

Kerala State Logistics Action Plan: Draft Report synopsis

Executive Summary

Globally in advanced economies & developed logistics eco-systems, the logistics cost is less than 8% of GDP, whereas in India, it is upwards of 13%. This blunts competitiveness of Indian economy. To reduce logistics cost, improve quality & make the country more competitive, Govt of India has launched a National Logistics Policy (NLP) with a 5 pillar approach. Taking this forward, Govt of Kerala as part of this exercise is developing a state level logistics action plan for advancing the competitiveness of state from a logistics perspective.

In this report, the Kerala logistics sector is analysed in detail – from production & consumption sides, multiple modes of transport & their costs. The potential of aggregation of logistics is examined in detail by a geo-clustering exercise and suitable aggregation points as well as inter-connection routes are identified. For Kerala to evolve as a well-functioning & competitive logistics eco-system, an effective middle-mile eco-system with all the modes of transport as well as third party logistics(3PL) players offering a range of services need to be there. This sector is largely absent in Kerala, which needs to be developed through various initiatives.

The study has analysed various aspects & assessed the potential cost savings that can be achieved by various initiatives like setting up mini-multi-modal logistics parks around these clustered points, increasing effective tonnage of roads (18.7 – 23.7 %), moving cargo to rail (68%) & water (72%). A multi-dimensional analysis of cargo has been done from state's perspective and an overall-weightage driven framework for prioritizing cargo initiatives have been given. A set of KPI's that can assess state from a logistical perspective have been identified and detailed. Further initiatives are identified as part of NLP's 5-pillar analysis & LEADS framework analysis. All these are integrated & presented as strategic initiatives with clear action items that can improve the competency of state from a logistics perspective along with stakeholders & key benefits.

The draft State Logistics Action Plan prepared as part of this study comprises of key Strategic Initiatives outlined as part of the industry interactions, inputs from the first State Logistics Coordination Meeting, assessment of the needs and challenges put forth by industry players, evaluating the State's logistics sector demand-supply outlook and key logistics cost considerations. Key tasks identified under each of the Strategic Initiative and details of corresponding Implementing Authority/agency are provided. The timeline for implementation is categorised under Short (1-2 months), Medium (3 months to 1 year) and Long (5 years). KPIs are also tagged under each of the Strategic initiatives. The action enlisting above parameters is provided in Section 11 of this report. To take forward the implementation approach, following actions are proposed:

- Finalising members of the State Logistics Coordination Committee and formalising the same via a Government Order or appropriate notifications.
- The draft action plan report is to be shared with all the committee members before the next meeting for finalisation of Strategic Initiatives
- Share the draft action plan with Industry stakeholders for their inputs and suggestions
- Formalising the Logistics Cell/Development Entity along with the working Groups, Synergy council (nodal officers from all stakeholder Department/agencies), and Project

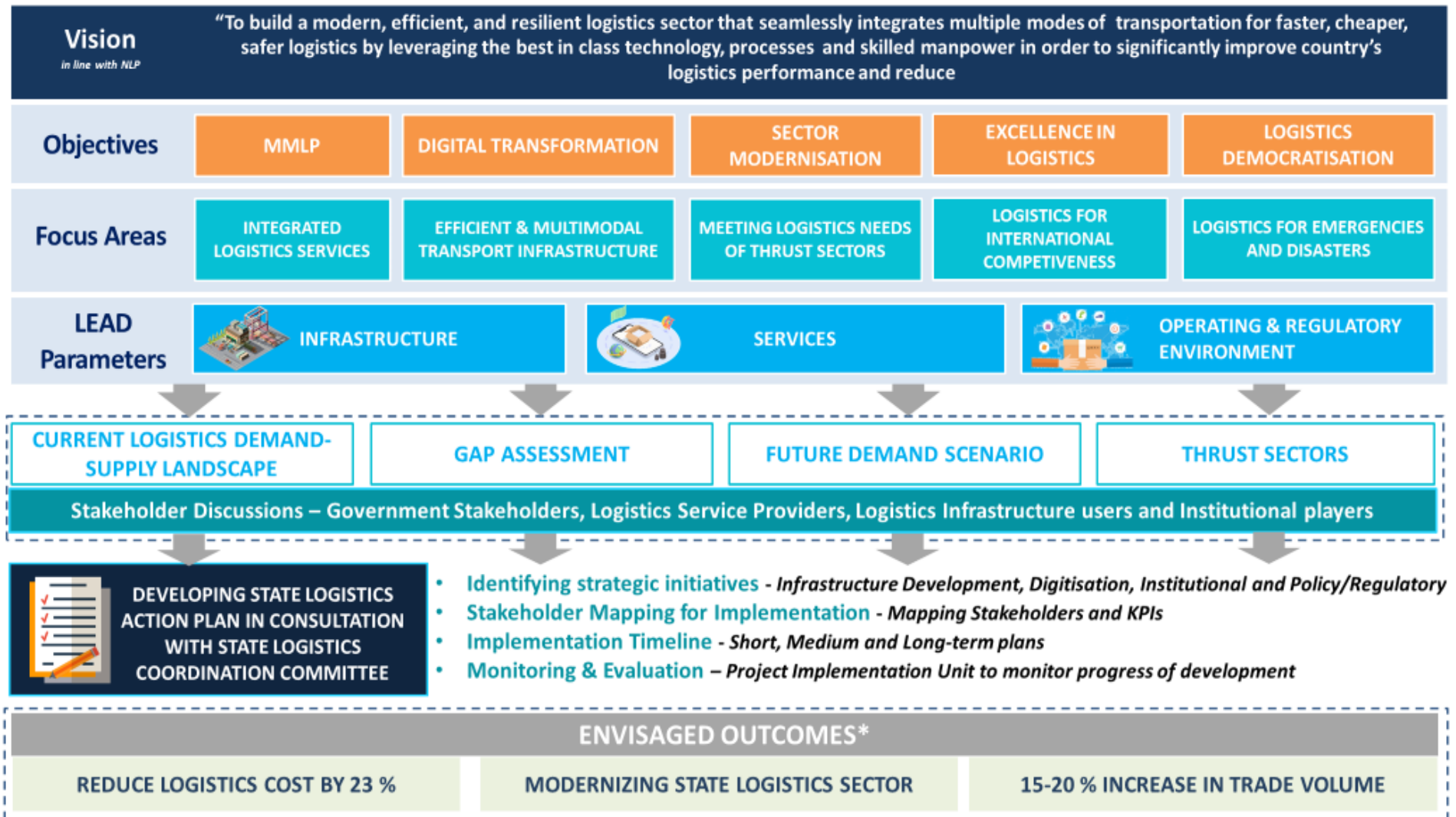
Management/Implementation Unit via a Government Order or appropriate notifications Operationalise the State Logistics Cell/Development Entity and Program Management/Implementation unit to monitor the progress of the agreed initiatives and report monthly progress status to the State Logistics Committee before every Meeting.

The list of strategic initiatives identified under different heads such as Infrastructure Development, Transport Infrastructure, Logistics Facilities, Digitisation of Logistics operations, Institutional Development and Policy Measures are as follows:

1. Increase tonnage of logistically important roads to support 4axle 6Wheel trucks (28.5 tonnes)
2. Develop cargo infrastructure for rail & water transport
3. Electric Vehicles for last mile delivery
4. Development of city level logistics plans
5. Building predictability in rail freight schedules
6. Evaluate feasibility for MMLP in Kerala
7. Infrastructure Development – Logistics Facilities
8. Develop return cargo (recyclable & others) volumes
9. Develop ‘warehousing as a business’
10. Digitization of Logistics Operations
11. Digitise state logistics
12. Develop Transportation Management Systems from logistics perspective
13. Institutional Development
14. Reimagine & upgrade selected SWC depots identified in geo-clustering exercise to evolve as mini-MMLP’s
15. Building Specialized skills for specialized cargo
16. Logistics plan for disaster management
17. Industry engagement channel for legal , policy & standards setting
18. Policy Measures (Regulatory Standards)
19. 3PL (Third Party Logistics) Providers benchmarking framework
20. Drone Delivery

All these initiatives are identified through secondary research , industry interaction session and based on primary data sought from Government Departments. To refine the initiatives further, more support in terms of data from respective departments to whom data requests were sent is required.

1. State Logistics Action Plan Framework



2. Mapping of NLP Pillars to Kerala

The National Logistics Policy (NLP) is structured into five pillars & a detailed mapping of those pillars is done along with national initiatives. A corresponding state level initiative is also identified there that can complement the national initiative

Pillar 1 : Integrated Logistics Services

Central Govt Initiative	Joint Initiative (State & Central)	Potential State level Initiative	State Stakeholder
National Logistics Efficiency, Advancement, Predictability & Safety Act (LEAPS) - Unified Legal framework for development of logistics sector, resulting in increased efficiency, transparency, competitiveness & ensuring modernization to achieve One Nation- One Contract - One Form paradigm		Assess the state laws - If there are laws that need to be assessed for improving the state logistics efficiency, mark that and start an initiative to evaluate those	Legal & Transport Departments
Master Plan for National Logistics Framework for Demand Driven logistics requirements (national level)		State Logistics Plan Prioritization framework based on the demand	Industries department
	Provide integrated national multi-modal transportation & logistics framework	As the MMLP standards are not quite feasible in a Kerala context, it would make sense for Kerala to be a part of MMLP standard setting exercise to influence the specifications & standards so that it becomes applicable to state's realities as well and required	Industries Dept

Central Govt Initiative	Joint Initiative (State & Central)	Potential State level Initiative	State Stakeholder
		budgetary support comes from centre	
	National Logistics grids for optimization of logistics movement between major clusters of demand & supply	Connecting State Grids to the national logistics corridor in road, rail , water & air transport	Industries & Planning Depts
Framework for development of modern warehousing		Warehouse standards depend a lot on type of goods as well as state-level climatic & geographic factors. Hence Kerala can take a lead in this, identify the key types of goods unique to the state (e.g.: spices , sea food, processed food etc) and develop standards for modern warehouses comparable to international standards, yet relevant to Kerala. Once these standards are formed, it could be plugged to national standards	Industries , Agriculture & Civil Supplies Dept
		Land allotment is a state subject. Hence the aspect of land allotment to different types &	Industries & Planning Depts

Central Govt Initiative	Joint Initiative (State & Central)	Potential State level Initiative	State Stakeholder
		sizes of warehouses, standards should be looked at the state-level	
Warehouse on cloud (a cloud based marketplace to expose the warehouse rates, reviews etc for better capacity utilization & price discovery)		The digitization of ware-houses from an external facing perspective to be done using open standards & API's . This would facilitate easy integration with this market-place when it comes	IT Dept, Industries Dept, KSUM
	Technical advisory support and model concession agreements for developing bulk storage & modern warehouses on government land in a PPP model	State can do an exercise to assess the need of new warehouses, types & locations and see if it merits to have green-field warehouses & if required, adopt a PPP model on State / central land whichever is most suitable	Industries & Planning Departments
Standards relating to palletization , handling equipment, racking and trucking / containerization to be developed through technical panels aligned with global best practices		State to identify the priority & unique cargo sectors to state , develop the standards & play a leading role in standard settings. This could be started as a separate initiative at state level & combined with the	Industries, Agriculture & Transport departments

Central Govt Initiative	Joint Initiative (State & Central)	Potential State level Initiative	State Stakeholder
		national track when it gets running	
Professionalization of logistics services iLog platform for registration, accreditation , ratings, review for logistics service providers		State can launch a skilling program to upskill and transform the logistics service providers so that they are seen as globally competitive in iLog when it comes into practice	Industries Dept
iLog platform for comprehensive integration between relevant systems, facilities & seamless exchange of information			
Skilling & Training program	Advanced skilling & training programs to be launched in association with IIT's, IIM's	Pitch for such a program in state focussed on a strategically important sector (e.g.: marine logistics, food processing logistics, spices logistics etc)	Higher Education, Industries
	Certified logistics professional program scheme to be introduced to ensure availability of qualified professionals	A skilling transformation program to be launched for state logistics professionals (loading / unloading , warehouse operations, cold chain etc). These traditional logistics professions to be mapped into a futuristic state and relevant skilling	Labour & Industries Depts

Central Govt Initiative	Joint Initiative (State & Central)	Potential State level Initiative	State Stakeholder
		transformation programs to be launched targeting each of those streams	
<p>Research & innovation in logistics</p> <p>A network of academic & research institutions would be developed to drive interdisciplinary research, form centres of excellence in logistics etc</p>		State Institutions like IIT Palakkad, CUSAT can pitch for being a part of this from a strategically relevant cargo perspective	Higher Education, Industries
<p>A logistics innovators network (LINE) would be formed to develop the start-up eco-system. Annual accelerator program would be launched in collaboration with start-up India</p>		Kerala already has a logistics accelerator program in collaboration with DP world running. In this context, it could be evaluated on scale-up possibilities, positioning it as national logistics accelerator partner etc. This needs a deeper analysis	KSUM, IT dept
Urban Logistics	City level logistics plan would be developed to streamline urban logistics , setting up dedicated logistics zones and last mile connectivity	Every corporation in Kerala can launch an initiative on the city logistics plan. IN addition to the centrally specified schemes, corporations can include programs on sustainability in logistics, reverse logistics, green logistics etc	Industries, City Corporations

Central Govt Initiative	Joint Initiative (State & Central)	Potential State level Initiative	State Stakeholder
City level logistics ranking framework would be introduced to rank cities		As this can have a bearing on investment decision of corporates looking towards setting units in state, Kerala can take a leading role in having a ranking plan and improving its position by benchmarking itself to leading cities in the world	Industries & City Corporations
Green Logistics	Shift to water ways & railways	Strategic Program could be run to develop waterways & railways cargo. As identified in earlier section on state logistics. This could be done initially for non-time critical cargo	KSINC, Inland Water Transport, Industries, Transport
	Adoption of EV's	- EV's in good carrying vehicles are yet to evolve. Kerala has high cost in last-mile delivery. It could be explored if cargo could be delivered using passenger EV autos up to certain limits, which can accelerate EV adoption as well	Industry, Electricity & Transport Departments
	Promotion of reusable &	Could be plugged into the ranking	Industries Dept

Central Govt Initiative	Joint Initiative (State & Central)	Potential State level Initiative	State Stakeholder
	collapsible containers	framework of 3PL providers	
	Rewards and recognition to promote green logistics initiatives	Could be plugged into the ranking framework of 3PL providers & city logistics plans	Industries Dept
	Reverse logistics for push towards circular economy	This has two important bearings for Kerala. Reverse logistics can spur return cargo which can improve the unit-economics of many businesses by reducing the effective logistics cost. And this can drive sustainability in cities. A joint initiative with Suchitwa Mission is ideal	Industries Dept, Suchitwa mission, city corporations

Pillar 2 : Efficient & Multi-Modal Transport Infrastructure

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
Promoting Intermodal Transport	Promoting transport infra and multimodal logistics facilities	Logistics clusters in state are identified based on the geo-clustering of warehouses , ports, rail, industry areas etc. It is proposed that these areas be converted into logistics parks / mini-MMLP's	Industries, Planning, Transport & Ports departments
	Encouraging operators to	Ranking framework of 3PL providers can	Industries, Transport

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
	adopt multimodal operations	include rail / water usage levels as a parameter	
	Containerization of cargo to be encouraged	Volume of containerized traffic would be a key factor in getting MMLP investment in future. Hence this aspect could be measured & tracked, especially in Kochi-Coimbatore economic corridor	Industries & Ports department
Developing guidelines to promote transparency in freight and encourage competition across modes		A benchmarking exercise of 3PL players can look into this aspect of bringing transparency to the logistics eco-system Similarly, digitization of SWC depots can bring in API's that can expose a variety of parameters	Industries, IT
Improving trucking & road transport ULIP / unified logistics Interface platform to be developed integrating multiple other DB's like fastag, vahan, gst etc		State can set up a task force with Industry & IT departments to work with centre when this initiative gets moving	Industries, IT
Digital trucking application would be developed to facilitate accreditation of trucking companies		A benchmarking exercise of 3PL players can cover this aspect	Industries, IT

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
Attracting freight for Indian railways	Developing customized offerings for unique commodity requirements	<p>Southern railway division at Trivandrum has good volumes of cargo. A joint task force can be setup to work with railways to explore developing the cargo volumes considering all the state relevant aspects</p> <p>The logistics parks suggested once established can have KPI's centred around volume of traffic pushed into rail</p>	Industries , Railway departments
	Promoting parcel business via scheduled timetable services	The earlier mentioned initiative can take a market development perspective & push for scheduled railway freight services	Industries, Railways
	Incentivizing service providers and users to shift to rail mode	Ranking framework for 3PL providers in state can be used to push for this	Industries
Promoting coastal shipping & inland waterways transportation	Developing dedicated berths for coastal cargo	Proposed logistics parks which are clustered near inland & sea-ports can take up this with shipping ministry	Industries, Ports. KSINC
	Developing mechanized cargo handling infra	Proposed logistics parks which are clustered near inland & sea-ports can take up this with shipping ministry	
	Single window for cargo clearance		

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
	Long term contracts with public / private sector to achieve scale	An industry dept level task force can work with various industries, especially those handling non-time critical cargo to push for inland water / coastal cargo transport working with proposed logistical parks	
	Incentivizing service providers for coastal freight movement	3PL ranking framework to be encouraged to develop first & last mile delivery support from river / coastal centred logistical parks	Industries, Ports. KSINC
	Development of first& last mile transport		
	Development of river-sea vessels to increase carrying capacity		
	Customised vessel financing scheme	To be taken up in an initiative to promote water transport. Rates can be linked with 3PL ranking framework	
	Development of river-sea vessels to increase carrying capacity	State to participate in these discussions and highlight Kerala's point of view	
	Including inland vessels under tonnage tax scheme, removing disparity in GST rates on input/output activities		
	Modifying customs procedures for transportation of transit goods via IWT		

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
<p>Increased use of pipeline infra</p> <p>Develop model guidelines for development of different categories of pipelines , parallel to / under railway</p>		Analysis on the futuristic transport needs of the state and see what all items could be supplied via pipelines & develop model guidelines, PPP frameworks wherever applicable	Planning & Industries Dept
	Right of way approvals from diff authorities to enhance cost-effective & safe movement of select commodities		Planning & Industries Dept
Airfreight for high value & perishables	Airfreight stations to be developed & co-located within MMLP's wherever possible	In Kerala context, logistics parks identified near the airports can be given a special task to develop airfreight.	Industries, Transport
	Explore utilization of unused airstrips for airfreight with special focus on perishable cargo		
<p>Promote Indian flag carriers</p> <p>Promote Indian flag carriers (air , ship) through encouraging investments and creating support system of financing, insurance, repair</p> <p>Promote Indian companies to own aircraft fleets and focus on air cargo operations for trade</p>		State can give concessional rates at ports / airports for cargo fleet if the MRO business of aircraft / ship is done in the state	Industries, Ports

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
within India & overseas which would provide revenue & employment opportunities , esp. in aircraft maintenance , MRO etc			

Pillar 3 : Meeting Logistics Needs of the Core Sector

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
<p>Modernizing logistics for agri & allied sector</p> <p>Develop national logistics grid for optimizing o-d movement for agri-commodities with focus on</p>	Integrated planning of agri-hubs & handling facility	Potential logistics parks across the state with potential cargo of benefit has been identified in the section before. These proposed logistics parks could be evaluated in detail and specialized cargo centric initiatives & investments required could be identified	Industries , Agriculture departments
	Shift to cost effective & environmentally sustainable modes		
	Setting up aggregation centres, packhouses, temp-controlled storage at strategic locations		
	Silo based impact , vertical storage of bulk grains		
	Enhance participation of start-ups for innovative solutions on storage & packing	Logistics accelerator by KSUM& DP World can be engaged to evaluate this	KSUM, Industries, IT departments
Driving MSME competitiveness		To be tackled along with the mini-	Industries

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
Logistics e-Marketplace to function as a single window for all logistics services and EXIM certifications and facilitate transparent price discovery and remove information asymmetry on capacity availability of logistics infrastructure		logistics parks initiative & digitization of state logistics	
	Develop common logistic-related facilities to facilitate cost-effective and efficient supply chains for MSME clusters and ensure geographically balanced growth	To be tackled along with the mini-logistics parks initiative. The mini-logistics parks could be developed in a PPP centric mode that can facilitate private sector investments	Industries
	Promote start-up ecosystem in asset-light freight platforms and last-mile delivery and asset-based models with focusing on warehousing, containerization and palletization to achieve scale to provide cost-effective logistics to MSMEs	Logistics accelerator program could be broadened to include this	KSUM, Industries department
Logistics for Priority Sectors – Identify sector-specific interventions for the		Once needs of state specific logistics like spices , food processing etc are identified, financing support for such	Industries

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
Priority sectors under the 'Make in India' program aimed at enhancing logistic cost competitiveness based on global benchmarks		schemes could be sought under Atma-Nirbhar initiatives	
Logistics for Bulk Cargo Establish a National Logistics Grid for major bulk commodities with focus on innovative shift of modes (like slurry pipelines for coal & iron ore), bulk transport for cement and other cross-cutting solutions		Once the national logistic grids for major commodities gets developed, the bulk cargo modes could be integrated with it. The key factors in this angle would be - GAIL pipeline integration - Kochi – Coimbatore- B'lore economic corridor	Industries
Like use of wagon tippers and in-motion weigh bridges for railway		Could be taken along the initiatives to develop rail cargo sector	Industries
	Use of barges for movement of bulk commodities	KSINC, Ports & Industries department can jointly work for developing business cases for barges once sufficient volumes are established	KSINC, Ports & Industries
	Rake availability for bulk cargo movement,	Could be taken along the initiatives to develop rail cargo sector	Industries
	Adequate storage infrastructure at rail sidings/ port terminals, along	The proposed mini-logistics parks can be developed further from this	Industries

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
	with investment in mechanization, and	perspective wherever applicable	
	Setting up MMLPs at key inter change points	Mini-MMLP's could be taken up in Kerala's context by re-imagining SWC depots	Industries
<p>Hazardous Cargo , dangerous goods & over-dimensional cargo</p> <p>Review and streamline transportation and storage of Hazmat, DG and ODC with unified standards and oversight mechanism and ensuring compliance by consignor;</p>		Identify the major hazardous cargo in Kerala & develop their handling standards	Industries
	Identify and designate well-equipped logistics facilities, major corridors and connectivity points for movement;	Review the present & proposed logistics facilities for that and see if it needs scaling up, connectivity and beefing up of security standards	Industries Dept
	Training of workforce involved to meet safety standards and reduce accidents	Relevant labourers to be given state of the art training aligning with the global best practices	Labour & Industries Dept

Pillar 4 : Logistics for International Competitiveness

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
<p>Improving Infrastructure for international trade</p> <p>Augmenting physical facilities at LCS</p>		Can be evaluated along with mini-MMLP's / reimagined selected SWC depots	Industries
Developing infrastructure for off border clearances to reduce border congestion			
Co-locating inland customs within MMLPs to maximize operational efficiencies			
Enhancing digitization to expedite clearances			
Promoting Free Trade Warehousing Zone (FTWZ) to enhance regional/ global trade			
Develop a Model Process Manual to provide guidance on streamlining and standardization of logistics processes with annual audit to assess logistics efficiency at ports and airports			
<p>Streamline Work with Customs & partner govt agencies</p> <p>Develop a robust IT platform and Risk Management System (RMS) for 6 major PGAs adopting a 'One Government Approach' to streamline inspections, sampling, testing and issuance of certification to expedite cargo clearance at port; integration with other IT systems to ensure seamless and paperless EXIM; explore outsourcing select PGA activities to certified</p>		To be tackled along with digitization of state logistics initiative	Industries, IT

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
third party vendors to improve service.			
<p>Develop a lab eco-system through</p> <ul style="list-style-type: none"> • a program to support accreditation of Indian labs conforming with standards of key trading partners, • electronic database of accredited labs, • SOPs for collection/ transmission of sample from ports to labs, and • a discount mechanism for MSMEs to avail cost-effective facilities for trade 		Can be taken along with initiative to set standards & increase competitiveness	Industries
<p>Integration with Global Value Chains</p> <p>Develop Highly Facilitated Trade Corridors (HFTCs), a bilateral initiative between an Indian hub port / airport and a key hub port / airport in key destination market of importance, to support greater integration of India with GVCs; these would be built on digitization initiatives to enable secure digital data transfer and integrated with counterpart systems of international partners to drive competitiveness in GVCs</p>		Vallarpadam Container terminal can take the lead in this by partnering with key destination ports for seamless data exchange, integrate with counterparty systems etc to speed up the cargo handling. This could also be applicable with respect to coastal cargo traffic to key domestic ports like Mumbai	Industries , Ports Departments

Pillar 5 : Logistics For Emergency Response

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
Logistics for Covid	Develop robust response systems with the help of mapping and location technologies to ensure safety of the supply chains and logistics. These systems would use tools to ensure logistics operations continuity, while addressing the need to re-align routes and supply chain planning due to presence of containment zones in COVID pandemic.	Key goods (food , medicines, farm produce etc) supply chains to be mapped to all key distribution points of state & and key backup routes for any disruption to main routes to be determined	KSDMA, Agri, Civil Supplies, Health, Industries Dept
Logistics for other emergencies	Support National Disaster Management Authority (NDMA) and the Ministry of Home Affairs (MHA) in relief and rehabilitation operations through	As Kerala has gone through disasters like flood, okhi , tsunami, it becomes important to have preparatory strategies for such calamities again. The SDMA needs to draw up a backup logistics plans for key cargo like food, medicines incase some localities get isolated as well as an SOP, Mock drills etc	
	Developing Standard Operating Procedures (SOP) to ensure safety and minimal disruption of essential logistics services,		
	Support in conducting mock drills to test preparedness		

Central Govt Initiative	Joint Initiative	Proposed State Govt Initiative	State Govt Stakeholders
Strategic Logistics Assets	Identify strategic logistics assets and facilitate in upgrading them to meet military standards in terms of their design, construction and build quality as well as equipment capacities, as required.	Key points for handling food , medicines , water supply & energy supply to be identified and classified as strategic logistics assets. Plan to be prepared to upgrade the safety & reliability of these during disasters	

3. LEADS Ranking Framework Analysis

Logistics Ease Across Different States is a framework used by central govt to benchmark the ease of logistics across different states & union territories in India . LEADS is derived from World Bank’s LPI framework (Logistics Performance Index). While the framework, indicators & coverage is given in public domain, the exact calculation details are not available. There are three broad categorizations under LEADS – Infrastructure, Services , Operating & Regulatory Environments. Each of these sections , associated indicators & their relevance to a Kerala context are analysed below

i. Infrastructure

Indicators	Kerala LEAD 2019 Ranking (National Max in brackets)	Definition	Coverage	Initiatives at state-level that can improve rankings
Availability of logistics infrastructure	3.18 (National Max – 3.92 by Gujarat)	Capacity in Relation to Demand	Road , Rail , ports, airports, dry ports, warehouses & cold storage	Initiatives to increase tonnage of road, multi-laning, developing rail, water cargo & mini-multi-modal logistics parks / logistics clusters as identified in the sections earlier can improve rankings
Quality of logistics infrastructure	3.27 (National Max – 3.8 by Gujarat)	Operation & Maintenance Protocols, efficiency of infrastructure facilities		

ii. Services

Indicators	Kerala LEAD 2019 Ranking (National Max in brackets)	Definition	Coverage	Initiatives at state-level that can improve rankings
Quality of logistics service providers	3.29 (National Max – 3.8 by Gujarat)	Ease of access of competent service providers, where competency refers to skill level of work force & level of technology adoption for service providers	<ul style="list-style-type: none"> • Haulage by different modes • Handling and storage of cargo • Freight forwarding • Customs broking 	<ul style="list-style-type: none"> • Ranking framework of 3PL service Providers
Ease of arranging logistics at competitive rates	2.92 (National Max of 3.45 by Gujarat)	Shipment prices in chosen state compared to price expectations, assessment of costs & prices elsewhere	<ul style="list-style-type: none"> • Shipment prices include those for transportation, handling, storage, • value added services 	<ul style="list-style-type: none"> • Developing mini-MMLP's around identified logistics clusters • Increasing tonnage of key-roads • Developing other modes of transport (rail, inland water, sea)
Timeliness of cargo delivery	3.27 (National max – 3.7 By Gujarat)	Timeliness of cargo delivery	<ul style="list-style-type: none"> • Unscheduled stoppages during transit • Average detention at borders • Documentary compliance check 	<ul style="list-style-type: none"> • Mini-MMLP's with customs clearance facilities can accelerate clearances

Indicators	Kerala LEAD 2019 Ranking (National Max in brackets)	Definition	Coverage	Initiatives at state-level that can improve rankings
Ease of track & trace	3.27 (National Max – 3.53 by Gujarat)	Ability to obtain frequent, consistent, accurate information regarding cargo movement & condition	<ul style="list-style-type: none"> • Real time information availability • when cargo is in transit, in storage, • awaiting regulatory approval, etc. 	<ul style="list-style-type: none"> • Ranking framework of 3PL providers can push for this perspective. Further, the mini-MMLP's can also support open logistics standards for this
Safety & Security of cargo	3.47 (National Max – 3.7 by Punjab)	Consistency in delivering without damage / pilferage /deterioration	<ul style="list-style-type: none"> • Loss/ damage of cargo: • During transit • Handling at terminals • During inspection 	<ul style="list-style-type: none"> • Ranking framework of 3PL providers can push for this perspective • Similarly, an evaluation framework for mini-MMLP's can measure this as well

iii. Operating & Regulatory Environment

Indicators	Kerala LEAD 2019 Ranking (National Max in brackets)	Definition	Coverage	Initiatives at state-level that can improve rankings
State facilitation & coordination	2.78 (National Max of	Efficiency & effectiveness of logistics/labour/land	<ul style="list-style-type: none"> • Law and order • City restrictions 	<ul style="list-style-type: none"> • This could be plugged into EODB framework

Indicators	Kerala LEAD 2019 Ranking (National Max in brackets)	Definition	Coverage	Initiatives at state-level that can improve rankings
	3.31 by Gujarat)	policies , law & order, tax breaks	<ul style="list-style-type: none"> • Trade and transporter union • Labor laws 	for logistics service providers (3PL) as well as proposed ranking framework of 3PL players
Efficiency of Regulatory Processes	2.99 (National Max of 3.41 by Gujarat)	Speed, simplicity & transparency in processing approvals & clearances, ease of documentation	<ul style="list-style-type: none"> • Customs • PGAs • GST • RTOs / Traffic Police 	

4. Strategic Initiatives under the Action Plan

Summarized view of the Strategic initiatives that would be key inputs for the State Logistics Action Plan is described in this section.

Needs / Challenges	Strategic Initiative
Absence of Middle-Mile logistics & 3PL providers	Re-imagine selected geo-clustering points centred around some strategically located state warehousing corporations as mini-MMLP's or logistics parks with individual P&L responsibility.
High cost of road transport	Increase tonnage of roads connecting proposed logistics parks by strengthening bridges & roads, straightening curves etc so that higher tonnage trucks can ply.
Leverage other modes of transport.	Push more non-time critical cargo into rail & water transport in such proposed logistics parks connected with alternate modes.
Underdeveloped First Mile Delivery & 3PL eco-system	Ranking framework of 3PL providers which measures aspects like financing support, insurance, green-packaging etc as well as integrated track & trace.
High cost of last-mile delivery	Drone delivery to be tried in beyond line of sight places with service providers, especially in high-ranges.
Lack of Return Cargo	Develop return cargo by working with Suchitwa mission to collect recyclable materials in return trips from various places.

Needs / Challenges	Strategic Initiative
New modes of clean transport options	Explore possibility of using EV passenger autos for last-mile delivery, which can boost the EV adoption as well. Would need legal & policy changes.
Skills for Specialized Cargo	Kerala can run strategic initiatives to upskill different players in the logistics eco-systems both at labourer level for important cargo from state's perspective (processed food, spices, perishable vegetables) and at higher education level (partner with higher educational institution for such courses in state)
Limited Track & Trace Ability	Kerala can run strategic program with state warehouses, proposed mini-MMLP's to augment the tech stack, digitize cargo operations & consequently track & trace ability
Back-up plan for important cargo during disasters	Kerala can run strategic initiative with KSDMA to identify strategic logistics assets, important cargo to support during disasters & setup backup supply routes in such cases
City Level Logistics Strategy	Every corporation can run strategic initiative to identify critical zones & roads from a logistics perspective, set-up green packaging standards & work with Suchitwa mission to boost recycling & augmenting return cargo
Legal, Policy & Standards Rework	Each of the important cargo from state perspective can be analysed with industry participation, bottlenecks identified & rectified, potential standards that can make the sector competitive internationally be identified & established
Predictability & Infrastructure in Rail	Ro-Ro service in key industrial corridors is needed as it can definitely reduce the cost as per industry. Similarly, cold-chain support in railway-freight is also essential
Under-developed water & coastal transport	The operator eco-system needs to be developed in water transport by multiple initiatives
Ease in opening & operating warehouses	Logistics is classified as an industrial activity by Govt of Kerala. Warehousing can also be brought under that

The key discussion points of the first Logistics Coordination Committee are also taken into consideration while preparing the Strategic Initiatives under the State Logistics Action Plan

Sl. No	Discussion Points of State Logistics Committee
1	Create aggregation points for farm produce and products from MSME sector at the first mile, preferably with multi-modal connectivity
2	Establish logistics parks with truck parking locations & warehousing facilities in peri-urban areas near cities
3	Move towards an eco-system of minimal inspection & stoppages of trucks by transport, tax, police etc

Sl. No	Discussion Points of State Logistics Committee
4	Identify truck movement choke points and address these bottlenecks with a view to improve truck travel time reliability in state
5	Earmark dedicated parking spaces along highways and major roads for trucks and resting places for drivers
6	First Mile/Last Mile connectivity to National Economic Corridor and major transportation projects including major Rail, Air , Shipping & Inland water waterways terminals
7	Transport infrastructure and traffic planning for last-mile delivery within city boundaries
8	Leverage coastal shipping & inland waterways (where available) and railways networks as an environmentally friendly and often cheaper alternative to transportation
9	Infrastructure & Planning for cargo movement for exports & imports wherever applicable
10	Ensure Modern material handling systems & facilities for weighment & X-Ray screening for safely managing cargo
11	Ensure availability of land & facilitative environment for conversion of land-use, FSI/FAR relaxation for warehousing, relaxation in height of warehouses etc
12	Effective implementation of Carriage of Goods by Roads Act – 2007
13	Special Focus on skill development & capacity building for logistics sector
14	Effective grievance redressal & dispute resolution mechanism
15	Promote innovations to promote green logistics & reverse logistics
16	Development of State Logistics Plan
17	Appointment of Nodal Officer for logistics & creation of state logistics cell
18	Setting of state logistics coordination committee

5. Next steps to be taken by Government to operationalise the State Logistics Action Plan

The action plan will include key clear mention of Strategic initiatives with KPIs across different stakeholders (Departments/Agencies) to achieve implementation of this holistic logistics sector development action plan. The implementation approach defined in

subsequent section proposes a plan for how the action plan developed needs to be implemented. The framework gives a layout which details out the composition of the State Logistics Coordination Committee which would act as a Governance council with stakeholders from the government, industry bodies, management forums and local government group, and a State Logistics Cell/Development Entity comprising of the implementation body (including nodal officers from all Departments/Agencies covered under the action plan) and Monitoring & Evaluation unit. The implementation approach also lays down the provision of taking regular feedback from industry players (both users and logistics service providers, infrastructure players etc.) and key experts at various meetings.

As highlighted above the action plan would be implemented with the help of two levels of Governance Level 1 constitutes of the State Logistics Coordination Committee comprising of following proposed members:

- Chief Secretary (Chair)
- Additional Chief Secretary (Home, Vigilance, Water Resources and Coastal Shipping)
- Additional Chief Secretary (Finance)
- Principal Secretary (Industries & NORKA) (Vice Chair)
- Principal Secretary (Agriculture)
- Principal Secretary (Transport)
- Chairman, Cochin Port Trust
- Secretary (PWD)
- Secretary (Labour & Skills)
- Secretary (Social Justice)
- Chairman & Managing Director, KSEB
- Chairman, Kerala State Maritime Board.
- Commissioner (Customs)
- Director (Agriculture)
- Special Commissioner (GST)
- Director (Industries & Commerce)
- Joint Director General of Foreign Trade, Kochi
- Deputy Inspector General of Police, Police Head Quarters
- Managing Director, KINFRA
- Chairman, CII Kerala State Council
- Co- Chair, FICCI Kerala State Council and Head of Logistics Sector sub-committee
- State President, KSSIA
- Representative from Logistics Service Providers

. The committee would largely cover a range of activities such as:

- In order to achieve the action plan targets, a high level of coordination and synergy among all the aspects of action plan implementation is paramount, this would be the key focus area for the committee.

- Aim to strengthen the forward and backward linkages to ensure inter-departmental synergy for multiplying the outcomes and reducing time lag in delivering results.
- Assist in jurisdictional, fund allocation and sourcing strategies and functional activities to finalise the action plan, advocacy and key inputs for policy, jurisdictional activities etc..
- Shall co-opt members/organizations from private sector/NGOs/Academic and Research Institutes to provide guidance on various Strategic initiatives.
- The committee shall convene once every quarter to monitor progress, discuss, identify, and recommend best practices for the implementation and success of the logistics sector vision for the State.

Level 2 constitutes of State Logistics Cell/Development entity which would be the implementation authority for execution of the action plan e. The composition of the State Logistics Cell/Development Authority would comprise of following:

- CEO
- Competent officials under Infrastructure Development, Services, IT, and Legal sections/working groups,
- Synergy council comprising of nodal officers from all stakeholder Department/Agencies and
- a State Project Monitoring/Management Unit.

At this stage, the Implementation Authority will undertake the following activities:

- Setting up a project monitoring unit to monitor and oversee the implementation of the action plan
- Developing an outcome-based framework to assess the success of the action plan strategic initiatives and monitoring the same taking into consideration industry feedback as well
- Coordinating and conducting regular meetings of the State Logistics Coordination Committee
- Preparing monthly progress reports on each of the Strategic Initiatives finalised under the State Logistics Action Plan

The State Logistics Action Plan comprises of listing of Key Strategic Initiatives outlined as part of the industry interactions, inputs from the first State Logistics Coordination Meeting, assessment of the needs and challenges put forth by industry players, evaluating the State's logistics sector demand-supply outlook and key logistics cost considerations. Key tasks identified under each of the Strategic Initiative and details of corresponding Implementing Authority/agency are provided. The timeline for implementation is categorised under Short (1-2 months), Medium (3 months to 1 year) and Long (5 years). KPIs are also tagged under each of the Strategic initiatives. The action enlisting above parameters is provided in Section

11 of this report. To take forward the implementation approach, following actions are proposed:

- Finalising members of the State Logistics Coordination Committee and formalising the same via a Government Order or appropriate notifications.
- The draft action plan report is to be shared with all the committee members before the next meeting for finalisation of Strategic Initiatives
- Share the draft action plan with Industry stakeholders for their inputs and suggestions

Formalising the Logistics Cell/Development Entity along with the working Groups, Synergy council (nodal officers from all stakeholder Department/agencies), and Project Management/Implementation Unit via a Government Order or appropriate notifications Operationalise the State Logistics Cell/Development Entity and Program Management/Implementation unit to monitor the progress of the agreed initiatives and report monthly progress status to the State Logistics Committee before every Meeting.

6. State Logistics Action Plan

Sl. No	Strategic Initiative	Key tasks	Implementation Authority/Agency	Timeline (Short, Medium, Long)	KPI
A. INFRASTRUCTURE DEVELOPMENT – TRANSPORT INFRASTRUCTURE					
1	Increase tonnage of logistically important roads to support 4axle 6Wheel trucks (28.5 tonnes) This covers state logistics committee discussion point #6	<ul style="list-style-type: none"> • Finalize the key roads to increase tonnage taking forward the initial list identified in this report as part of geo-clustering exercise • Identify the overlap of these roads in other state road programs (RKI, PWD road widening etc) and feed in logistical requirements to those programs for overlapping roads • Create an infrastructure development plan to meet first Mile and last Mile connectivity to Kochi-Bangalore Economic Corridor, other industrial corridor projects and major transportation projects of the State 	PWD (primary) Planning, Transport, Industries (secondary)	Medium	%of logistically critical road length supporting 28.5 tonne trucks
2	Develop cargo infra for using	<ul style="list-style-type: none"> • Strategic Plan to push more cargo to rail & water with infra , 	Industries (Primary),	Medium	% increase in Cargo Type & Loads in every quarter

Sl. No	Strategic Initiative	Key tasks	Implementation Authority/Agency	Timeline (Short, Medium, Long)	KPI
	<p>rail & water transport</p> <p>(Green Logistics Initiative)</p> <p>This covers state logistics committee discussion points #6,9,15</p>	<p>policies , operations, incentives , building predictability in rail/water transport schedules, industry promotion etc</p> <ul style="list-style-type: none"> • To be run in close coordination with the initiative to transform SWC depots into mini-MMLP's. These SWC depots could function as the switching points for transfer to other modes of transport • Infrastructure & Planning for export cargo movement 	Transport, Civil Supplies (Secondary)		loaded & unloaded in ports & railway stations
3	<p>EV for last-mile delivery (Green Logistics Initiative) (showcasing initiative)</p> <p>This covers state logistics committee discussion points #15</p>	<ul style="list-style-type: none"> • Develop strategic plan for EV cargo vehicle adoption in last-mile delivery working with multiple departments • Evaluate the feasibility of allowing/incentivising EV passenger autos also for last-mile delivery from a legal, standards, safety aspects 	Industries	Medium	<p>%increase of EV cargo vehicles registered in state</p> <p>Load distributed from SWC depots in EV vehicles / Total Load</p>
4	<p>City Level Logistics</p> <p>This covers state logistics committee discussion points# 7,15</p>	<ul style="list-style-type: none"> • All City corporations can develop a detailed logistics plan which includes • Logistics zone identifications • Cold storage locations • Green packaging standards • Return cargo & recyclable cargo pickup points etc • Cargo Vehicle parking locations • Green packaging standards • Logistics policies in corporation limits suited for the city 	<p>City Corporations, LSG (Primary),</p> <p>Industries (Secondary)</p>	Medium	<p>#of corporations with city logistics plans</p> <p>#compliance% at a corporation level (to be decided in the plans)</p>

Sl. No	Strategic Initiative	Key tasks	Implementation Authority/Agency	Timeline (Short, Medium, Long)	KPI
5	Predictability in Rail Freight transport	<ul style="list-style-type: none"> Open a regular interaction & engagement channel with railways to push for dedicated freight schedules from Kerala along with infrastructure support like cold-chain, Ro-Ro service etc 	Industries (Primary)	Long	#of dedicated rail freight schedules #capacity in tonnes in rail freight schedules #of cold storage wagon facilities in rail freight #Ro-Ro wagons servicing Kerala
B. INFRASTRUCTURE DEVELOPMENT – LOGISTICS FACILITIES					
6	Develop return cargo(recyclable & other cargo) facilities & volumes (Green Logistics Initiative) This covers state logistics discussion point #15	<ul style="list-style-type: none"> Develop strategic plan with LSG, Suchitwa Mission, City corporations to develop return(recyclable & others)cargo from key cities. The plan could include infra, incentive mechanisms, tech platforms etc for trucks in Kerala to pick up return cargo so that effective logistic cost is less 	LSG (Primary), Suchitwa Mission, City Corporations, Industries	Medium	Tonnes of return cargo booked by city corporations Tonnes of recyclable cargo booked by city corporations %of return cargo in various modes of transport
7	Warehousing as business This covers state logistics committee discussion point# 11	<ul style="list-style-type: none"> Develop a strategic plan to develop 'warehousing as a business' , rationalizing licenses & rules, making it easy to open ware-houses in the geo-clustered logistics zones identified . The plan to also push for technology standards like open API's, data exchange standards etc. It can also have standards on packaging, warehouse operations etc Establish logistics parks with warehousing facilities in peri-urban areas near cities 	Industries (Primary), Legal, LSG (secondary)	Medium	#of new warehouses opened in clustered logistics zones #of warehouses that are available as a service on cloud for booking

Sl. No	Strategic Initiative	Key tasks	Implementation Authority/Agency	Timeline (Short, Medium, Long)	KPI
8	Exploring Feasibility of MMLP	<ul style="list-style-type: none"> MMLP is a long term concept with pilot MMLP locations going to come only by 2025. But State can lead an initiative to identify & pitch specific locations in state to get support from centre to get considered in the next set of MMLP's 	Industries (Primary)	Long	
C.DIGITISATION OF LOGISTICS OPERATIONS					
9	Digitise state logistics This covers state logistics committee discussion points#3,15	<ul style="list-style-type: none"> Develop a strategic plan to digitize the logistics operations of government including entities like state warehousing corporation, transport operators etc. The architecture developed can be based on open standards, to which any industry players can plug-in as well. A focus to minimise inspections leveraging technology to be done along with this 	IT Department(Primary), Industries, Civil Supplies (secondary)	Short	#of SWC depots in which storage & transportation services can be booked, modified & monitored online
10	Transportation Management Systems This covers state logistics committee discussion point# 4	<ul style="list-style-type: none"> Develop a strategic plan to develop traffic management technology systems in key cargo routes which can detect vehicles, types , numbers etc. It should have detailed specs of the system capabilities. The plan also should have traffic regulation strategies in key logistics routes 	Transport(Primary), Industries(Secondary)	Short	Average speed in key logistics routes for trucks (up to the safe limits) #of electronic inspections of cargo vehicles without stopping (e.g.: video analytics, weighing platforms etc)
D. INSTITUTIONAL DEVELOPMENT					
11	Re-imagine & Upgrade selected SWC depots as mini-MMLP's.	<ul style="list-style-type: none"> Develop transformation plan for SWC depots identified in geo-clustering exercise to 	Industries Dept (Primary),	Medium	#of SWC depots upgraded to mini-MMLP's

Sl. No	Strategic Initiative	Key tasks	Implementation Authority/Agency	Timeline (Short, Medium, Long)	KPI
	<p>This is essential for an effective middle-mile logistics eco-system to evolve</p> <p>This covers state logistics committee discussion points# 1,2,5,9,10,11</p> <p>(showcasing initiative – this is how freight villages – MMLP equivalent in Germany emerged)</p>	<p>evolve as mini-MMLP's</p> <ul style="list-style-type: none"> • Develop policies & frameworks to develop geo-clustered zones identified in this from a logistics perspective (e.g.: support establishment of warehouses, multi-modal points, cold storages, parking plazas, EV charging points etc) • Infrastructure planning for cargo movements for export & import could be done at selected geo-clustered multi-modal SWC depots . This can include inland customs clearance etc 	Civil Supplies, Transport, KSEB (Secondary)		<p>Volume of non-food cargo handled in selected SWC depots monthly</p> <p>Volume of cold-storage related cargo handled by SWC depots monthly</p> <p>Based on transformation plan, further KPI's can be developed</p>
12	<p>Specialized Skill for specialized cargo</p> <p>This covers state logistics committee discussion point# 13</p>	<ul style="list-style-type: none"> • NLP mentions about specialized logistics programs to be launched in institutes of higher education. Higher Education department can work with MHRD to set up such programs in IIT Palakkad / NIT Calicut / CUSAT etc focusing on logistics related to specialized cargo relevant to Kerala (spices , cashew , food processing etc) • Develop a strategic skill upgradation plan for the blue-collar logistics workers of the state focussed on the specialized logistics needs of cargo like spices , food processing, electronics, cashew etc relevant to Kerala in line with the 	Labour, Higher Education (Primary) Industries (Secondary)	Medium	<p>#of specialized logistics courses available in Kerala</p> <p>#Number of blue-collar workers who has gone through logistics skill development programs</p>

Sl. No	Strategic Initiative	Key tasks	Implementation Authority/Agency	Timeline (Short, Medium, Long)	KPI
		globally recognized best practices			
13	Logistics plan for Disaster Management	AKSDMA can prepare a strategic plan to <ul style="list-style-type: none"> Identify the strategic logistics assets, routes, cargo whose strength should be increased Develop resiliency & backup routes for critical cargo like food & medicines Develop standard operating procedures for logistics in case of disasters 	KSDMA(Primary), Industries(Secondary)	Medium	
14	Industry Engagement Channel for legal, policy & standards setting This covers state logistics committee discussion points #6,12,14	<ul style="list-style-type: none"> Open a regular interaction channel with various key industry stakeholders to hear about their logistics perspective with respect to legal issues , policies & standards and develop short, medium & long term interventions. This could be regularised along with the EODB framework 	Industries (Primary), Planning, Legal (Secondary)	Short	#of policy/law/standards changes brought about after consulting with industry
E. POLICY MEASURES (REGULATORY STANDARDS)					
15	3PL (Third Party Logistics) providers benchmarking framework This covers state logistics committee discussion point#8	<ul style="list-style-type: none"> Prepare a detailed benchmarking framework for 3PL providers assessing them on various aspects like ability for track & trace, insurance, multi-modes of transport, green packaging, EV use etc This benchmark & associated rankings could be used to incentivize 3PL players in govt linked schemes 	Industries Department (Primary)	Short	#of 3PL players available in every logistics clustered zone above certain level in benchmark
16	Drone Delivery (showcasing initiative)	<ul style="list-style-type: none"> Develop a policy framework & standards for drone delivery including 	Transport	Short	#drone delivery service providers

Sl. No	Strategic Initiative	Key tasks	Implementation Authority/Agency	Timeline (Short, Medium, Long)	KPI
	This covers state logistics committee discussion point# 15	zones, weight, safety & tracking standards			