions:** Invest in technology-led solutions for soil testing, water testing, pest control, crop advisory,

and other aspects of regenerative agriculture. This can include developing mobile applications, sensor-based technologies, and remote sensing tools that provide farmers with real-time data and insights to optimize their farming practices and enhance productivity sustainably.

- **Leverage Community Resource Persons (CRPs):** Utilize the existing network of CRPs and extension workers to disseminate knowledge and information about regenerative agriculture practices at the grassroots level. Provide training and capacity-building programs for CRPs to empower them to serve as effective agents of change within their communities, promoting the adoption of regenerative farming techniques.

By implementing these recommendations and fostering partnerships between the private sector, FPOs, government agencies, and grassroots organizations, we can accelerate the adoption of regenerative agriculture practices in India, leading to more sustainable and resilient food systems and rural livelihoods.

FIGURE 1 PANEL-1: Role of the private sector in creating a conducive production system for regenerative agriculture

INPUTS FROM THE DISCUSSION

Panellists and participants shared the learnings and experiences from their individual and organisational initiatives on regenerative agriculture, challenges being faced by the farmers and other stakeholders and probable solutions to address some of these issues. The key points and highlights from the discussion are as follows.

Awareness and Support for farmers to scale up regenerative agriculture practices

- Panellists and participants expressed a growing awareness of the benefits of regenerative agriculture, including increased soil fertility, reduced environmental impact, and improved farm resilience.
- A consensus emerged on the importance of government support, policy incentives, and public awareness campaigns to promote regenerative farming practices.

Capacity building and Training of farmers and other stakeholders

- The importance of farmer education and training in regenerative practices was emphasized. Participants focused on tailored and accessible training programs and workshops to build the necessary skills and knowledge.
- Along with farmers and FPOs participants and panellists also emphasised the need for handholding and capacity building of other stakeholders such as input sellers, and market players among others.

Focus on improving Soil Health, Biodiversity and water management practices

- Participants recognized that regenerative agriculture practices, such as no-till farming, cover cropping, and organic matter restoration, hold significant potential for improving soil health and structure.
- A holistic approach for linking biodiversity with farmer intervention and monitoring through R&D interventions.
- Water-efficient irrigation techniques and rainwater harvesting received strong support, given their potential for reducing water consumption and preventing soil erosion.

Market and Product Strategy:

- Product identity should be established at an affordable consumer price.
- Resolve post-production impediments through public policy.
- Value addition is required to obtain premium prices.
- Collaborate with like-minded partners for marketing and lowering the carbon footprint.

Policy Advocacy to scale up the regenerative agriculture

- All the participants advocated for collaborative efforts to influence policy changes at local and national levels to create an enabling environment for regenerative agriculture.
- The need for subsidies, incentives, and research funding was highlighted to support regenerative practices.

Challenges and Concerns:

- Participants highlighted several challenges, including the initial cost of transitioning to regenerative agriculture, the need for technical knowledge and training, and the apprehension of uncertain yields during the transition phase.
- Concerns were raised regarding potential market access barriers and the need for reliable certification mechanisms for regenerative products.

FIGURE 2, PANEL-2: Discussion on key enablers and initiatives for scaling up regenerative agriculture in India

STRATEGIES AND ACTION POINTS FOR IMPLEMENTING A REGENERATIVE AGRICULTURE PROJECT

Based on the stakeholder consultation, the following recommendations have been identified as crucial for advancing regenerative agriculture and designing an implementation plan for regenerative agriculture projects in India. It was discussed that the design of such a project will require a well-thought-out strategic roadmap to address the unique challenges and opportunities in the country. Here's a comprehensive strategic roadmap for implementing such a project in India:

Identification of the geography, crops, and farmers

- Identify the appropriate geography; state, districts, blocks and villages for project implementation keeping the regional context, agroecological zone and available funds in mind.
- Identify the project partners, FPOs, and farmers for implementation.
- Select the crop/crops to be focused on (food crops or non-food crops)

Needs Assessment and Feasibility Study: The first step

- Conduct a thorough needs assessment to understand the specific challenges and opportunities in the chosen region of India.
- Analyze soil health, climate, water resources, and existing farming practices.
- Assess the socio-economic and cultural factors that may impact project implementation.
- Conduct a baseline study to assess the baseline situation and measure the value of baseline indicators.

Define project objectives, targets and interventions

- Define clear, measurable goals and objectives for the regenerative agriculture project.
- Identify the interventions that outline the long-term benefits for farmers, the environment, and the community.

Stakeholder Engagement

- Engage with key stakeholders, including farmers, local communities, government agencies, NGOs, and academic institutions.
- Build partnerships and collaborations to leverage resources and expertise.

Major interventions for the project

Training, handholding and capacity building of farmers

- Develop the training modules and other knowledge documents for capacity building of farmers.
- Provide training and education to farmers and local communities on regenerative farming practices, soil health management, and sustainable agriculture.

Interventions to improve Soil Health and water management

- Implement regenerative practices such as no-till farming, cover cropping, crop rotation, and organic matter restoration to improve soil health and structure.
- Promote the use of organic fertilizers and compost to reduce chemical inputs.
- Promote preparation of locally made bio-inputs by establishing the bio-resource centre by involving women members.
- Implement water-efficient irrigation techniques such as drip and sprinkler systems.
- Promote rainwater harvesting and the use of contour farming to reduce soil erosion and conserve water resources.

Promote Sustainable Livestock Integration

- Integrate livestock into the farming system to enhance nutrient cycling and increase farm resilience.
- Implement rotational grazing and agroforestry practices to support both crop and animal production.

Market Access and Value Chain Development

- Assist farmers in accessing markets for their regeneratively grown produce. Farmer producer organizations can be promoted to ensure local-level value addition and assist in market linkages with different layers of value chain players.
- Collaborate with market players and retailers to create demand for regenerative products.
- Develop value-added products and support marketing efforts to increase income for participating farmers.

Monitoring and Evaluation

- Establish a robust monitoring and evaluation system to track the progress of the project.
- Regularly assess soil health, biodiversity, water quality, and socio-economic indicators.

Collaborations and Knowledge Dissemination

Since UNGCNI is a platform for private sector organizations to achieve sustainable development goals, it can act as a great platform to bring the stakeholders together and disseminate knowledge among themselves.

- Call out the relevant stakeholders and form a coalition to discuss, promote and scale up the regenerative agriculture practices.
- Share project results, research findings, and success stories through workshops, conferences, and publications.
- Use digital platforms and social media to reach a wider audience.

Funding and Financial Sustainability

- Develop the cofounding project in close collaboration with private-sector players and donor organizations.
- value addition and market linkages may help farmers to continue with their practices even after the exit of the program.

By following this strategic roadmap, regenerative agriculture projects in India can contribute to sustainable, resilient, and environmentally friendly farming practices while improving the livelihoods of farmers and the overall health of the ecosystem.

FIGURE 3: Participants filling in their feedback and suggestions

ANNEXURE

List of the Participants

S. No.	Name of the person	Name of the organisation
1	Mr. Binu Cherian	Harvest Plus
2	Mr. Devi Prasad J	Centre for Good Governance, Govt. of Telangana.
3	Dr. L. Jalapathi Rao	Rtd. Registrar, Agricultural University
4	Dr. R. Kalpana Sastry	Ag Hub
5	Dr. R. Ratnakar	Former Director, Extn. Education Institute (EEI), Southern Region, India PJTSAU, Hydrabad
6	Dr. Raja Krishna Murthy M	Core Carbon X Sol. Pvt Ltd
7	Dr. Sowmini Sunkare	Agrighar Services Pvt. Ltd.
8	Mr. Kirti Mishra	Ecociate Consultants
9	Mr. Koushik Ghosh	NSL Textiles
10	Ms. Lakshmi Haritha Bhavani B	Ancient Foods India
11	Mr. Manoj Kumar	Verstegen Spices, Netherlands
12	Mr. Mayank Yadav	Bayer Crop Science
13	Ms. N. Rajitha	SERP
14	Mr. Raj Shekhar Reddy	Delta Things
15	Mr. Pawan Kumar	S.M. Sehegal foundation
16	Ms. Priyanshi Priya	Dvara E-Registry
17	Mr. Rajiv Sharma	AgVysor Innovations LLP
18	Mr. Rangu Rao	Safe Harvest Pvt Ltd.
19	Mr. Ratnesh Jha	UNGCNI
20	Mr. S. Suman	Dr. Reddy's Foundation
21	Mr. Santosh Gupta	Ecociate Consultants
22	Ms Shamala Gowri	Jayanti Herbs & Spices
23	Ms. Subha Kawatara	UNGCNI
24	Ms. Suman Singh	UNGCNI
25	Mr. Tarak Dhurjati	NSL Group (Nuzivedu Seeds Limited)
26	Mr. Vijay Vardhan	ITC Limited