SECTOR SPECIFIC REPORT (Transport)

February 2022 Edition



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Green Financing to Decarbonize Indian Transport Sector

In February 2022, the Indian think tank body and the implementation partner from India NITI Aayog, has conducted a virtual workshop on "Financing for Decarbonization of Transport" along with the World Resource Institute (WRI), India under the programme for the NDC-Transport initiative for Asia (NDC-TIA) project. The programme is the joint initiative of seven organizations including GIZ, to formulate a comprehensive engaging model for the decarbonization of transport in India, China, and Vietnam.

The Government of India working under this project as a part of the International **Climate Initiative to formulate** a strategy for the smooth adoption of a sustainable form of mobility options towards decarbonization of Indian Transport. The initiative also receives support from Federal Ministry for the Environment, Nature Conservation and Nuclear Safety as per the German Bundestag decision and talks about the following:



The implementing agency has emphasised the need for low-interest rate financing for the same to realize the actions into reality. The key discussion held under this joint workshop are:

Green Financing for Decarbonization of Tramsport	Adoption of Electric Mobility	Green Hydrogen	
	Role of Bio Energy & Bio Feedstock	Digital & Smart Systems	
G Decarb	Standard Regulations & Certifications	Investment towards Enabling Infrastructure	



Green Financing to Decarbonize Indian Transport Sector

During this peer-to-peer knowledge exchange learning workshop, the NITI Aayog has emphasised the role of financing institutions to increase collaboration with transport organizations to effectively mitigate the challenges of decarbonization and green financing in the transport sector. The Indian implementation body for the project has laid down the urgency of formulating innovative green financing policies to take further action towards sustainable mobility in the country and its quick adoption.

Globally, climate change is a big concern as the rise in temperature cause abrupt changes in the atmosphere continuously and thus result in rising sea levels, droughts, extreme weather conditions all around the world. To address it effectively, the decarbonization of transport is essential as 23% of the energy emission-related Carbon-Di-Oxide (CO_2) comes from the transport sector alone, and by 2030 it is expected to attain the level of 40% globally.



Source: https://www.weforum.org/agenda/2022/01/green-finance-bolster-india-transition-net-zero/

As the share of carbon emission through transport is large, thus immediate corrective measures are necessary in this regard and the need for financing such policy frameworks need collaborative efforts. Due to rapid change of demand in the urban transportation and sustainable mobility, it is important to tap the numerous potentials of renewables in the sector and create a framework for financial inflow from various financial institutions such as Banks, Public-Private Partnership





Green Financing to Decarbonize Indian Transport Sector

investment, Micro- Credit, insurance, etc. Here the digital and smart systems also play a major role to keep a check on rising emissions and help towards the goal of achieving Nationally Determined Contributions (NDCs) committed by India on the world forum.



Emission Reduction Measures to Achieve Zero Emissions with Baseline 2050

Source: https://energypost.eu/decarbonising-end-use-sectors-buildings-transport-industry-which-strategies-are-best/

The continuous change is noticeable in both the demand and supply side in the transport sector in India and thus rapidly changing the business models through innovations and technological

interventions. On the other side, these rapid changes pose a hurdle in formulating a clear strategy and increase the risk to capital assets in the respective industries. Still, such valuable knowledge forums suggest the stakeholders at the policy level and help find them the priority path towards cleaner and sustainable mobility through the following actions in their respective countries:





Green Financing to Decarbonize Indian Transport Sector

Create a Circular Ecconomy Focused on Energy and resource efficiency

Transform Existing Power Resources and Systems to High Efficiency Renewable Sources

Met the Electrification of Demand through Renewable Sources

Use of Renewable Fuels, Feedstock, Biomass, Green Hydrogen, and e-fuels for Economical Electrification of Demand

For the Rest of the Emissions, CO2 Removal and Storage Technologies must be Used.

India on an aggressive note has adopted the path of green sustainable mobility and committed to achieving net-zero emissions by 2070. No doubt the rising population and scale of economic growth are posing serious challenges in this path but still, through the support of the Indian Banking and Financial sector, India will put its best foot forward in achieving the set ambitious climate goals through green financing and proved to be prudent enough to leverage a paradigm policy shift towards the decarbonization of the Indian transportation sector.

Financing for Decarbonisation of Transport





Parvatmala: National Ropeways Development Programme for Hilly Regions

Under the Union Budget 2022-23, the Government of India has announced the National Ropeways Development Programme named "Parvatmala" to resolve the transportation problems on difficult terrains of Indian hills. The programme is set to be implemented through the Public-Private Partnership (PPP) model for efficient and improved connectivity in the hilly regions.

The "Parvatmala" programme will pave the way for developing a sustainable environment-friendly transit mode on the hills where the conventional roads are not in place and need help to establish smooth connectivity to promote tourism. This will also provide a sustainable and economical solution to urban mobility in these congested areas with the capacity of transiting 6000-8000 persons per hour through ropeways.

The Ministry of Road Transport and Highways is the responsible authority to find out the feasibility of this programme and to observe other probable mobility options and technology solutions in the region. The ministry will also have the responsibility for policy formulation related to construction and research under this programme for hilly regions.

In 2021, through the amendment of the Government of India (Allocation of Business) Rules, 1961, the Ministry of Road Transport and Highways got the authority to take care of the development of Ropeways and other alternative mobility solutions in the hilly regions across India. The construction

of Ropeways will take place in the remote areas of the country to promote tourism in these regions under the National Ropeway Development Programme.

The Minister of Finance has also announced the implementation of 8 ropeway development projects of 60Km lengths across the country in the recent Union Budget. The implementation under the scheme has already started in major Indian Hilly regions such as Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Manipur and some parts of North Eastern states. The development will provide an ecological and economical mass transit system where the commutation of travellers is not easily possible otherwise.





Parvatmala: National Ropeways Development Programme for Hilly Regions



The economy of Indian hilly regions faces a major blow due to poor road connectivity and mass transit networks. Due to technical and ecological constraints, the transportation system in these natural paradises is tough to develop and maintain. Even the air connectivity to the regions is also very limited in comparison to people's interest to come and have a feel of the scenic beauty of high mountains and deep valleys. Thus, the ropeway emerged as a pro solution to provide a convenient, economical, and safe mode of transportation for local as well as tourist commuters to provide economic and socio-cultural growth of the hilly regions.

The Ministry of Road Transport & Highways under Parvatmala has already started working on finalizing its initial study to formulate the plan for ropeway development and gap funding of such projects across the country. The implementing body has started working on some of the projects in the state of Uttarakhand and Sikkim to promote tourism and accelerated the growth momentum in these regions. At present, some ropeways are already operational in India and attract tourists and local commuters on daily basis. To name a few of the mare as under:



Parvatmala: National Ropeways Development Programme for Hilly Regions

S. No.	Ropeway Route	State/Union Territories
1.	Girnar Ropeway	Gujarat
2.	Guwahati Passenger Ropeway	Assam
3.	Gulmarg Gondola Cable Car	Jammu
4.	Bi-cable Zig -back Ropeway, Gangtok	Sikkim
5.	MansapurnaKarni Mata Ropeway, Udaipur	Rajasthan
6.	Aerial Ropeway, Nainital	Uttarakhand

Thus, the already proven ropeway transit mode will work as the panacea for transport miseries in difficult hilly terrains. Along with this, it will increase the livelihood and employment opportunities for the farmers, youth and women of these remote places that will surely connect the potential of local resources and their exclusivity with the shining growth story of transforming India sustainably.

Why in news? The Union Budget 2022-23 announced a new scheme called 'Parvat Mala' or National Ropeways Development Programme. STUDY Parvatmala Schem Benefits of Ropeways About It will be initiated through Public-Private Ropeways and cableways (cable cranes) Partnership (PPP) mode. can handle large slopes and large The idea is to improve connectivity and differences in elevation. Ropeway projects adopting 3S (a kind convenience for commuters, besides of cable car system) or equivalent technologies can transport 6000-8000 promoting tourism. This may also cover congested urban passengers per hour areas.

Nodal Ministry

The Ministry of Road Transport and Highways (MORTH) will have responsibility for the development of ropeway and alternative mobility solutions technology.

Covered Area

The scheme is being presently started in regions like Uttarakhand, Himachal Pradesh, Manipur, Jammu & Kashmir, and the other North Eastern states.

• Economical mode of

- Faster mode of transportation
- Environmentally friendly



National Rail Plan, 2030: A Blue Print to make Indian Railways Future-Ready

The engine of economic growth of India, the Indian Railways has formulated National Rail Plan to make itself more advanced, efficient, and future-ready by the year 2030. The plan is set to decide on different policies and strategies to increase the Indian Railway's capacities operational as well as commercial. In this, the target is set to increase the modal share of the railways to 45% in the freight category.

Existing Rail Freight Transport Share			
Modes	Tonnes (Millions)	Share (%)	
Rail	1221.5	27%	
Road	2911.7	64%	
Coastal Shipping	234	5%	
IWT	72	2%	
Pipeline	84	2%	
Total	4523.2	100%	

Source: https://indianrailways.gov.in/NRP%2015th%20DEC.pdf



Source: https://indianrailways.gov.in/NRP%2015th%20DEC.pdf



National Rail Plan, 2030: A Blue Print to make Indian Railways Future-Ready

The holistic plan has also underlined the objective to plan the developments ahead of time and cater to increasing demand for the growth of India up to 2050 in a sustainable way. The plan thus looks forward to a much greener and modern Indian Railways over a decade with much higher efficiency and enriched passenger experience. It also envisages the different possible financing methods to provide a developmental thrust to the railways including the Public-Private Partnership (PPP) model.





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The plan provides a long-term perspective and integrated development forecast of Indian Railway's passenger as well as freight demand in the span of 2030 to 2050. This will well assess the deficiencies and shortcomings present in the current system of Indian railways and roll out the plan of its future infrastructure requirements. The plan will provide a framework to evaluate the priority projects for making the Indian Railways an efficient transport system for mass commutation and transportation of passengers as well as freight including the funding and investment requirements for the same.

The Ministry has formulated apath to attract major investment for the overhaul of the railways and make it more return-oriented for various stakeholders through Public-Private Partnership (PPP) model and private investments in already existing railway facilities and operations. The main challenges to bring investment for the plan lies as under:



Through such an exhaustive and aggressive investment plan, the Ministry of Railways will pave the way for the future path of passenger and freight transportation in India. In some of these areas, the government is already working regressively which are proven to be effective concerning the National Rail plan as a wholesome.





National Rail Plan, 2030: A Blue Print to make Indian Railways Future-Ready



Source: https://indianrailways.gov.in/NRP%2015th%20DEC.pdf

The State-run India's growth engine, Indian Railways has also received major allocations under the Union Budget 2022-23 for distinct initiatives such as Kisan Drone Facility, the establishment of new

Freight Corridors, Zero Carbon Emission by 2030, etc. The Ministry is working rigorously to achieve the targets set under the National Rail Plan, 2030 and trying to bring a positive change in the sphere of its operations, management, infrastructure as well as network and services.

All this is planned to be achieved with the help of public and private stakeholders' support. The





National Rail Plan, 2030: A Blue Print to make Indian Railways Future-Ready

services such as Kisan Rail, leasing of Theme-Based Tourist Trains are providing a new and rejuvenated picture of the Indian railways for their commuters and in turn creating a more robust growth spectrum for India's cultural, social, and economic growth.

All this is planned to be achieved through seamless connectivity of different parts of the country through dedicated freight and high-speed Rail corridors and will be energised through time-bound energy and technological innovation in the country such as "KAVACH". The plan is thus coherent to the PM Gati Shakti and AtmaNirbhar Bharat Programme of the Government of India to enhance the capacities and capabilities of Indian Railways in the coming years ahead.

Resources

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