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# National Logistics Policy and the Fertilizer Supply Chain

Frank Notes

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As per ICRA's estimates, India's logistics sector is one of the largest sectors globally, with a market size of USD 215 billion growing at a CAGR of 10.5% through 2025. The sector also provides livelihood to around 22 million people and is a prime contributor in broadening international trade. However, despite its size and importance to economic growth, India's supply chain is overshadowed by unbalanced logistics models, high indirect costs, poor infrastructure, disintegrated and complex network chains and lack of technology adoption. To get better off from the ongoing complex system, the Union Government came up with PM Gati Shakti National Master Plan in October 2021, with one of the objectives to improve logistics efficiency by addressing the issues of multi-modal and last-mile connectivity.

On 17th September, 2022, Hon'ble Prime Minister Shri Narendra Modi launched the National Logistics Policy (NLP) in tandem with the Gati Shakti National Master Plan with an aim to build robust infrastructure, fill the missing gaps in logistics, and draw more investments into the country. The strategy has twin-objectives of reducing costs and improve efficiency at par with the global standards. It is worth mentioning that logistics costs in the Indian supply chain amounted to almost USD 400 billion, around 14 per cent of GDP based on expenditure method of GDP calculation. The policy aims at bringing down these logistics costs to the global average of around 8 per cent of GDP. Additionally, India ranked 44 in the World Bank Logistics Performance Index, last released in 2018. Thus by the virtue of the scheme, the Government is endeavoured to bring India among the top 25 countries by 2030. The plan is to boost economic growth by providing employment opportunities and improving India's competitiveness in the global market through a cost effective, technology enabled, integrated, sustainable and trusted logistic ecosystem in the country.

Presently, the logistics modal mix in the country is highly skewed towards transportation by roads (60%) followed by rails as against the global benchmarks of a relatively mixed transportation system carried out partly by rails (50-55%) and almost equally by roads and water. Transportation cost constitutes the major chunk of the logistics costs. With heavy reliance on road network combined with poor infrastructure pushes up the transportation costs in India. Further, our rail and water networks are under utilized owing to the lack of proper infrastructure. Shortage of warehousing space is another major cause of rising costs. Besides these, there are indirect costs which include damages during transit, inventory carrying costs, etc. These hidden costs constitute a significant part of India's total logistics costs and are on average four times that of global costs.

The policy seeks to facilitate a multi-modal mix that focuses more on railways and waterways including inland waterways and coastal shipping. It is expected that the strategy would reduce transportation costs to 4% of GDP from 6% now and that of warehousing costs from 3.5% to 2.5% by 2030. Additionally, the inventory and order processing costs would also be lowered significantly with the enhanced usage of supply chain technology, such as artificial intelligence, blockchain and the IoT. The Comprehensive Logistics Action Plan (CLAP) includes Integration of Digital services through Unified Logistics Interface Platform (ULIP), setting up a dashboard, Ease of Logistics Services (E-LogS), to take up issues related to operations and performance, formation of a Services Improvement Group (SIG) and provision of certification courses using Integrated Government Online Training (IGoT) platform.

The Government plans to improve efficiency in 15 identified sectors including cement, steel and fertilizers. Logistics and supply chain management is also of prime importance in the fertilizer sector given its obligation to make

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timely availability of fertilizers to farmers across the country.

Indigenous fertilizer production is heavily dependent on imported inputs. These include natural gas, rock phosphate, sulphur, ammonia, phosphoric acid, muriate of potash. Imported natural gas utilized for production of ammonia and urea is transported through gas pipelines. Most plants using other raw materials are either located in the port itself or very near to the port. India imported 16.3 million tonnes of raw materials both solid and liquid in 2021-22. All these imported raw materials have to be handled, stored and transported to the plants.

India also imported 18.4 million tonnes of finished products last year. These materials have to be moved from ports to district levels and then to wholesalers and retailers. Similarly, India produced 43.7 million tonnes of fertilizers, which have to be transported from the plants to consumption centres. Sales and consumption of fertilizers are seasonal. It is important that fertilizers are available to the farmers in time. Therefore, movement and warehousing of fertilizers are very critical for the agriculture.

Overall logistics costs particularly freight constitute anywhere 6-12% of the cost of sales of fertilizers. Government provides freight subsidy both for primary and secondary movement for urea. But for P&K fertilizers, freight subsidy is provided only for primary movement. Given that government is providing huge subsidy on fertilizers, it is important that all cost reduction measures are implemented including logistics cost.

The average load for movement of fertilizers is about 827 KM. It has come down over the years by way of rationalization. Railway remains backbone of transportation system in the country. More than 80% of the fertilizers are transported through railways and remaining by road and almost negligible by waterways. But non-availability of railway rakes sometimes in peak season remains an issue. Further, considering the hygroscopic nature of fertilizers, loading in BOXN wagons needs to be minimized. The infrastructure issues such as enlarging platform to accommodate full rake, proper roofing at good sheds, illumination, drinking water facility, etc. need attention. Lack of 2 or 3 point rakes, lack of mechanization at rake points and high demurrage and wharfage charges are other issues with railway movement.

Inland waterway mode of fertilizer transportation is practically nil due to logistic disadvantages and high cost. IFFCO transported some quantity of complex fertilizers through coastal route from its Paradeep and Kandla ports. Fertilizer freight subsidy notified for coastal shipping and inland water transport (IWT) on multi-modal mode of transportation is admissible to indigenous fertilizers only. The additional expenditure involving road bridging, storage en-route and multiple handling on coastal shipping and IWT mode of transportation makes it uneconomical. The risk of damage and loss due to multiple handling is also high for the price sensitive subsidized fertilizer cargo. Transit time between origin and destination is comparatively longer than that by other means of movement. Low availability of suitable size and type of river sea vessels (RSV) for integrating coastal shipping with inland waterways has also been an issue.

Freight cost and time management are important components in the supply chain. Increasing the volume of fertilizer cargo transportation through coastal and inland waterways would decongest rails and roads. It is suggested to include waterway transportation of imported fertilizers also under the ambit of freight subsidy policy, reducing or incentivizing all duties and taxes, port charges etc., creation of facilities even at minor ports to avoid long haulage, improving berthing facilities, adoption of suitable size and type of RSV. Transporting fertilizers through containerised coastal shipping may also offer some advantage.

Promotion of multimodal transport with better coordination amongst all stakeholders and the use of digital technology under the NLP would help in making a successful and efficient supply chain including last mile delivery of fertilizers. This should also help in reduction of delivered cost of fertilizers.■