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Risk Report

AGRICULTURAL RISK IN INDIA: FACTORS AND RECOMMENDATIONS

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Summary

This Risk Report examines agricultural challenges in India exacerbated by several factors, notably, climate change, and poorly designed and implemented government led agro-financing policies. Uncertainties challenging the country include seasonal yield variability, price fluctuation, weak infrastructure, and a limited access to financial services in the form of credit and insurance. A higher frequency of natural disasters – primarily in the severity of flooding and drought – will have the most immediate as well as long-term negative impact on production. The inability to meet population food demands requires an alternative management strategy and overall policy implementation rethink. Alternative viewpoints concerning the lack of risk management tools are examined, and suggest that this insufficiency can be viewed as an opportunity for India to penetrate further into emerging agricultural insurances and commodity markets. The report concludes with a series of recommendations that would provide additional benefits in safeguarding agricultural sectors to promote sustainable growth objectives.

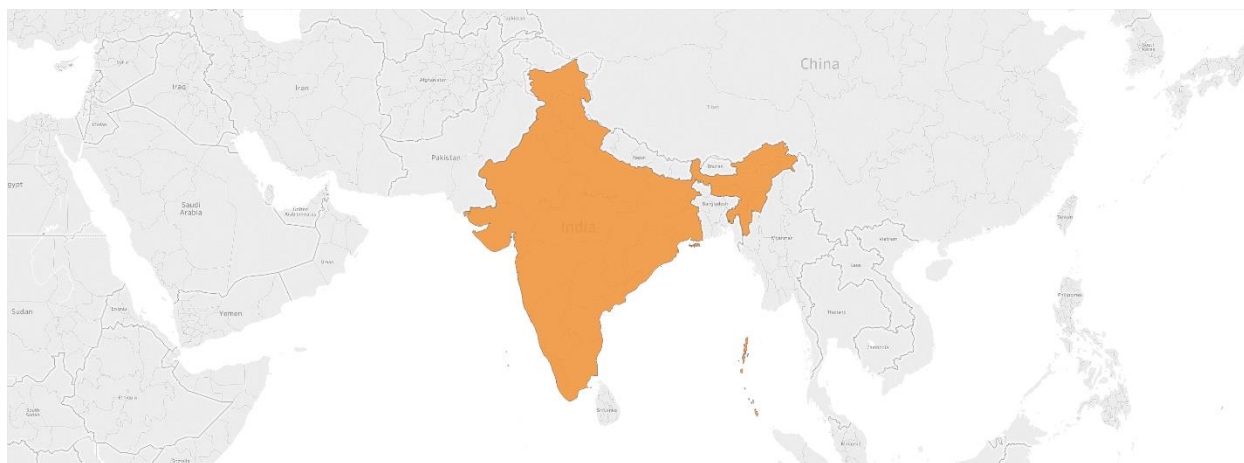
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List of Abbreviations:

eNAM	National Agriculture Market
GDP	Gross Domestic Product
MIS	Market Invention Scheme
MSP	Minimum Support Price

Factors of Agricultural Risk

Agricultural sectors in India are exposed to a variety of high-frequency risks, including climate and weather, natural disasters, pests, and crop disease, all of which contribute to high variability in annual production. All of the aforementioned can be further exacerbated by price fluctuation, limits to credit, and the implementation of technological assistance and institutional advisory. Risk management in India ranges from informal mechanisms of avoidance, such as certain problematic or sensitive crops, to diversification across crop yields. Minimum support price (MSP) systems and agricultural insurance are powerful stabilizing factors that should not be underestimated in India's path to modernization.



Climate Change and Environmental Variability

Rising temperatures, erratic rainfall distribution, floods and cyclones, droughts, and changes to insect and animal habitats, including invasive species, all contribute to losses in agricultural production and indicate a more unstable path ahead for maintaining livestock population. A developed response mechanism for primary crop failures and the resulting secondary effects, such as livestock deaths, is much needed. Further mechanisms of value are climate forecasting, climate information generation, the sharing of such data through early warning systems, and the mapping of agricultural production and losses through remote sensory technology. All of these will greatly benefit both at-risk communities and overall food production. In addition, a broadly accessible and fair insurance system should be put into place to protect farmers from bankruptcy and mitigate the risk of landholders foregoing the land they cultivate.

Agricultural Insurance

The main agricultural insurance scheme in India is plagued by farmers having limited access to recoup funds. While proving essential at times, it remains an imperfect system, suffering from several limitations such as guaranteed yields that are not in-line with farmer aspirations, low indemnity levels, delays in claim settlement, lack of coverage for horticultural crops, poor servicing and awareness levels, notably among non-loanee farmers, as well as inadequate loss coverage.

Henceforth, a list of the most important modifications are recommended to meet challenges:

- A longer yield time should be used in fixing Guaranteed Yield for stable coverage, with a 15% increase in government exposure.
- An increase in the indemnity level, involving an increase of government expenditure of approximately 8%, should be instituted.
- Coverage to prevent planting in adverse conditions, involving added government expenditure of 5%.
- "Uniform seasonality discipline" in the form of cut-off dates for purchasing insurance should be employed for participation by all farmers.

Agricultural relief funds through crop insurance require an increase in support that should involve:

- Setting up a system of weather stations in all regions of the country, as well as introducing a weather insurance pilot program for select crops.
- Re-introducing government-supported Farm Income Insurance, with coverage to include oil seeds as well.
- Increase livestock-related activities from 20% of agricultural Gross Domestic Product (GDP) to 30% or more, in doing so, raising the premium.
- The government should work more closely with private insurance companies to help standardize general practices across the board.

Agricultural Insurance Support Services

All effective systems of insurance are based on two key factors: accurate and timely data, and effective distribution channels. It is recommended that a large-scale use of remote sensing technology be used in the agricultural insurance program to deliver a more timely settlement of claims. It is also recommended that new distribution channels, such as post offices and micro-insurance agencies, be introduced. This program should be implemented in conjunction with the creation of a national database equipped to disseminate information in a timely manner.



Price Support Measures

MSP helps achieve food security by extending remunerative prices to farmers in exchange for their produce. A few recommendations are needed to make the current system more efficient:

- Broader crop coverage and an extended MSP to all farmers.
- Normative rationalization of State taxes.
- The creation of a Revolving Fund that ensures a timely availability of funds.
- Decentralizing procurement so that adequate provision of funds is met in advance.
- Recommendations include Market Intervention Scheme (MIS) price fixation by an expert body, reimbursement based on actual losses incurred by farmers and establish improved linkages with a growing agricultural processing body.
- Changes to Price Stabilization Fund (meant for commodities such as coffee, tea, rubber and tobacco) to include crop-specific acreage, an increase in crops covered, and flexibility when it comes to farmers' deposits and linkages to crop insurance.
- Creation of a credit risk management fund for plantation crops that institutionalizes credit risk of farmers in the event of adverse price movement of plantation crops.

India's estimated 119 million farmers and 144 million agricultural laborers are always at risk of a poor-conditioned monsoon season. However, production year 2017-18 seems to be following a solid 2016-17 output, and produced the country's largest foodgrain at an estimated 273 million tons. A bumper year also saw pulses, cotton and sugarcane perform well with an agricultural budget boost from ₹ 16,646 Crore to ₹ 41,855 Crore in the past three years. Much needed agro-centric initiatives, like Soil Health Cards and National Agricultural Market (eNAM) also gave more hope in the overall agro-sector. Recently there has been a MSP enhancement for different crops. Also, Prime Minister Narendra Modi has made the pledge to see farmer's incomes double by 2022. Despite these positive efforts, however, there have been intensive agitations across the country, as many farmers in India work their toil for subsistence-level earnings.

In today's economic climate, food production is not the main trigger for agricultural crisis. Rather, global and local market volatility remain the determining factors to food insecurity and possible shortages. For example, should the price of produce and grains be under constant pressure, costs could correspondingly rise, thereby impacting farmer incomes and debt repayment capacity. The burden of risk falls most heavily on farmers, as they are most exposed to year-to-year risks such as pests, natural disasters, drought, a lack of insurance and financial protection, losses in storage and transport, and price uncertainty while marketing.

In many ways, India is an agricultural nation. Recommendations for ensuring that this vital sector remains healthy thus address both policy and practice in order to meet expanding population demands and to mitigate climate change challenges. The goals of these recommendations are

1. An effort to minimize risk to farmers and distribution networks across the agro-value chain; and
2. To ensure a fair share of the value that is produced by farmers is returned to them.

Long term sustainable solutions and policies are needed in order to achieve these goals. Key areas of macro concern are:

1. **Market Disconnect:** A disconnect exists between what an Indian farmer produces and what an Indian consumer demands. Farmers are often not connected to aggregators, food processors and retail chains to help shape what they grow. This lack of connection to market

demand ensures that agricultural production remains overly dependent on farmer choices and the policies of government MSP programs.

2. **Weak Suppliers:** Farmers continue to be small and marginal, inadequately resourced and ill-informed with regards to markets and marketing.

3. **Dependence on Agriculture:** The Indian population is 60% dependent on agriculture for its livelihood, while this sizeable sector contributes to only 14-15% of its GDP.

4. **Lack of Adequate Technology:** Farmers remain ill-equipped to take advantage of useful technology. The few that have access to agro-technology have limited training and resources to adopt technology quickly and over the long term. This hinders farmers from competing on an equal footing globally. They also have little say in steering development-based solutions.

5. **Low investment in R&D:** Less than 1% of agricultural GDP in the country is re-invested in research. This figure is given that the agricultural sector is critical to food security and provides livelihood for two-thirds of the population.

6. **Insufficient Supply Chain infrastructure:** There seems to be little to no infrastructure in place across entire agricultural value chains, with little to no discourse on its future.

Long term strategic planning, putting in place a holistic system of smart production, distribution and fair remuneration, is required. Key areas that need addressing are: increasing supplier power; producer-consumer linkages; and customized approach to a variegated crop groups. Investment should prioritize infrastructure and value chains, education, R&D, technology, training, and marketing. Risk mitigation will empower the agricultural sector to be more efficient and to meet consumer demands in a better way.

Recommendations

The following are a series of recommendations that could assist India with risk reduction in its agricultural sector:

1. Consolidation of farmers and land use into larger groups without losing land title(s).

This can contribute to measures inclusive of the following:

A. Forming larger farming organizations that are properly networked, both regionally and centrally.

- B. Encouraging land storage banks for surplus food production, especially in areas that are remote, hilly, and semi-arid, where farming can be more difficult. By depositing surplus, farmers can work collectively and better coordinate to decide food prices and other terms. This could work to shape an improved model of partnership between producer-suppliers on the one hand and aggregators, retail chains, food processors, buyers on the other.
2. Establishing direct linkages between growers and consumers:
 - A. Reducing uncertainties in food production and ensuring fair trade value for farmers will require organization structures directed by a policy framework promoting linkages between professional aggregators, food chain collaborators, and food processors,.
3. Adopting advanced technology throughout the agro-value chain:
 - A. Upgrading to global standards in technology and sophisticated land surveying devices should be seen as top priority. A holistic approach, with the inclusion of agricultural university programs and research institutions, needs to be considered. R&D investments must be enhanced substantially through a transparent and accountable framework.
4. Infrastructure that provides transportation, storage facilities, information sharing, credit, and insurance, needs to be established.
5. Dependence on agriculture needs to be reduced 60% to a sustainable level around 30%:
 - A. Agricultural policies need to focus on creating efficiency through less burdensome methods. Diversification in the overall general economy will encourage reduced dependency on farming and increase efficiency in agro-growing. Such policies may include assisting in the professional aspirations of people looking for alternate careers or the employment of more tech-savvy careerists in the agricultural sector, especially in the areas of production and distribution, weather monitoring and warning systems.

Conclusion

India is ready for a dramatic shift in the way food is produced and distributed to consumers. The country cannot rely on political rhetoric or short-term outlooks to address the need for change. Rather, a sustainable vision based on modernization and technological assistance should be implemented. Organization and short-term planning are India's two biggest challenges to proper agro-policy implementation. Smart and sustainable policy-making backed by committed funding – where funds are allocated to infrastructure, technology and collective production regarding suppliers – is necessary to increase India's agricultural efficiency and competitiveness, and to prepare the country for the increasingly alarming challenges related to population pressure, climate change, and inequity of resources and purchasing-power.



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