Vol. 03 | Issue 02 | MAY 2012 ₹ 100/-

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Image Courtesy: Ancra Systems

'ESSENTIAL' rather than 'NECESSARY'

'Cold chain' is not only about cold storage. The term has been derived from cold supply chain, which includes everything right from cold packaging and cold storage to delivery. Even though there have been some improvements in recent years owing to some big investments, the government's multi-year strategy plans are still far from meeting the actual requirement.

SUPRITA ANUPAM

INDIA is the second largest producer of horticultural commodities in the world with a production of 71.5 million MT of fruits, 133.7 million MT of vegetables and 17.8 million MT of other commodities, such as flowers, spices, coconut, cashew, mushrooms and honey, among others. However, a significant portion of the produce, particularly perishables like fruits, vegetables, flowers, etc., goes waste due to post harvest losses.

In order to address this issue, the Task Force on Cold Chain Development was constituted by the Government of India in 2008. The task force conducted a nationwide cold chain assessment, which revealed a massive shortage of cold chain equipment, space allocation and lack of preventive/corrective measures for the breakdown of installed cold chain equipment facilities in immunisation centres and storage facilities. It also highlighted the shortage of trained manpower. Growing at 20–25%, the cold chain industry—estimated to be as large as ₹10,000–15,000 crore—is expected to touch ₹40,000 crore by 2015.

Understanding well the criticality of the matter, the Central Government has recently taken a decision to set up the National Centre for Cold Chain Development (NCCD) to address issues relating to the gaps in cold chain infrastructure in the country, informed Agriculture Minister Sharad Pawar during a recent event. The National Spot Exchange (NSE), in its study on Cold Chain Grid in India (2010), also recommended the need for a robust cold chain infrastructure for reducing the post harvest losses of perishables. A sum of ₹25 crore has been allocated as a one-time grant for setting up a corpus fund for NCCD.

Substantiating the need for the same, Mahendra Swaroop, President, Federation of Cold Storage Associations of India, says, "The cold storage industry shall play a vital role in the growth of the economy. In future, we have got plans to act globally on the cold storage industry. So far, the domestic growth in this industry is taking place at a very slow rate. However, cold storages are required in large numbers for various agriculture produce, horticulture, spices, poultry, fish, animal husbandry, etc. As these cold storages would need a good cold chain infrastructure, there will be huge requirement for refrigeration machinery and equipment, going forward. Additionally, there will be a massive requirement for trained technical personnel as well.

PITFALLS TO BE ENCOUNTERED

The temperature required to maintain the whole supply chain is between 2–8°C. Ensuring this is not an easy task, particularly in India, because of the diverse geographical conditions. Even the vaccines and the fresh food would not be able to sustain themselves for the expected time if the temperature rises any further. The cold chain is dependent on the air flow patterns. Hence, the unit load must not restrict, but promote air infiltration around the goods. Consequently, shoulder vents, side vents become important in this supply chain. Such application of specially designed unitised packaging, aids in minimising the handling damage. The cold chain also makes obligatory a selection criterion, thereby allowing right cost realisation for various product categories.

In the current scenario, all manufacturers are facing a growing demand for consumer products that meet international safety standards. As a result, Cold Chain Management (CCM) of temperature-sensitive products is getting more complex. The cold chain management is the toughest hurdle in temperature-sensitive food and pharma products value chain with intermediaries taking up to 30% of the final price of the product. The products get destroyed or get perished because of lack of cold chain facilities, thus posing a bigger challenge to the industry.

As pointed out earlier, maintaining a cold environment is essential throughout the cold chain. But, in India, the development is still fragmented and not yet organised. The absence of a proper cold chain and associated logistics in India leads to wastage of fresh foods and vegetables to the extent of 30–35%. Of this, 30–40% perishes in farmers' fields and during picking, while the remaining perish during transportation and marketing. So far, the Indian cold chain industry comprises of antediluvian cold stores with a capacity of 22 million tonne, including 14.27 million tonne in Uttar Pradesh and West Bengal. CONCOR subsidiary, Fresh and Healthy Enterprises at Rai (Haryana); Adani Logistics at Rewali, Sainz and Rohru (Himachal Pradesh) and MJ Logistics Ltd at Palwal (NCR), are few logistics providers, who have a full-fledged cold chain facility at those centres.

GOVERNMENT INITIATIVES

Going by the Union Budget 2012–13 announcement and industry sources, full infrastructure status has been accorded to the cold chain sector in 2011. More so, a Viability Gap Funding was announced for the cold chain. External Commercial Borrowings was opened up for this sector last year. Customs duty to set up cold storages reduced to 2.5%, which, in turn, translated into cost reduction for imported technology. Truck refrigeration units were already exempted from basic customs.

According to Pawanexh Kohli, Advisor, CrossTree Techno-visors, the following measures augur well for attracting investments into the segment:

- Excise duty has been exempted to cold chain equipment.
- An exemption from service tax to installation of cold storages was declared last year.
- Infrastructure spending is to be increased with a special focus on agriculture-based infrastructure.
- There has been around 150% weighted deduction on capital investments in this sector.
- Food storage capacity needs to be augmented. For which, the government will provide an added ₹300cr to develop initiatives for horticulture marketing (initiatives).
- Corpus on rural infrastructure development was also increased to ₹180 bn.
- A comprehensive policy to further develop PPP models is underway.
- There is no roll back to investment-linked tax incentive announced last year and to ongoing grants and subsidy schemes.
- NHB steers NCCD as an autonomous body.

In the Union Budget 2012, the Government of India had announced, "We will introduce international standards to 100 farmers and agro-processors with particular emphasis on the five large agro-processing facilities, four poultry processing plants and nine aquaculture farms. The expansion of the cold chain system will ensure that the produce leaving our shores are kept in optimal condition, thereby guaranteeing our competitiveness in the international marketplace."

BRIDGING THE GAP

The Cabinet Committee on Economic Affairs (CCEA) has approved the proposal of the Ministry of Food Processing Industries (MOFPI) to further upscale the scheme of cold chain, value addition and preservation of infrastructure in the sector, an official statement said. The committee has approved an outlay of ₹231 crore to assist an additional 30 cold chain projects in the country, the statement added. "With a view to reduce wastage, enhance shelf-life, add value and generate employment and cold chain infrastructure has been given a major thrust during the 11th Plan," it said.

The ministry has, so far, approved 49 projects, which are targeted to create an additional cold chain capacity of 2.31 lakh tonne, 234 reefer vehicles and 34 tonne per hour of individual quick freezing capacity. The total project cost is ₹1,072.82 crore that involves a government grant of ₹380.41 crore and private investment of ₹691.61 crore. The extent of wastage of agri produce has been estimated in the range of 0.8–18% due to lack of post-harvest infrastructural facilities, it added.

The following steps need to be taken to ensure smooth growth in this sector:

- Regional cold chain training support programme units in association with the government as well as states to ensure appropriate manpower
- Robust mechanism to ensure quality delivery
- Cold chain standards must be developed at par with global standards
- Regular self assessment must be done by states to maintain the required standard needed in cold chain. ■

Increasing capacity to meet Future Demands

The Central Government has proposed to modernise all the ports in India for increasing their overall capacity to 3,230 million tonne by 2019-20, which is three times more than the present level of 936 million tonne. An estimated investment of about ₹2.77 lakh crore will be required to support this initiative. This move is expected to offer a big boost to the growth of India's maritime industry.

■ ARINDAM GHOSH

EVER growing international trade has played a crucial role in enabling India to consistently deliver high levels of economic growth over a period of time. If India is able to maintain this level of growth, the country, along with China, will soon lead Asia's economic expansion on the global map. For India to move forward in this direction and achieve this position sooner than later, ports will play a vital role. Ports will facilitate international trade for India and smoothening international trade will accelerate the process of India's overall economic development.

Currently, India's maritime industry facilitates the country's international trade by almost 95% in volume and 70% in terms of value. In a way, this highlights the pivotal role played by ports in comparison to other forms of transport in facilitating international trade. For instance, for a commodity like oil, more than 70% of India's crude oil consumption is imported and transported only by sea. The figure is expected to grow further.

Presently, India has 13 major ports, which are controlled by the Central Government. The country also has 176 non-major ports, which are operated by the concerned state governments and private players. It has been estimated that the traffic is expected to grow at a rate of 11% per annum to reach about 2,500 million tonne by 2019-20. So, with an aim to tackle the challenges posed by the rising traffic and provide better ship management facilities, the government has decided to develop surplus capacity of above 25% than the anticipated figures at 3,230 million tonne. To achieve this, the Shipping Ministry had envisaged an investment of approximately ₹2.77 lakh crore.

TREMENDOUS POTENTIAL FOR PPP

Developing and implementing state-of-the-art & sustainable infrastructure is crucial, but it requires huge investments. For the government to single-handedly make the entire funds available may not always be possible. In such a scenario, public private partnership (PPP) has emerged as a successful instrument to generate funds. The government has been encouraging PPP mode of investment in the ports sector. Such investments would lead to the introduction of latest technologies and solutions along with improved management practices. Above all, investment from the private sector will come as a big boon to the plan for additional capacity, which, in the process, would make Indian ports highly competitive globally.

To attract investments for the maritime industry, the government has permitted 100% FDI under the automatic route for ports development projects. Further, policy regulators