

SDG Blueprint for Sustainable Agriculture: Expert Consultation

Focus on SDG 2, SDG 6, SDG 15, and SDG 16

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Summary Document

SDG 2 (Zero Hunger)

The discussion on agricultural policies, farmer awareness, and sustainability in farming practices highlights critical challenges and opportunities for the agricultural sector in India.

- There exists plethora of challenges in agricultural policies and implementation in India. The discussion emphasized that having policies alone is insufficient; the focus should shift towards effective policy implementation. While designing policies and conducting policy research are vital, the actual implementation of these policies deserves equal, if not more, attention.
- One of the key challenges is the limited awareness among farmers about government provisions and learning programs. The need for capacity building and awareness campaigns is evident, but these efforts often concentrate on agro-technical aspects while neglecting policy-related information. The benefits of technology can be fully realized when it is effectively applied on fields, and this necessitates a strong emphasis on ensuring that the last mile of implementation is well-informed and prioritized.
- Information asymmetry among policymakers is noted. While good practices are discussed, harmful ones are often neglected. Thorough assessments should precede new policy designs, with rationalization of existing schemes. Examples like empowering district officers to directly address the needs of the poorest of the poor demonstrate the potential for more effective, ground-level policy implementation. Long-term policies should envision convergence among different departments, creating a one-window approach for farmers. State governments should have discretion to adapt policies to their specific contexts.
- Adaptation to sustainable technologies and innovations is crucial for enhancing farmers' income and environmental conservation. The policies may seem promising, but their true benefits only materialize when they are implemented in the field. The policies on crop diversification and other solutions must bridge the gap between theoretical intent and practical application. Geographical factors and farmers' preferences should be considered in policy design. Incremental additions to policies by both the government and other funders must prioritize reaching the last mile. Advocacy for farmers becomes essential to ensure their needs and concerns are addressed comprehensively.
- The discussion also contemplated that there is a predominant focus on increasing productivity, which may not be enough to double farmers' income. Crop diversification, for instance, might not be beneficial if farmers cannot sell their produce in competitive markets.
- The central role of farmers in policymaking and implementation is emphasized. The plight of smallholder farmers, who lack support to survive market competition, underscores the necessity of incentive mechanisms and equitable distribution. It is crucial to define and recognize farmers, including tenant farmers, who often remain invisible in policy discussions.
- Data consistency is a significant challenge. Identifying what entitlements farmers receive from different SDG policies and recognizing trade-offs impacting farmers' lives

is vital for policy synergy. Agricultural policies should acknowledge local realities, as exemplified by the case of Orissa. Despite achieving a state of food surplus, it is noteworthy that in Orissa, increased food production hasn't been accompanied by a corresponding rise in the usage of chemical fertilizers, dispelling the assumption that high production necessarily goes hand in hand with extensive fertilizer use.

- Fragmentation of land is another issue that poses a challenge for farmers to engage in sustainable farming practices. Citing economic survey of Bihar, it is noted that with an average landholding of just 0.5 acres, it is exceedingly challenging to promote crop diversification plans in such fragmented land. At the ground level, especially in tribal areas of Maharashtra, individual farmers may not readily adopt new agricultural methods as their land area is too small. Hence, there's a call for aggregating farmers and encouraging community-led adaptation of farming practices, which are more welcomed due to factors like small landholdings. Addressing the issue of disproportionate land sizes, different crop diversification programs should prioritize farmers based on their income levels. Affluent farmers in states like Punjab and Haryana may have different needs. Recognizing the joint household nature of farming and the contributions of women in agriculture can inform policy formulation. Thus, efforts should be made to aggregate small farmers for community-led adoption of sustainable farming practices.
- The government of Odisha has recognized tenants' farmers as farmers and has eliminated any non-incentives provided by the central government, demonstrating a holistic approach to governance. Moreover, they have actively promoted and encouraged Self-Help Groups (SHGs) and women's empowerment through initiatives like *Mahila Kisan Sashaktikaran Pariyojana*, since the role of women in farming is often overlooked, despite farming being a joint household enterprise.
- One of the opportunities is to initiate pilot programs in areas where successful policies are in place, recognize their effectiveness, and consider scaling them up to a broader level. By establishing a comprehensive database through identifying farmers, and aligning policies accordingly, pinpointing of the areas where farmers are not receiving the benefits they should. It is crucial for policies to be financially advantageous for farmers, as they are primarily engaged in agriculture for self-sufficiency, and they might be reluctant to adopt practices that come with opportunity costs.
- Farmers' awareness of sustainable practices, the importance of profitability in policies, and the need for substantial representation of farmers in policy discussions are all underscored. The importance of integrating SDG indicators into policies and recognizing that ecology and economy should go hand in hand is emphasized. The importance of agro-forestry, information dissemination, and market access is highlighted. A community-led approach to sustainable agriculture, especially in areas with small landholdings, can be effective.
- There is a need to establish policies with a more decentralized approach, offering farmers a range of options to choose from, rather than rigidly controlling schemes at the state and central levels. Currently, policies involve subsidies and MSPs, which incentivize specific actions. It is crucial to question whether these policy constraints are in line with the preferences and needs of farmers, both politically and economically. From the beginning of the agricultural process, starting with seeds and extending to sales, these constraints have already been imposed.
- The deliberations went ahead addressing the challenges with insurance schemes and loans that are provided to the farmers. For instance, in Telangana, there are insurance schemes that are provided to the farmers along with loans, but many farmers are unaware of them, and they struggle to understand how to access or claim the insurance benefits. Also, the presence of strong market competition can discourage farmers.

- When designing policies, it is essential to consider their impact not just on the overall farm economy but also on individual farmers. Policymakers should evaluate how these policies benefit farmers, what incentives they provide for crop cultivation, and why farmers would choose to grow particular crops. Thus, there is a need to focus from farm economy to farmers' economy.
- Talking about technology adoption in India, it is inherently assumed, and delivery of technology-enabled services will solve all problems of the farmers. Instead of assuming that technology alone will increase productivity, it is vital to question why farmers might not be doing well. Capacity building should be viewed from the farmers' perspective, not just the supply side. Rather than creating entirely new policies, it is beneficial to examine existing policies for different opportunities.
- Utilizing technology for capacity building is vital, and advertising weather forecasts on television can increase farmers' awareness of weather conditions. It is crucial to provide accurate weather information to farmers so that they are able to take informed decisions.
- Chemical-based agricultural methods are often more profitable, which discourages farmers from embracing organic farming, as it tends to be less financially rewarding. Increasing farmers' income is a critical concern, especially in the face of competition from chemical farming practices. There's a need to ensure that incentives are directed towards farmers themselves rather than other channels. The size and accessibility of markets play a pivotal role; without access to markets, farmers may not have the motivation to engage in sustainable agricultural activities.
- Since a significant portion of the farmers' population (about 86% consists of small and marginal farmers), leveraging community-led initiatives like Gram Sabha, which sells non-timber forest products (NTFP), can also be applied to agricultural products. This brings the promotion of agro-forestry as a promising agricultural practice. Agro-forestry should be incorporated into Comprehensive Development Plans (CDPs) and involve community participation. When diversifying crops, the turnover should match that of rice and wheat. Also, there is a misalignment between crop choices in CDPs and the agro-ecological conditions, particularly in eastern and southern India. The challenge is to reconfigure agricultural practices to ensure food security is not compromised.
- For any solution to be successful, it must align with the economic interests of farmers. It is crucial to strike a balance between ecology and the economy, with a primary focus on the well-being of farmers.
- India's diverse agro-climatic conditions raise concerns about depleting groundwater levels, particularly in Rajasthan, where water availability in the future is uncertain.
- Budget constraints pose a significant barrier to farmers adopting sustainable agriculture practices. There is a need to provide greater incentives to farmers who adopt sustainable agricultural practices, especially when these practices are linked to subsidies. This can serve as an example to encourage other farmers to embrace sustainability.
- While agricultural policies exist, the conversation emphasizes the need for more effective policy implementation. A gap often exists between policy design and its practical application on the ground. Farmers often lack awareness of policy provisions and available resources. There is a strong call for awareness campaigns that focus not only on agro-technical aspects but also on policy benefits and learning programs. Initiatives like the KISAN Mela demonstrate effective government efforts. Farmers involved in Agricultural Technology Management Agency (ATMA) programs from different states can benefit, ensuring that every village reaps the advantages of government policies. For example, in Rajasthan, active farmer WhatsApp groups are utilized to disseminate information to farmers. Thus, community-led approaches, such as Gram Sabhas and farmer WhatsApp groups, can play a significant role in

disseminating information, promoting sustainability, and aggregating smallholder farmers.

- Insufficient remunerative prices for agricultural products are a concern. The sustainability of practices could be impacted if the government withdraws incentives. There's a question about why there are so many schemes, suggesting a need for greater consolidation.
- There is a need to shift from the traditional focus on yield per hectare and instead emphasize mainstreaming ecosystem services in agriculture. Policies should prioritize farmers and strengthen the agricultural value chain. Policymakers are encouraged to move beyond productivity-focused debates and consider broader, farmer-centric solutions that address economic well-being. Policies should consider India's diverse cultures and farming practices, ensuring inclusivity and sustainability.
- Evaluating the effectiveness of the existing institutional structure in realizing the SDGs is crucial, along with identifying and addressing potential policy obstacles. The process of policy piloting is essential, and initiatives like those undertaken by ICAR can help promote agricultural systems related to crop diversification plans. - ICAR's work on mustard and green gram cropping systems has shown that these systems can be more profitable for farmers than the traditional rice-wheat system.

In conclusion, the multifaceted discussion underscores the need for comprehensive, farmer-centric policies that address the challenges faced by India's agricultural sector while embracing sustainable and equitable solutions.

SDG 6 (Clean Water and Sanitation)

- Capacity building should extend horizontally to include all stakeholders, not just a top-down approach. This includes farmers, local communities, and governmental agencies at various levels. Encouraging farmers to diversify their income sources through practices such as agroforestry, animal husbandry, and non-farm activities can make them more resilient to agricultural risks.
- Collaboration with civil society, local NGOs, and Central Water Commission (CWC) can help in mobilizing resources, expertise, and community engagement for sustainable water management. Repairing and improving canal infrastructure is essential for efficient water distribution to farms and mitigating water loss due to leakage and evaporation. Ensuring a consistent and efficient project cycle is crucial for the timely and effective implementation of water management projects.
- Farmers' interests and benefits should be at the forefront of any water management project, as their livelihoods are directly impacted. Building trust through transparent communication, community involvement, and fair resource allocation is vital for the success of water management initiatives. Developing innovative and adaptable schemes that address specific regional and local needs is essential for sustainable water management.
- Encouraging land tenure security and providing incentives for landowners to invest in water management can improve land productivity. Addressing the cost of water treatment is crucial, and exploring cost-effective and sustainable treatment methods should be a priority. Ensuring accurate and accessible data for informed decision-making, and streamlining bureaucratic procedures, can enhance water management efforts.
- Promoting eco-friendly alternatives to plastic mulch and addressing plastic waste management can prevent water blockages and environmental degradation. Including Minimum Support Price (MSP) considerations can provide price stability for farmers, encouraging them to invest in sustainable practices. Fostering collaboration between central and state governments can improve resource allocation, policy coherence, and coordinated efforts.
- Retrofitting and upgrading existing infrastructure can be more cost-effective and sustainable than building new systems from scratch. Providing financial incentives and green credit facilities can motivate farmers to adopt sustainable water management practices. Identifying and supporting local leaders who champion water management initiatives can drive community engagement.
- Sharing success stories and best practices with farmers and relevant departments can inspire and guide others in implementing water management strategies. Promoting the balanced use of solar pumps can reduce the reliance on non-renewable energy sources and decrease the carbon footprint. Treating wastewater and using it for agriculture or other purposes can not only conserve water but also generate revenue for local communities. Ensuring the safety of treated water for agricultural and other purposes is crucial to protect public health.
- Creating a centralized platform for data sharing and access can streamline information exchange among stakeholders.
- Customizing water management strategies to local needs and involving the community in decision-making can enhance project success. Including provisions for farmers to

recharge groundwater through rainwater harvesting and other methods can help maintain water resources.

- Ongoing training and capacity building programs are essential for both farmers and government staff to keep them updated with the latest techniques and practices. Implementing a robust monitoring system at district, block, and central levels ensures accountability and the effective use of resources.
- Ensuring that funds allocated for water management schemes are properly utilized is crucial for achieving project goals. Collecting and analyzing disaggregated data by gender, age, and other factors can help in designing more inclusive and effective water management initiatives. Promoting the integrated management of surface and groundwater resources can enhance overall water sustainability.
- Considering the impacts of climate change and implementing climate-resilient practices in water management schemes is essential. Implementing metering and spatial science technology for groundwater can help in better resource allocation and management.
- Information and Communication Technology (ICT) and Information, Education, and Communication (IEC) campaigns can enhance awareness and outreach. Maintaining regular coordination and updates between the Central Pollution Control Board (CPCB) and agencies involved in water management is vital. Promoting allied activities like pisciculture, horticulture, and sericulture alongside traditional farming can improve overall income and resource use efficiency.
- Preparing farmers to access markets and receive fair prices for their produce is crucial for sustainable agriculture.

SDG 15 (Life on Land) and SDG 16 (Peace, Justice, and Strong Institutions)

The discussion revolves around the nexus between land, agriculture, and sustainability, highlighting several key points and challenges:

- The experts stressed the need to view land as an integral part of a larger landscape, emphasizing the importance of common land, such as community pastures, within the context of agriculture. Recognizing that agriculture cannot be isolated from the broader ecosystem, they point out the interconnectedness of land and agriculture, including nutrient transfer, soil moisture, and coordination.
- Common lands/ Commons should be acknowledged as vital for wildlife conservation, providing habitat for many species. The conversation stresses the importance of preserving common land for the benefit of the planet and its biodiversity, keeping it free from agricultural or other human activities.
- A systemic approach is advocated to link institutional functions with the SDG 16, which focuses on the responsible use of resources for the benefit of farmers. The productivity of private land is seen as dependent on resources like water, which often originates from common land. Thus, the relationship between private and common land is highlighted as a critical connection.
- In regions lacking irrigation infrastructure, common land is identified as a strategic asset that can significantly enhance agricultural productivity.
- The creation of foundational data is deemed essential for effective governance. Reliable and extensive data can inform decisions that benefit farmers and promote agricultural sustainability. Additionally, the discussion underscores the importance of circularity in policies, with a focus on how goods are transferred to the market within the value chain.
- Alignment of interests and subsidies is considered crucial. There is a need for placing responsibility on the state in addition to individual farmers, emphasizing that a comprehensive approach is needed, addressing both supply and demand sides of agriculture.
- Integration and coherence in land-related policies, especially for leasing and other agricultural activities, are deemed necessary for efficient outcomes.
- Local crops, beyond demand-driven varieties, are seen as vital to preserving local ecosystems. The importance of a holistic approach that considers local species, soil health, water management, and more is emphasized.
- The discussion recognizes that different regions and areas require tailored interventions to address their unique challenges and opportunities. Contextualizing solutions to local conditions are considered essential.
- Agroforestry is seen as a means of diversifying agriculture. However, the long gestation period for certain crops, like timber, presents a significant barrier. Farmers are discouraged by the uncertainty and risks associated with such extended waiting periods.
- The discussion highlighted the need for a healthy climate for agroforestry and quality nurseries, as well as financial mechanisms to support it. Carbon credits, in particular, should incorporate water management aspects. Other ecosystems need to be considered.
- There is another challenge of a broken supply chain that how will the farmers be guaranteed that their produce will be safeguarded and sold after completing the gestation period of as long as 20 years. Further, there is a lack of healthy climate areas for agroforestry and quality nurseries are also not available. Limited land holding among farmers also discourages agroforestry. Moreover, there is a lack of financial mechanisms for agroforestry. For carbon credits, people opt for fast carbon-growing species that destroy the local resources faster. Also, there is no evidence that farmers have received incentives for voluntary marketing.

- While collective marketing is seen as beneficial, collective production is viewed as challenging due to issues related to uniformity, accountability, and varying contributions among farmers. Trust among farmers is considered crucial. Citing the example of Telangana government that came out with a land leasing and subsidy policy, but it failed because those taking leases were not eligible for subsidies. The tenants working on the land may not be ready to develop the land as they are not sure if they will get the benefits and hold over the leased land for next year or not. Collective farming instead of land pooling is feasible.
- Talking about “common land”, for the purpose of collective farming, the issues pointed out were the identification of beneficiaries, controller of land, and allocation of benefits. Common land can be earmarked for public goods and not private goods. Agricultural production is private, and marketing is a collective and public activity.
- The discussion deliberated on land pooling and tenancy, emphasizing the importance of defining policies that safeguard the interests of tenant farmers and prevent corporate control over leased land.
- Some land can provide large benefits- the question in collective farming remains is how to distribute the profit as the productivity of land will differ from person to person and will consider the inherent fertility of the land- these questions need to be dealt with first before formulating land leasing and tenancy policies. For example, In Punjab, 55% live abroad. They give land to tenants- there is an opportunity to exploit the absence of land pooling
- A major barrier is that the society is divided. It is polarised and often hinders the success of welfarist policies. For example, in 2003, government of Madhya Pradesh came up with the Land Ceiling Act– but conflict among the community led to revoking the Act.
- The lack of clarity in terminology, such as organic farming, sustainable agriculture, natural farming, and regenerative agriculture, is noted as a challenge. The need for alignment and convergence among these different agricultural methods is emphasized. Giving the example of KVKs allotted with the task of promoting natural farming through demonstration but they get confused as natural farming cannot be developed instantly. It requires clarity and convergence.
- Market dynamics are characterized by a distorted pricing mechanism, where producers receive a small fraction of what consumers pay. Transparent price discovery is seen as essential to establish a stronger connection between consumers and farmers.
- Governance is viewed as the key to achieving equity in product distribution, as markets tend to exploit farmers. Policy contradictions and the lack of a well-defined land use policy are identified as challenges that need addressing.
- The importance of localized solutions and farmer-centric policies is highlighted. Policymaking should prioritize the welfare of farmers, ensuring that policies are feasible and beneficial for them.