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India's Rural Development And Agricultural Infrastructure

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INTRODUCTION

The studies all agree that rural infrastructure is a requirement for dramatically raising human well-being and astonishingly boosting agricultural development. Infrastructure projects, however, demand huge upfront cash commitments, lengthy gestation times, and large incremental cash requirements. High risk, low rate of return on investment, and production ratio. Increased crop yields, which in turn foster agricultural growth, have a clear and significant association with farmers' access to institutional finance and markets. The development of agricultural infrastructure in India has the ability to upgrade the country's current traditional agriculture and subsistence farming practises into the most cutting-edge, lucrative, and dynamic farming systems. Agricultural infrastructures are divided into two categories, according to Wharton (1967)(: I capital intensive, such as irrigation, roads, and bridges [ii] institutional infrastructure, such as formal and informal institutions, and [iii] capital intensive, such as extension services.

Infrastructure, including rural development, watershed irrigation, and The kind and scale of agricultural output in India are influenced by electrification, roads, markets, and rural literacy, working closely with institutional infrastructure like financial institutions. The rate of agricultural and economic growth is accelerated by fast-expanding infrastructure, which increases farm output and decreases farming costs. Infrastructure is known to have a crucial role in generating stronger economic multipliers when agricultural growth occurs.

Categories of agriculture infrastructure

A vast range of public services that support production, acquisition, processing, preservation, and commerce make up agricultural infrastructure. The following major categories can be used to group agricultural infrastructure.

Infrastructure based on inputs:- seeds, fertiliser, pesticide, farm machinery.

Infrastructure based on resources:- farm energy, irrigation and water, Road connectivity, transportation, warehousing, processing, preservation, etc.

Institutional infrastructure: marketing, financial services, information & communication technology, agricultural research, extension & education, etc.

Development economists are aware of the expanding significance that agricultural infrastructure plays in the country's economic development, which extends beyond just agricultural development. Researchers have identified 11 different types of infrastructure, including I public transportation, [ii] storage services, [iii] means of irrigation and public access to water, [iv] commercial infrastructure, [v] processing infrastructure, e [vi] Public services agriculture extension and research services Information and communication services (viii) Services for land conservation (IX) health and education services, as well as [x] credit and financial institutions.

Infrastructure-related studies:

The scientific literature on agricultural infrastructure, particularly road connection, deals with its relevance for agricultural development in detail; among others, the following are a few of the most pertinent for India.

In a study of 13 Indian States, Binswanger [1993] found that investments in rural infrastructure cut transportation costs, boost farmers' access to markets, and result in significant agricultural expansion.

Studies conducted by the World Bank in 1994 revealed a direct correlation between infrastructure development and increases in farm production and non-farm rural employment. Given that the majority of low-income households in developing nations are located in rural areas, this is a significant development.

Infrastructure's effects accelerate the commercialization of agricultural and rural areas [Jaffee and Morton, 1995]. Additionally, it may result in the conversion of latent

In a recent study, which covered a wider time span and covered infrastructure factors with 10 explanatory variables, the impact of infrastructure on agricultural development was examined. The findings showed that there were four types of

infrastructure: transportation, power, irrigation, and research. Important factors that had a substantial impact on agricultural productivity Irrigation facilities significantly improved with increased access to power, especially through the extensive energization of pump sets. Improved irrigation systems and research input ultimately increased agricultural production. Along with the growth of the transportation infrastructure, other infrastructure amenities, such as market access, loans, and extension services, also emerged [Throat and Sirohi, 2002.

Initiatives by the government:

India is rich in natural resources, including land, water, labour, livestock, fish, forestry, and vegetation, climate, solar, and wind energy. Science, technology, and money have not even been used to the full extent of the country's potential for development in agriculture. In addition to supplying jobs and ensuring food security, agriculture has enormous potential to propel the nation's economic progress and has the greatest cascading effect on the development of secondary and tertiary sectors in rural areas. Following independence, the Indian government gradually built the following organisational, administrative, and physical infrastructure with the goal of developing agriculture.

District rural development agencies, district industries centres, national rural road development agency, khadi & village industries commission/boards, national extension service, rural banking institutions, panchayati raj [local bodies] institutions; boards for sericulture, coir, handloom, and handicrafts, rural electrification corporation, central water commission, groundwater boards, farmers training centres, and kishi vigyan Kendra's (Agricultural Science Centres);Manufacturing facilities for seeds, fertiliser, insecticides, and agriculture equipment; creating irrigation potential; processing, preservation, storage, roadways, and marketing facilities.

Innovative Approach: It was clearly understood the significance of rural infrastructure in key areas like irrigation, roads, bridges, etc., especially in light of the pressing need to increase the agricultural growth rate to 4.5% in the 9th Five Year Plan. While in India providing appropriate rural infrastructure

Since the agricultural sector accounts for roughly two-thirds of employment and 70% of the population lives in villages, the scarcity of financial resources, the State Governments, who are generally in charge of its inception, growth, and upkeep, is a crucial limiting factor. It was noted that numerous infrastructure projects were Lacking sufficient financial resources on the one hand, and being unable to fulfil their obligations to give agricultural 18% of net bank credit on the other, commercial banks were left in a lurch. As a result, the Indian government decided it was necessary to establish the "Rural Infrastructure Development Fund" (RIDF), which will be run and administered by NABARD, by way of deposits to make up for the lack of agricultural loans from commercial banks.

MASSIVE WORK AHEAD

With the implementation of the IRDF, numerous new projects encompassing over 30 activities are being implemented in thousands of villages where rural households now feel a sigh of relief and comforts, in addition to the infrastructure projects that were previously left unfinished at the level of State Governments due to a lack of adequate financial resources. The Fund's use, however, has lagged behind sanctions partly because I it has been challenging to find eligible projects and [ii] some State Governments have been slow to get administrative and technical permission. Delays in finishing preliminary work for irrigation projects where land acquisition is involved, including [iii] requirements for drawing money.

This necessitates raising awareness among interested parties about shared concerns. Additionally, the established administrative, technical, and legal system that impedes implementation must be revised, clarified, and made more approachable. While it is more important than ever to I make the greatest use of already-built infrastructure and improve it as well as [ii] continue to build new infrastructure in order to bring prosperity to rural families, the following areas should be given priority.

IRRIGATION

The ultimate irrigation potential has been estimated at 140 million hectares, which includes 59 million hectares from big and medium irrigation projects and 81 million hectares from minor irrigation projects, according to the 9th Five Year Plan [1997-2002]. With regard to the latter, 17 million hectares from 64 million hectares of groundwater resources and little surface water irrigation systems.21.4 million hectares, or around 37% of the irrigation potential from big and medium irrigation projects, are already exploitable. Of this, 13.4 million hectares are occupied by numerous projects that are in the planning stages. Underutilizing the irrigation potential that has already been generated due to a lack of field canals and other small investments, etc., is a big issue as well.

Use of enhanced Seeds:

Among other things, the use of standard quality seeds from high yielding crop types and their timely availability are crucial for improving crop production, which is essential for long-term & sustained agricultural expansion. Additionally, high yielding seeds should be created by using biotechnology & radiation technology, for example, as part of on-going research process. The Indian Council of Agricultural Research, State Agricultural Universities, cooperative sector, and the corporate sector are all involved in India's seed development programme.

Prudent Use of Pesticides and Fertilizers:

The amount of nutrients consumed by fertilisers per hectare has increased from 105.5 kg in 2005-2006 to 128.6 kg in 2008-2009. However, increasing soil production is still a difficult task. Increased application of major and minor nutrients in the proper amounts is necessary. Based on soil analyses, in proportion. In order to create 500 new Soil Testing Laboratories (STLs), 250 Mobile Soil Testing Laboratories (MSTLs), and reinforce the current State STLs for nutrient analysis, a new programme called the National Project on Management of Soil Health & Fertility was initiated in 2008–2009. Fertilizers have been designated as an essential commodity in order to ensure that farmers have access to sufficient quantities of fertilisers of standard quality and to control trade, quality, and distribution.

CONCLUSION:

Agriculture infrastructure has to the power change India's current subsistence of traditional agriculture into a modern commercial and dynamic farming system.

It is time for rural households to identify their infrastructure need and make demand of elected officials as a matter of right; government must allot adequate resources in their annual budgets, and implementing organisation, including banks , must be concerned about, committed to, and accountable to a time- bound programmes should be used to install infrastructure in each village. as part of the right to information every program's or scheme's performance must be made publicly available a month thought local print and electronic media.

The establishment of a rural infrastructure development company will allow for the planning, implementation and mobilisation of financial resource from within the nation as well as from the World Bank, Asian development bank and other foreign institution.

REFERENCES:

1. Infrastructure For Agriculture & Rural Development In India Need For A Comprehensive Program & Adequate Investment Dr Amrit Patel
2. Akerlof, George. (1970), "The Market for Lemons: Quality Uncertainty and the Market Mechanism" Quarterly Journal of Economics 84:488-500
3. Bank for International Settlement, (2001), "The Banking Industry in the Emerging Market Economies: Competition and Consolidation and Systemic Stability." BIS
4. Boyd, J., and E. Prescott. (1986), "Financial Intermediary Coalitions." Journal of Economic Theory 38(2):211-32.
5. Benston, G., and C.W.Smith. (1976), "A Transaction Cost Approach to the Theory of Financial Intermediation". Journal of Finance 31:215-31.
6. Diamond, D. (1984), "Financial Intermediation and Delegated Monitoring". Review of Economic Studies 51(3):393-414.
7. Government of India (1972), Report of the Banking Commission. Delhi.
8. Gentler, M., (1988), "Financial Structure and Aggregate Economic Activity: An Overview." Journal of Money, Credit and Banking 20(3):
9. McKinnon, R. I. (1973), "Money and Capital in Economic Development" Brookings Institute, Washington.
10. Weiss Laurence. (1988), "Comment on Financial Structure and Aggregate Economic Activity: An Over View". Journal of Money Credit and Banking, no. 3, 20:594-96