

ENABLING COLD-CHAIN INFRASTRUCTURE DEVELOPMENT IN INDIA

EVOLUTION AND ASSESSMENT OF POLICIES AND
INSTITUTIONAL MAPPING



ABOUT THE REPORT



“Enabling Cold-chain Infrastructure Development in India: Evolution and Assessment of Policies and Institutional Mapping”

was developed under the Alliance for Sustainable Habitat, Energy Efficiency and Thermal Comfort (SHEETAL) project, funded by Children’s Investment Fund Foundation (CIFF). The report briefly summarises the institutional and policy development of cold-chain in India, a) highlighting the various institutions/actors and their role(s) in cold-chain policy formulation and implementation b) mapping the past policies, plans and other government initiatives providing a historical context to the present policy narrative on cold-chain in India, and c) identifying the deficiencies/gaps in the existing policies, missing links in policies and paving the way forward.

BACKGROUND: INDIA'S HORTICULTURE COLD-CHAIN SCENARIO



India is predominantly an agrarian economy, with nearly 50% of the population still dependent on agriculture and its allied sectors. These sectors contribute up to 14.4% to the country's overall GDP (2011-12)

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India is a predominantly agricultural country with nearly 50% of the population still dependent on agriculture and allied sectors, contributing up to 17-18 per cent to the country's GDP (as per economic survey 2017-18)¹. With the improved irrigation facilities, better quality seeds, and other technological advancements, India has seen a surge in the production of perishable high nutrition products in recent years, producing 311.71 million tonnes of horticulture crops (2017-18)². However, large production volumes have not been able to address prevailing conditions of under-nutrition and hunger in the country. Additionally, India's current global share in farm trade is still negligible (around 1%)³, owing to a considerable amount of food loss across the supply chain. Without considering the importance and need of quality food supply to households, a unidimensional focus on food production has contributed to the problem manifold. The necessity to produce more will multiply further with India's growing population. Additionally, the increased production needs to be accompanied by a timely consumption of the produce to stop the food loss. In this regard, efficient connectivity from farm to table to reduce food wastage is thus needed to develop and strengthen our cold-chain supply and storage facilities.

A well-managed, temperature-controlled supply chain network has several benefits. It can reduce food wastage, minimize food inflation, ensure food quality, and improve shelf lives of perishable products, among other things. Additionally, cold-chain infrastructure will also benefit the farmers by timely connecting them to the market, reducing crop loss and increasing their net profit. However, given the energy-intensive nature of the current cold-chain infrastructure in India, the environmental implications and cost-effectiveness of the system are contentious.

Successful cold-chain implementation in various parts of the country requires a much-needed push through policies, access to finance, technology innovation. It is equally important to spread awareness around the importance of the cold-chain supply process(es) among the stakeholders responsible for planning, building, maintaining and monitoring these cold-chains. The Government of India recognizes these essential steps. It is proactively working towards developing a sustainable cold-chain across Indian states through five-year plans, missions, policies and dedicated agencies/departments. It is also provisioning financial assistance and capacity support to upgrade the cold-chain infrastructure. However, the existing reports and literature on cold-chain infrastructure indicate that institutional strengthening and development of the integrated cold-chain need a far more concerted effort. Moreover, lack of clarity around roles and responsibilities of the existing actors/stakeholders at the central, state and local level makes it difficult to implement and further capacity development. This report examines the various actors/institutions that play an essential role in cold-chain infrastructure development to bridge this gap.

1. Institute for Policy Research Studies (2018). Report Summary Economic Survey 2017-18, Retrieved from: <https://prsindia.org/policy/report-summaries/economic-survey-2017-18>
2. Ministry of Agriculture & Farmers' Welfare Department of Agriculture, Cooperation & Farmers' Welfare Horticulture Statistics Division HORTICULTURAL STATISTICS AT A GLANCE 2018. Retrieved from: <https://agricoop.nic.in/sites/default/files/Horticulture%20Statistics%20at%20a%20Glance-2018.pdf>
3. Ministry of Agriculture & Farmers' Welfare Department of Agriculture, Cooperation & Farmers' Welfare Horticulture Statistics Division HORTICULTURAL STATISTICS AT A GLANCE 2018. Retrieved from: <https://agricoop.nic.in/sites/default/files/Horticulture%20Statistics%20at%20a%20Glance-2018.pdf>

Figure 1: Recent reforms that shape cold-chain infrastructure in India



This report briefly summarises the institutional and policy development of cold-chain in India,

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Highlighting the various institutions/actors and their role(s) in cold-chain policy formulation and implementation,

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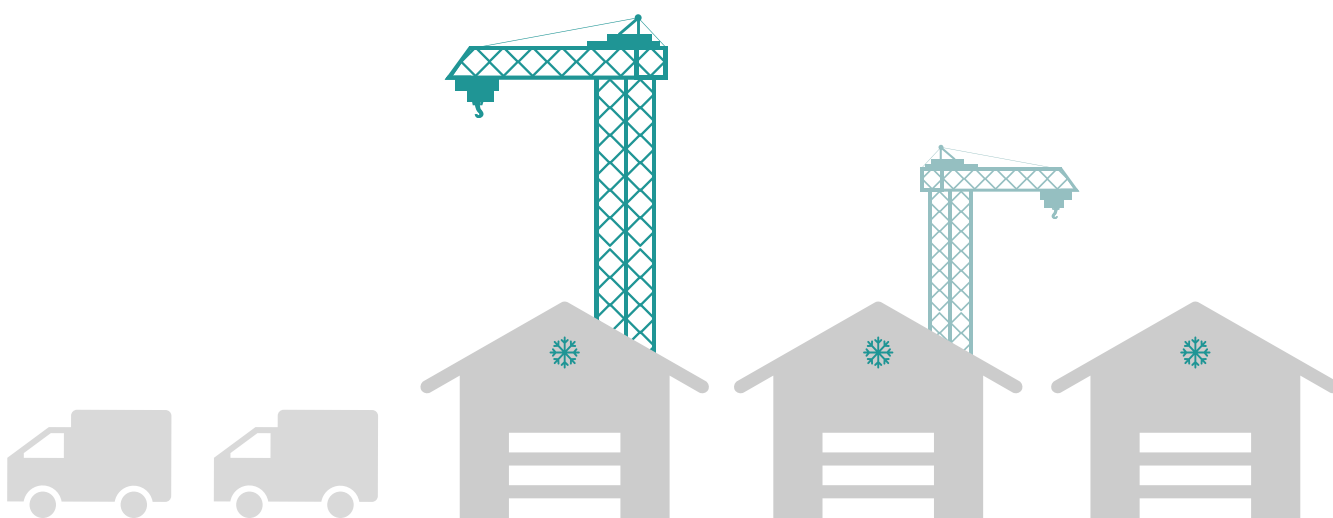


Mapping the past policies, plans and other government initiatives providing a historical context to the present policy narrative on cold-chain in India, and

03



Identifying the deficiencies/gaps in the existing policies, missing links in policies and paving the way forward.



KEY FINDINGS

01 Cold-chain institutional mapping at the policy formulation and implementation level highlight that a) central government play an important role in policy formulation, b) autonomous agencies at the national level strategize and facilitate these policies through various missions; and c) state and regional organizations aid and support in the actual implementation of these policies. While multiple ministries are already involved in implementing cold-chain across India, they operate in silos. They may need to combine their synergies to better plan and execute the development of cold-chain across India.

02 Past Five-Year plans, policies, and missions indicate a heavy emphasis on food production with little or no measures to maintain production quality. Therefore, policies/guidelines on developing and maintaining cold-chain infrastructure are fewer and were formulated much later.

03 Examining the missions and policies about cold-chain development reveals that the central government has focused on supporting cold-chain development by providing financial assistance, technological support, and capacity building. However, there is a scope to formulate policies/schemes that positively push towards building energy-efficient and low climate impact cold-chain infrastructure.

This report will be of particular interest to policymakers, research groups, and institutions trying to bridge India's cold-chain infrastructure gap. In addition, this may provide a starting point for the authorities within and outside India planning to develop the cold-chain infrastructure to identify the various actors playing an essential role in planning and implementing the cold-chain infrastructure.



For more information/any query, please reach out to tarun@aeee.in

Alliance for an Energy Efficient Economy

37 Link Road, Ground Floor, Lajpat Nagar III, New Delhi, 110 024

+91-11-41235600

info@aeee.in

www.aeee.in



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