NATIONAL POLICY INTERFACE OF SDGS AND SUSTAINABLE AGRICULTURE

Goal 1. End poverty in all its forms everywhere

Climate-related hazards, both slow-onset shifts and extreme events, are directly affecting vulnerable communities. These hazards are adversely impacting livelihoods, causing losses in agricultural yields, impacting human health and food security, destroying homes, and resulting in loss of income (Connolly-Boutin and Smit, 2016). Agriculture, food systems, and the sustainable use of natural resources are crucial for securing the livelihoods of millions of poor people struggling with poverty worldwide (FAO, 2019). Agricultural development is essential not only for poverty alleviation but also to feed the projected 9.7 billion people by 2050 (The World Bank, n.d.). Growth in the agriculture sector can lead to a two- to four-times increase in income among the poorest compared to other sectors (World Bank, 2023). Farmers who adopt climate adaptation practices experienced higher food security levels (8–13%) and lower levels of poverty (3–6%) than those who did not (Ali and Erenstein, 2017). Achieving agricultural growth through the application of new technologies is one of the most important ways to reduce poverty. However, the impact of such efforts on the rural poor depends on initial conditions, the structure of relevant institutions, and incentives (Khan, 2001). Encouraging farmers to diversify to higher-value commodities will be a significant factor for higher agricultural growth, particularly in rain-fed areas where poverty is high.

National Policy and Stakeholder Mapping

Policies/Schemes	Stakeholders	Pre-production	Production	Post-production
Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)	• Ministry of Rural Development	X	X	X
Pradhan Mantri Gram Sadak Yojana (PMGSY)	• Ministry of Rural Development	X		X
Deendayal Antyodaya Yojana (DAY) National Rural Livelihood Mission (NRLM)	• Ministry of Rural Development • National Bank for Agriculture and Rural Development	X	X	X
Pradhan Mantri Gramodaya Yojana (PMGY)	• Ministry of Rural Development	X		
Vanbandhu Kalyan Yojana (VKY)	• Ministry of Tribal Affairs	X	X	
National Adaptation Fund for Climate Change (NAFCC)	• National Bank for Agriculture and Rural Development	X	X	
Market Intervention Scheme and Price Support Scheme (MIS-PSS)	• Ministry of Agriculture Cooperation and Farmer's Welfare			X

Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)	• Ministry of Power • Rural Electrification Corporation Limited	X		
Integrated Scheme on Agriculture Marketing	• Ministry of Agriculture, Cooperation and Farmers' Welfare			X
Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	• Ministry of Agriculture and Farmers Welfare	X	X	X
Promotion of Joint Liabilities Groups (JLG's)	• National Bank for Agriculture and Rural Development	X	X	X
Pradhan Mantri Fasal Bima Yojana (PMFBY)	• Ministry of Agriculture and Farmers Welfare • Agriculture Insurance Company of India Limited (AICL)	X	X	X
Rashtriya Krishi Vikas Yojana (RKVY)	• Ministry of Agriculture and Farmers Welfare	X		X
National Agriculture Market (e-NAM)	• Ministry of Agriculture and Farmers Welfare			X
National Mission for Sustainable Agriculture (NMSA)	• Ministry of Agriculture and Farmers Welfare	X	X	X
Pradhan Mantri Kisan Maan-Dhan Yojana (PMKMY)	• Ministry of Agriculture and Farmers Welfare	X	X	X
Modified Interest Subvention Scheme (MISS)	• Ministry of Agriculture and Farmers Welfare	X	X	X
Kisan Credit Card (KCC) Scheme	• Ministry of Agriculture and Farmers Welfare • National Bank for Agriculture and Rural Development	X	X	X

Synergies and Trade-offs

Increased agricultural productivity can be beneficial to poor households in various ways. They may gain directly as producers as their income will increase. If the costs decrease more than the prices of the agricultural products, poor households may gain indirectly as consumers through lower prices or as agricultural labourers through increased employment and higher wages (Christiansen and Martin, 2018). Moreover, growth in agricultural productivity not only increases farm incomes but also stimulates linkages to the non-farm rural economy, leading to economic growth and rapid poverty reduction, with the overall growth multipliers almost always significantly greater than one (Hazell and Haggblade, 1993). Well-structured social protection schemes can also play a critical role in reducing poverty. These schemes can minimize the risks of investment in agriculture, benefit agricultural growth more directly, and promote social inclusion, thereby reducing the incidence of poverty (Devereux, 2016). Furthermore, women who own land or have control over assets are better positioned to improve their lives, deal with crises, lower their risk of poverty, and increase food security (LARRDIS, 2023). Therefore, policies to build agricultural resilience in the face of climate change and its impacts should integrate an understanding of gender differences in capacity, needs, and priorities. This will ensure the successful implementation of adaptation actions (Centre for Budget and Governance Accountability, 2021).

On trade-offs, switching crops to sustainable agriculture practices may not be affordable to farmers and may be less profitable than input-intensive agriculture (Kurukulasuriya and Rosenthal, 2003). This is more applicable to small and marginal farmers.

Target	Synergy	Trade-off
Target 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day		
Target 1.2: By 2030, reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions		
Target 1.3: Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030, achieve substantial coverage of the poor and the vulnerable		
Target 1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services, including microfinance		
Target 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters		
Target 1.a: Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions		

Target 1.b: Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions		

Gaps and Barriers

The direct linkages between sustainable agriculture, food availability, calorie intake by the poor, and reduction in poverty have been limited (Timmer, 2005). The lack of study and attention on these linkages is a major roadblock to poverty alleviation and agricultural development.

Further, monitoring welfare schemes is of key importance for the success of any programme. It is observed that a major share of resources continues to be absorbed by non-targeted individuals who fall beyond the specified age or income bracket (Asri, 2017).

Due to a lack of data and inadequately utilized methodologies, measuring progress and accountability with respect to governmental assistance remains a challenge (UN DESA, 2009). Additionally, progress towards schemes that focus on women's empowerment and gender equality cannot be accurately tracked owing to under-reporting (Centre for Budget and Governance Accountability, 2021).

Moreover, the SDG India Index captures only three out of seven targets, i.e., Target 1.2, Target 1.3, and Target 1.4. This creates a problem for India as the only metric keeping track of the performance of the SDGs does not cover all the aspects of SDG 1 (Bhambu, 2020). The impacts of sustainable agriculture on multidimensional aspects of poverty remain an area that needs more attention.

Emerging Policy Solutions

Strengthening Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)—Income Diversification and Empowerment: MGNREGA should continue offering alternative income sources to rural households, especially during off-peak seasons. This will allow them to improve livelihood security. Non-farm activities, which provide higher wages, empower farmers to negotiate better terms with buyers, lenders, and other actors in the agricultural value chain, fostering fairer wages.

- **Strengthening agro-ecological practices:** It is important to continue emphasizing water conservation and promoting the construction of water-harvesting structures such as dams and percolation tanks, along with micro-irrigation, under MGNREGA. Additionally, the scheme should encourage agro-ecological practices for sustainable farming, including organic farming and integrated pest management.
- **Sustainable infrastructure and technology:** To improve the effectiveness of MGNREGA projects and promote environmental conservation, the scheme should integrate eco-friendly technologies such as solar-powered pumps and energy-efficient machinery. Additionally, setting up composting systems to recycle organic waste can enhance soil fertility and minimize waste.
- **Sustainable land use:** Encouraging farmers to adopt sustainable land-use practices and diversify crop cultivation is essential to mitigate risks associated with extreme weather events and safeguard crops. This will also enable the farmers to secure their income sources.

- **Equitable resource distribution:** It is critical to address the issue of water availability and ensure equitable access to resources, including water. Strengthening local government capacity for water management through subsidies and grants is vital.
- **Integration with agro-ecological approaches:** MGNREGA should be integrated with agro-ecological measures and incentives for geographical location-based interventions. By enhancing the integration of components of the National Rural Livelihood Mission (NRLM), the impact can be further magnified.
- **Behavioural nudges and awareness:** Strengthening training and capacity building in both NRLM and MGNREGA is essential. Moreover, the promotion of sustainability through village development plans and awareness building can encourage farmers to adopt sustainable practices.
- **Community networks:** To create strong social and community networks for interventions, incentives can be introduced for active self-help groups (SHGs) under NRLM. This will help reduce the influence of middlemen and promote the collective efforts of farmers.

Strengthen Reporting on Metrics for Policy Design and Implementation: Some proposed metrics that could be monitored include the following:

- Percentage of poor farmers and producers who practice sustainable agriculture and who have access to markets.
- Budget allocation for encouraging sustainable agriculture practices in government schemes.
- Market linkage mechanisms for encouraging sustainable agriculture practices among farmers.
- Credit linkage mechanisms for encouraging sustainable agriculture practices among farmers.
- Number of poverty eradication schemes integrating sustainable agriculture through convergence or new components.

Technology Adoption and Synergies: The introduction of technologies such as drones for sustainable livelihoods should be encouraged. Connecting stakeholders, farmer groups, and technologies through existing schemes can be further enhanced by partnering with fintech companies and private sectors that can provide financial incentives.

Market Demand and Climate Resilience through Minimum Support Price: To build resilience among farmers, it is crucial to promote flood-tolerant seeds and increase market demand for livelihood diversification. Minimum Support Price (MSP) can act as an incentive to strengthen the agricultural sector.

Building Trust and Resilience: Addressing liquidity constraints in insurance schemes and promoting trust-building measures, particularly in processing units, can help alleviate issues of distrust among farmers and improve the overall resilience in the agricultural sector.