

## Frighht Sustainability Indicators from the Policy Maker's Perspective

Economic KPIs related to freight transportation		Social KPIs related to freight transportation		Environmental KPIs related to freight transportation	
Unwanted stops like tolls & border crossing	Less is better	Per capita accidents and deaths from freight transportation activities (Numbers/year)	Less is better	Total Energy usage per kg per km of transported goods	Less is better
Unease due to bureaucracy & administrative process like crossing state/country boundaries	Less is better	Livability and wellbeing of communities near transport activities.	More is better	Fossil Fuel Consumption per km per kg of freight transported	Less is better
Presence of professional and large freight handlers	More is better	Preservation of cultural & historic values while decision making	More is better	Proportion of renewable resources used in vehicles and transport facilities	More is better
Quality and Quantity of delivery services available	More is better	Relative quantity & quality of freight service available to SMEs	More is better	Implementation of Energy saving policies/technologies e.g. fuel efficient vehicles, LED bulbs etc.	More is better
Implementation of space-efficient packaging & loading	More is better	Access of transportation services to rural areas	More is better	Emission of CO2 and other climate changing substances per kg per km of freight transported,	Less is better
Increase in the value-density of products transported over the years.	More is better	Severity of congestion of Urban Centers due to freight transportation	Less is better	Emission of pollutants like CO, VOC, NOx, particulates etc. per kg per km, will depend on type of vehicle, age of vehicle, etc.	Less is better
Level of implementation of technology like GPS, IT in freight transportation.	More is better	Sub-Optimal utilization of fleet capacity i.e. overloading frequency	Less is better	Percentage of vehicles adhering to Bharat Norms or Euro Norms	More is better
Congestion of infrastructure like road, rail, ports, airways, can be assessed using Average speed of transportation	Less is better	Response time against disruption and emergency	Less is better	Level of adoption & implementation of Green Supply Chain Management	More is better
Variety & quality of transport modes available like road, rail, waterways etc.	More is better	Proportion or availability of trained drivers	More is better	Extension/Implementation of carbon trading in the sector	More is better
Level Inter-modality, i.e. synchronization between transport modes	More is better	Ergonomics of drivers cabin & Vehicle interior air quality	More is better	Frequency of air pollution standard violations by transporters	Less is better
Proportion of transportation made by efficient modes like Sea/Waterways	More is better	Delivery time pressure on drivers	Less is better	Level of noise pollution because of freight transportation	Less is better
Transportation cost as portion of total economic activity	Less is better	Gender Equality in transport related activities	More is better	Per capita land devotion to transportation facility	Less is better
Proportion of total transportation cost went in tolls, taxes, insurance, maintenance	Less is better	Availability of training program for drivers and other staff members involved in transportation activities.	More is better	Preservation of wild life habitat (wetland, forest, wildlife)	More is better
Proportion of Smart freight handling facilities like efficient ports, rail corridor etc.	More is better	Number of transportation related jobs created	More is better	Waste reduction & Conservation Efforts in freight transportation activities e.g. recyclable packaging, end of life dismantling of vehicles/ships etc.	More is better
Empty haulage & redundant trips	Less is better	Amount of CSR funds dispersed to nearby societies by transportation companies	More is better	Amount of hazardous elements spilled on land resulted from faulty transportation.	Less is better
Load factors for freight transports (Empty running is excluded from this)	More is better	Infrastructure degradation rate due to overweight loads	Less is better	Amount of hazardous elements spilled on land resulted from accidents.	Less is better
Efficient & Sustained fuel supply for transportation	More is better	Fair treatment and just employment in the transportation sector (measured as i.e. number of complains)	Less is better	Incorporation of eco-friendly resilience strategies during disruptions	More is better
Availability of Warehouses & Cold storages at port & rail-road transportation	More is better			Percentage of less-polluting transport modes within an intermodal system	More is better
				Amount of Environmental penalties for not respecting the regulations	Less is better

