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MAKING “SUSTAINABLE” THE NEW NORM IN INDIA

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ISSUE BRIEF

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EXECUTIVE SUMMARY

Despite being the primary source of livelihood for about 58% of India's population, the agricultural sector's contribution to India's overall GDP has witnessed a steady decline. More than 8,007 farmers committed suicide in 2015, and farmers across the nation have been making demands for debt waivers, better pricing and government support. Owing to an increasing population, demographic transition, water scarcity, technological innovations and rapid urbanisation, it remains crucial to focus on what is profitable and sustainable for the Indian farmer as well as the Indian economy. Sustainable agriculture, then, can be defined as produce that is good for the people as well as the planet, while continuing to be profitable. This paper examines the policy initiatives undertaken by the government in this regard, along with some of the challenges that stand in the way of the adoption of climate-smart agricultural practices. It also aims to examine the role of all key stakeholders – including farmers, the government, private companies and the consumer. Sustainability has the potential to be a game-changer; however, certain aspects, like the implications of India's agrarian crisis, its consumer market and the role of private companies, need to be taken into account.

INTRODUCTION

As climate change triggers negative impacts across the country - including heavy rains, floods and intense tropical cyclones, more hot and dry days and longer periods of low productivity, and coastal flooding, among others - there is a heightening of risks associated with vector-borne diseases, crop failure, food shortages, lower nutritional quality, and threats to the health and livelihoods of communities and ecosystems.

Set against the background of a lower-middle income country still heavily reliant on agriculture, India needs to make some key decisions today that will ensure its own growth trajectory, as well as its position in the global market in the future.

INDIA AND AGRICULTURE

Agriculture has been central to the Indian identity, as well as to its 21st century growth story. From the idea of countering food insecurity in the second most populous nation, and as a major employer, agriculture has played a crucial role in the building of the Indian economy.

From the post-independence reduction of India's import bill, to bolstering the industrial sector while meeting increased crop yield goals and food production needs, as well as engaging with a newly liberalised India, agriculture has seen a number of phases. Of these, the Green Revolution remains the most crucial and controversial phase. Through it, India saw the expansion and aggregation of farmland, double-cropping, and the use of genetically modified (GMO) seeds. In turn, these laid the foundation for

India's transformation from a food-deficient country to a food secure one. Even as the long term impacts of GMO seeds were unclear, the 1960s were a turning point in the agrarian history of the country. Fifty years later, the effects continue to be evident, and relevant, especially in a context where the share of India's agriculture to its GDP has declined.

While this decline of agriculture's contribution to India's GDP is being attributed to the growth of its industrial and service sectors, the country is now witnessing a strange phase where the identity of the farmer has transformed. Despite being amply evident in the epitome of Indian culture, and even Bollywood films, the Indian farmer is now disappearing. Growing agrarian distress, looming climate risk, rapid urbanisation, and other factors, continue to make farming (once India's main occupation) difficult and less desirable as choice of career.

I THE AGRARIAN CRISIS

More than 70% of Indian farmers want to give up farming, owing to the consequences that have emerged from the industrialisation of agriculture. Crop yield is significantly lower than similarly placed nations like China and Brazil. With its continued reliance on the irregular monsoon cycle, India's risk profile in the agriculture sector continues to grow at an alarming rate (Sachdev 2018).

Further, 8,007 farmers committed suicide in 2015 (National Crime Records Bureau 2016). As recently as November 2018, 80,000 farmers and labourers participated in the two day "*Dilli Chalo*", with three-pronged demands of debt waivers, setting a minimum price for produce, and a special session of Parliament to discuss the same (Aljazeera 2018).

Even as this paper is being drafted, farmers across the nation are making demands to the state and central government for better pricing, loan waivers, revised land-use structures and government support (Kanmony 2017: 1). These can all be seen as symptoms of greater complications in the current agrarian crisis, with large scale national implications.

There also needs to be a recognition of issues which emerge within the agrarian sector due to increasing population, demographic transitions (rural to urban migration), water scarcity, technological innovations, and rapid urbanisation, among others (Planning Commission n.d.).

The link between what is profitable and what is sustainable for the Indian farmer, the Indian economy, and Indian agriculture is perhaps one solution to the issues that the country needs to address.

I IS TRADITIONAL AGRICULTURE, AND "ORGANIC", THEN THE MOST SUSTAINABLE?

In the most progressive way, there is a need, now more than ever, to look at juxtaposing the niche understanding of organic and sustainably sourced with technological advancement. This in turn makes a stronger business case for aggregators and companies, as well as for the Indian farmer.

The definition of sustainable agriculture is today widened to incorporate organically produced and responsibly sourced material. In essence, sustainable agriculture is produce that is good for the people as well as the planet, while continuing to be profitable. This means that sustainable products:

1. Consume resources (water, fertilizers, pesticides) which are completely natural and at rates that match, or are less, than the supply.
2. Link the producer and consumer, thereby making the supply chain more transparent, consuming fewer natural resources in the transportation process, and protecting indigenous varieties of crop due to its farm to table nature (Horrigan, Lawrence et. al 2002).
3. Engage with the entire supply chain on issues of fair wages and sustainable trade.

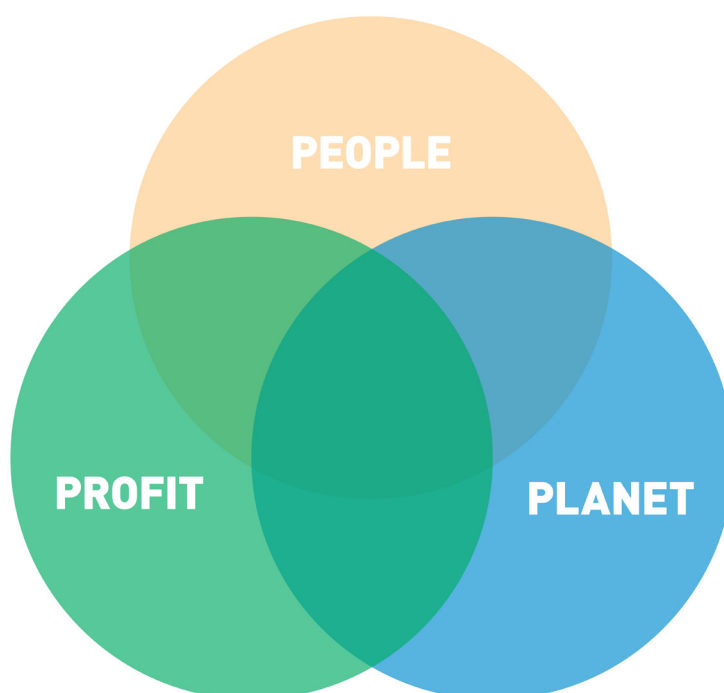


Fig.: The triple bottom line for a sustainable agricultural product

Sustainable Agriculture remains anchored in the idea of adding value to the **triple bottom line - people, profit and planet**, thereby rejecting the industrial approaches of production (Slaper and Hall n.d.). The newer technical definition often replaces profit with balance as its end goal, with a recognition that profit-oriented businesses are not viable in the long run (Ikerd n.d.).

In the context of sustainable agriculture in India, the triple bottom line could mean ethical hiring practices for labour (including seasonal hiring), usage of naturally available and organic inputs (organic manure), the growing of indigenous/endemic crops varieties, proper crop waste management, and fair trade, among others.

Sustainable agriculture can, thus, possibly be a measure to help enhance productivity while simultaneously reducing prevalent ecological risk in a context as diverse and dynamic as India (BASF n.d.).

POLICY ACTION

The government, in attempts to address the current crisis in the agriculture sector, has implemented the National Mission of Sustainable Agriculture, under the National Action Plan on Climate Change, 2008.

The main goals remain the enhancement of agricultural productivity through integrated farming, soil health management, and natural resource conservation (Indian Agricultural Research Institute n.d.). The broader aim is to make agriculture more productive, sustainable, remunerative, and climate resilient. There are several schemes included under this mission, which remain largely input-based:

1. **On-Farm Water Management** - implemented to enhance water use efficiency through technological interventions like drip and sprinkler technologies, an efficient water application and distribution system, and secondary storage of rainwater, among others.
2. **Pradhan Mantri Krishi Sinchayee Yojana** - under this, the 'Per Drop More Crop' focuses on water use efficiency via precision or micro-irrigation, supporting micro level water storage, or water conservation and management activities.
3. **The Rainfed Area Development Programme** - focuses on Integrated Farming Systems to enhance productivity and minimise risks associated with the variability of climate. It also focuses on the maximisation of farm returns via activities like horticulture (garden cultivation or management), livestock, fisheries, and vermi-organic compost. This helps farmers mitigate the impacts of droughts, floods, and other extreme weather events.
4. **Soil Health Management** - aims at promoting Integrated Nutrient Management through the reduced use of chemical fertilisers, and an increase in the use of organic manures and biofertilisers to improve soil health and productivity.

In India, small and voluntary sustainability measures have been adopted and adapted to suit local needs. Farmers in Uttar Pradesh have now moved from single crops to beekeeping, mushroom cultivation, and cluster plantation. These have increased economic returns, including the advancement of medicinal plants, fruits, and flowers. Further, they have begun to use organic solutions like phyto pesticides from the neem tree, compost from cow dung, fodder and dry leaves, along with the introduction of earthworms (Kumar 2012).

The associated upliftment of rural communities in initiatives like the Mahila Kisan Sashaktikaran Pariyojana, in the Wardha and Yavatmal areas of the Vidarbha region of Maharashtra, further evidence the need for a more strategic shift to sustainable agricultural practices in the country.

A number of studies on sustainable agriculture in India also highlight zero tillage, crop rotation, green manuring, farmyard manuring, and vermicompost as other methods to create a more sustainable agricultural system (Tatke 2015).

37% of Indian land (about 120.40 million hectares) is severely affected by land degradation.

37%

Since the understanding of sustainable agriculture in India remains input-based, with an emphasis on soil and water (National Bank for Agriculture and Rural Development 2019: 3), and more than 37% of Indian land (about 120.40 million hectares) remaining severely affected by land degradation, the need of the hour is also to expand on traceability across value chains. The critical question then becomes one of accountability and responsibility.

The assumption made is that the farmer, the government (the state and centre), private companies and the consumer are all key stakeholders in the regularisation and standardisation of sustainable processes of manufacturing, packaging and transportation. But are they equal stakeholders?

| SUSTAINABILITY STANDARDS - ORGANIC - SUSTAINABILITY PRODUCED - RESPONSIBLY SOURCED

From the pre-independence handloom, to new-age fads around the use of organic products, grains, sustainable, organic and responsibly sourced agri-products have found their way to the Indian consumer from time to time. In the sustainability game, the Indian consumer plays as important a role as the production chain itself.

While the move to sustainable produce is a risk the average Indian smallholder farmer is not willing to take, it is further complicated by middlemen and the mandi system; that is the value chain does not consistently remain sustainable.

Packaging and transport remain crucial issues to be addressed in the sustainability of consumer goods; from chips to chocolate, and shampoo to sanitary napkins.

In this, the Government may need to standardise and make sustainable practices more accessible and viable for each value chain actor. At the same time, accountability, verification, and traceability need to govern market access decisions made by large and small companies. The price sensitivity of the Indian demand market makes it a complex space, and traceability measures almost always involve short term costs which companies need to see value in. Strengthening the business case, or a policy push, are needed to counter inertia therein. A number of multinational companies working in India have made global commitments on sustainable sourcing, which similarly need to extend to India.

Furthermore, there is a need for consumer awareness, beyond food safety, to be built up, especially around commodities which interact with more aware segments of the Indian consumer market.

It is important to highlight that while the number of sustainability standards and certifications have risen within the Indian market, price sensitivity remains a vital issue. Often these measures have been developed in other geographies, and their relevance to India is rather complicated.

For social and environmental safeguards - associated closely to sustainable agriculture - a number of credible voluntary certification systems and standards exist internationally. These are aimed at reducing the negative impact of production of key commodities: the more widely recognised standards include:

- Forest stewardship Council (FSC)
- Marine Stewardship Council (MSC)
- Roundtable on Sustainable Palm oil (RSPO)
- Better Cotton Initiative
- Bon Sucro
- FairTrade
- Trustea
- Green Seal
- USDA Organic
- Rainforest Alliance Certified
- UTZ

To foresee the long term impacts of sustainability in demand and supply in the market then, especially in varying geographical and climatic conditions, assessment becomes pertinent at multiple levels - economic social and ecological - involving aspects like cost-benefit analysis, risk analysis, eco-system charts and indicator systems (Wezel, Casagrande et. al 2014).

What is needed then is a proper macro and micro level analysis of the Indian agriculture scenario, and how sustainable it could actually be.

Sustainability remains, to a large extent, limited to inputs, and thereby needs to be expanded through the processes of sustainable production (agriculture) to sustainable consumption. This also speaks to global mandates highlighted in SDG 12: Responsible Production and Consumption.

Sustainability can be a game changer, but much remains to be done in context-setting to the sensitive Indian market, farmer distress, the socio-economically weak consumer segments and companies with large global commitments and limited local action.

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