# SDG Blueprint for Sustainable Agriculture: Expert Consultation

*Focus on SDG 1, SDG 3, SDG 4, SDG 5, and SDG 10*

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*Summary Document*

**SDG 1 (No Poverty) and SDG 10 (Reduced Inequalities)**

The issue of water availability remains prominent. Farmers with large hand holdings usually have access to water resources; therefore, equitable distribution of resources, including water, bailers are crucial. Also, strengthening the capacity of government at local levels becomes imperative for water management. Subsidies and grants can improve the scenario.

The inadequate agroecological consolidation approaches are yet to be integrated with MGNREGA. Intervention at geographical locations can be strengthened along with the incentives, and it will further help to integrate some components of NRLM with MGNREGA. Moreover, Behavioural nudges can be proposed in terms of enhancing existing mechanisms, such as strengthening training and capacity building in NRLM and MGNREGA. Strong market engagement and redressal mechanisms are crucial.

Doubling farmers' income in these SDGs remains the go-to mantra for policymakers. Strengthening the capacity through the introduction of technologies such as teaching the use of drones helps to ensure sustainable livelihood. Analysing synergies in existing schemes can help connect stakeholders, technologies, and farmers' groups. Financial incentives from private sectors and fintech companies can drive this moment ahead. Other social barriers, such as lack of trust and provisions of aid in processing units, remain central.

Water mapping and sustainability are not yet structured in the minds of small and marginal farmers. Integration of village development plans and sustainability to drive them to think about sustainability and awareness building is important.

In NRLM, incentivization can be introduced to active SHGs as it creates a strong social/ community network for interventions. In Millet's mission, the issue lies with the creation of market demand, where the government can intervene and enable the ecosystem that Millet produces to be sold. Focus on the ground level can be shifted from entrepreneurs to enterprises and can promote participation and impact. The collective efforts of farmers are crucial for all. It has also been witnessed during enterprise management that middlemen usually reap the benefits.

In PM Fasal Bima Yojna, insurance schemes are price-sensitive and pose liquidity constraints that exacerbate the issue of distrust among farmers. The promotion of flood tolerance seeds in national adoption for climate funds becomes important to build resilience among farmers. There is a need to boost the market demand for encouraging livelihood diversification, and minimum support price (MSP) can act as some of the incentives.

**SDG 3 (Good Health and Well-being)**

Macro-level interventions are progressing but with a slower pace. Strengthening is required in terms of engaging mental health professionals and quick support through helpline numbers.

The ambit of disease includes addressing health conditions related to Non-Communicable Diseases (NCDs). These diseases, such as diabetes, heart disease, and cancer, are a significant global health concern. Broader policy frameworks are required to address these NCDs, which can impact the overall well-being and productivity of farming communities.

While organic farming has several benefits, there are significant barriers at the ground level. These may include financial constraints, lack of technical expertise, and resistance to change traditional farming practices. Sustainable agriculture, as per SDG 2, emphasizes the importance of promoting environmentally friendly farming practices like organic farming to ensure food security and protect natural resources.

Meaningful involvement is essential when dealing with farmers facing multiple long-term health conditions. Understanding the barriers and opportunities they face is crucial for tailoring interventions. SDG 17, which promotes partnerships for the goals, underscores the importance of involving diverse stakeholders to address complex challenges.

Capacity building in farming communities should include access to mental health support. Farmers' mental well-being is an integral part of their overall health. SDG 3 calls for universal health coverage, which includes access to mental health services as part of essential healthcare. Farmers often hesitate to consult mental health counsellors due to the stigma associated with mental health issues. Addressing mental health is essential for achieving SDG 3's goal of good health and well-being. Promoting awareness and reducing stigma is crucial.

Ensuring access to loans, seeds, infrastructure, and tools can alleviate financial stress among farmers and reduce mental health issues. Strengthening mental health services, including counselling, is essential for farmer well-being. Improving access to healthcare, including telemedicine, is critical. However, challenges like limited internet connectivity in rural areas need to be addressed. Enhancing farmers' access to markets, knowledge about seeds, and sustainable techniques can improve agricultural practices and livelihoods. Raising awareness about mental health through community meetings, media, and traditional cultural practices can help reduce stigma and promote well-being.

The health system setup, both at the individual and institutional levels, should harness community assets to develop solutions. Co-creation with the farming community is vital. This aligns with the principle of community engagement under SDG 17 for effective implementation of sustainable development initiatives. Proposing telemedicine and digital education requires assessing the availability of necessary infrastructure like Wi-Fi and mobile phones among farmers. These digital initiatives can contribute to better healthcare access (SDG 3) and education (SDG 4) in rural areas.

Recognizing that diseases in the community can affect farmers' health underscores the interconnectedness of health and environment. This emphasizes the need to address

environmental and health issues simultaneously, aligning with the integrated approach of the SDGs.

To implement policies effectively, it's crucial to assess the availability of resources and budget allocation. SDG 17 emphasizes the importance of financing for sustainable development initiatives. Developing effective strategies and frameworks for capacity building and awareness is essential for achieving SDGs 2 and 3. These strategies should consider the unique challenges and needs of farming communities. Recognizing that farmers may have limited time for capacity building, interventions should be tailored to their schedules. Addressing the shortage of mental health resources requires innovative approaches and partnerships, aligning with SDG 17.

Embracing technical innovations and making technology more affordable can enhance agricultural practices. This aligns with SDG 9 (Industry, Innovation, and Infrastructure). The availability of raw materials, technical expertise, and financial resources are essential for transitioning to organic farming. The challenge lies in making organic products more affordable and accessible to the masses. It's important to work on market mechanisms to ensure that organic farming becomes the norm. Aligning with SDG 2 (Zero Hunger), sustainable agriculture practices should also focus on making farming profitable for farmers, ensuring food security, and reducing the environmental footprint.

While there may be stringent regulations on pesticide use, effective implementation remains a challenge. Pesticides can still be readily available in the market, undermining regulatory efforts. Sustainable agriculture, as per SDG 2, should include responsible pesticide use and environmental protection. Providing education on safe pesticide usage and the benefits of crop rotation can improve agricultural practices and environmental sustainability. Addressing gender inequality and promoting women's involvement in agriculture is crucial.

Emphasizing continuous engagement beyond project-based initiatives can lead to long-term sustainable solutions, ensuring that progress towards SDGs is maintained. In tribal belts, promoting traditional medicine and indigenous crops can improve health and food security, aligning with SDG 2. Policy recommendations should be based on reliable data and consider the realistic challenges faced by farmers and the agricultural sector. Addressing the setbacks caused by COVID-19, including nutritional and food insecurity, is vital for SDG achievement. This requires strategies to build resilience and recover lost ground.

Strengthening regulations on pesticide usage and promoting sustainable agriculture practices can protect the environment and farmer health. Encouraging the procurement of nutritional food within available resources can address food insecurity and promote health. Implementing insurance schemes can provide financial security to farmers in case of crop failure, while crisis helplines can address extreme situations quickly. Promoting multi-sectoral collaboration between ministries and enhancing health infrastructure can lead to more effective healthcare delivery. MSP of millets remains low, and it prevents the shift from rice. A lot of procedural issues persist, like time consumption and lack of funds and resources.

**Goal 4 (Quality Education)**

The current education system often lacks relevance to the needs of farmers and sustainable agriculture practices. There is a need to align education with practical agricultural knowledge and skills. Language barriers can hinder effective communication and knowledge transfer, particularly in regions with diverse linguistic backgrounds.

Social norms and stereotypes may limit the participation of women farmers in educational and training programs. Promoting gender equality in agriculture and education is essential for SDG 4 and SDG 5.

Education and awareness-building efforts need to be accompanied by capacity-building initiatives to ensure that farmers can apply what they learn.

Krishi Vigyan Kendras (KVKs) often operate in isolation with limited exchange of resources and knowledge. Collaboration and resource-sharing among KVKs can enhance their effectiveness. Education programs should consider the timing of farming activities, considering the agricultural calendar and seasonal variations.

Educational content should be tailored to the specific needs of farmers, addressing topics like soil quality, water management, and sustainable practices. Education and training programs should align with farmers' income aspirations, helping them generate higher revenues through sustainable agriculture.

Establishing partnerships between KVKs and State Agricultural Universities (SAUs) can be time-consuming, hindering swift action and program implementation. The timelines can be reduced. KVKs often have stretched resources, including human resources, which can limit their capacity to deliver effective education and training. Strengthening the agricultural ecosystem requires coordinated efforts to pool and utilize available resources efficiently. Agricultural education falls under the state list in India, making it challenging to implement uniform policies nationwide.

Skill development initiatives should be integrated with other schemes to enhance farmers' income. Innovative information and communication technology (ICT) tools, like Radio Bundelkhand, can enhance the reach and effectiveness of agricultural education. Gender-sensitive training can empower women farmers and promote gender equality in agriculture.

Educational systems can incorporate water budgeting and sustainable water management practices, contributing to SDG 6 (Clean Water and Sanitation). Research can help develop tailored and effective training modules that align with the latest advancements in agriculture. Skill development programs should focus on enhancing farmers' incomes, helping them move out of poverty. Collaboration with financial institutions can provide farmers with access to credit and financial resources for sustainable farming practices.

Utilizing audio-visual educational materials can make learning more engaging and accessible to farmers. Formal education should align with market realities and provide access to

technology and industry partnerships. Enhancing infrastructure and educational institutes' accessibility can bring education closer to farmers.

KVKs can collaborate, share resources, and align efforts with NGOs, SAUs, and ICAR for more comprehensive support. KVKs can collaborate with farmers for disaster management, climate action, and disaster mitigation plans. Education and training programs should be outcome-focused, ensuring that farmers can apply their knowledge effectively. Developing a national database can provide valuable insights and data for policy formulation and decision-making. Engaging farmers as key stakeholders in education and training programs can lead to more relevant and effective initiatives.

Tailoring technology to specific regions and ecosystems can enhance its adoption and impact on agricultural practices. Providing KVK staff with training in the latest advancements can improve their effectiveness in educating farmers.

Progressive farmers with practical knowledge can be valuable trainers in KVKs and SAUs. Technology should only be transferred to farmers after rigorous research and analysis to ensure its benefits.

Adequate funding for skill development programs is crucial to achieving the desired outcomes. Practical, hands-on learning can be more effective than classroom-based education, where the level of skilling can be defined. Support systems should be in place to help farmers bring their products to market successfully. Mobilizing farmers for education and providing incentives can encourage their participation. Usually, a huge gap between the understanding of skill and knowledge persists. Moreover, a common understanding of the environment, and sustainability lacks. NEP already has a skill enhancement framework that can foster skill adoption and quality.

Efforts should be made to raise awareness among farmers about government schemes and programs available to them. Promoting livelihood diversification can provide alternative income sources for farmers. Continuous assessment of the impact of training programs and feedback loops can improve their effectiveness. Collaboration with industries can lead to more opportunities for farmers to sell their products. Efforts should be made to raise awareness among young individuals about the opportunities in agriculture. Marketplaces can attract more people to engage in agriculture across the value chain.

Tailoring educational programs to specific geographical regions can enhance their relevance. Linking educational opportunities with livelihood generation can create a more holistic approach to skill development.

Existing educational infrastructure, including national open schools, can be leveraged instead of creating new infrastructure. Engaging with local communities, including farmers, can help tailor education programs to their needs. Also, there is a lack of detailed courses on agriculture. Mainstreaming and combining vocational training and formal education can promote quality education and save time and foster efficiency.

Fostering innovation and strengthening export opportunities can improve the economic prospects of farmers. Promoting sustainability in farming, including income and resource

efficiency, should be a key component of education. Engaging farmers as key stakeholders in education and training programs can lead to more relevant and effective initiatives.

Incentivization is often required to mobilize participation, even if the objective is just awareness generation. Lack of trust between state and central becomes a common issue. Agriculture is a state subject, and directions are received from the central. This alignment can be strengthened. The dynamics of political will sustains. Most of the KVKs are working beyond their mandate, huge resource crunch and human resources exist. Technology upgradation and transfer processes must be strengthened, and KVK personnel can be upskilled to use them. Night school can be leveraged however, not every section of society can avail them due to persisting social norms, like gender safety issues.

Most of these farmers' efforts can be made in alignment with SAPCC and disaster risk management, where farmers are equally involved. Skilling can be made more comprehensive by connecting and including the components of skilling in centrally sponsored schemes.

While designing the modules, income aspirations must be addressed through such modules. Also, technologies can be promoted based on the specific regions so that it could help in livelihood generation based on the region they are living. KVK and SAU can be aligned with NGOs and grassroots organizations to make a strong community connection and overcome the issue of trust.

A lot of time, the issue of hesitancy and rigidity of mindset appears among farmers. Usually, young farmers are easy to talk to and encourage them to adopt the technology. Moreover, half-cooked technology is usually taken to fields; robust research and testing must be done. Parameters or sustainability checklists can be devised for technology transfer and skill transfer. Additionally, need assessment must be carried out to balance the trade-offs and deliver what they need, and resource mobilization and accessibility can be improved. Promotion of livelihood diversification is necessary.

**SDG 5 (Gender Equality)**

Women often face barriers in accessing and inheriting land, which can restrict their participation in agriculture. Deep-rooted social norms and legal obstacles, such as those related to inheritance under the Hindu Succession Act, can hinder women's land rights.

Registering women as farmers can empower them by recognizing their role and contributions in agriculture. Recent changes, such as Aadhar requirements for property transfers, can create complexities in the process.

Cultural norms in places like Bangladesh can limit women's ability to sell agricultural products in public spaces.

Imparting agricultural knowledge and skills is vital to empower women, especially when they are confined to specific roles. Capacity building should encompass various aspects beyond farming to uplift women in agriculture.

With male migration, women often become the primary managers of land, highlighting the growing importance of acknowledging their roles.

The absence of gender-disaggregated data has hindered policymakers from recognizing gender-related barriers in agriculture. Gender-disaggregated data is crucial for understanding and addressing the challenges faced by women in agriculture effectively.

While gender equality sessions often involve women, it's essential for men to actively participate and support gender equality efforts.

Access to land, rather than just ownership, should be defined, as in some regions, land ownership is divided into individual ponds, making access complex. The prevalence of large land holdings often leads to lower women's participation in agriculture, where they primarily manage land but do not own it. After marriage, women may shift to their husband's villages, making access to their own land difficult.

Implementation of schemes like 'Pokra' in Maharashtra can be challenging when large landholders transfer land to females for benefits. Limited data connectivity and access to mobile phones can hinder women's access to information and resources. Initiatives like Krishi Tai need to ensure that women join with interest and receive proper remuneration.

Women sometimes engage in resource theft or use resources for personal consumption rather than for farming purposes. Changing terminology from "strengthen" to "introduce" in data collection can better address gender disparities. Sex-disaggregated data is essential in agriculture to understand and bridge gender disparities.

In regions like Punjab, women are often categorized as laborers rather than farmers due to landholding patterns.

Transferring assets to women is not always straightforward but is an important step toward gender equality. Males often dominate marketing activities, making it difficult for women to sell their produce directly.

Initiatives by Krishi Vigyan Kendras (KVKs) to enable farmers to sell their produce in markets are commendable. Direct payments to women for selling produce, as seen in Gujarat, empower them economically.

Recognizing and acknowledging the work done by women in agriculture is essential before collecting data to determine where to focus efforts.

Practices like 'Padyali' in Uttarakhand show that a substantial percentage of women are actively engaged in sustainable agriculture. Promoting policies that provide concessions to women, such as Kisan Credit Cards, can incentivize land transfers and empower women.

Collaborative efforts between Self-Help Groups (SHGs) and Krishi Vigyan Kendras (KVKs) can enable women to access opportunities and support. Community radios and women's networks within communities can enhance communication and knowledge-sharing. Simplifying education in local dialects and using engaging methods, like street plays, can make education more accessible to women. Facilitating women's access to financial instruments, like Kisan Credit Cards, can empower them economically.

Biometric verification can improve security in property registration and reduce the chances of fraudulent land transfers. Focusing on highlighting the positive contributions of women rather than solely enlisting policies can empower them further. Establishing internet access centers for women can enhance their digital literacy and access to information. Recognizing women as farmers and collecting sex-disaggregated data can provide insights for targeted policy interventions.

Governments can acquire land and lease it to women, offering them the opportunity for independent farming. Utilizing technology for financial inclusion and knowledge dissemination can uplift women in agriculture. Most of the technologies are utilized by male farmers, which makes their task easier. However, manual work is usually done by women as technology ergonomics are skewed towards male convenience.

Providing education in local dialects and promoting experiential learning can bridge educational barriers. Biometrics can be used for land verification to enhance security and reduce fraudulent land transfers. A lot of programs are only inclined towards male farmers, such as Kisan Bhaiyo. Instead, the promotion of gender-neutral intervention is required. No intervention has been made on ‘Kisan bheno’ yet.