

Corridor Concept to Road Development

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The recently announced Bharatmala Pariyojana is an attempt to bring back the corridor concept to road development. Though the National Highways Development Project (NHDP) also started with corridors (the Golden Quadrilateral (GQ), the North-South-East-West (NSEW) and others including port connectivity in various phases), over years, it had settled down to a package concept.

While a grand project of 83677 kms has been announced at a cost of Rs 6.92 lakh crore, the sharper focus is on 35800 kms at a cost of Rs 5.35 lakh crore. Interestingly, out of the 34800 kms of highways planned in phase I, 10,000 kms are a carry over from the NHDP.

The new 24800 kms have been arrived at based on OD (origin destination) surveys and traffic assessments at over 1500 points. While as a concept it is good, unfortunately, the OD survey carried out by RITES, the transport consultancy public sector under the Indian Railways, is dated at 2007. The traffic assessments are based on a combination of manual and automatic counts (including camera based) and highlight congestion areas.

Out of 24800 kms, 5000 kms are lane expansion and decongestion projects on the GQ and NSEW. Six laning of the GQ was a Phase in the

NHDP, which has been partially complete, but saw environmental clearance and land acquisition difficulties in many stretches with concessionaires pulling out of agreements. There are only 800 kms of expressways.

We need to look at lessons based on the experience so far.

- 1. Project selection:** There is an attempt in a scientific basis using origin destination traffic studies and specific segment traffic densities. For example, the East West corridor from Mumbai to Kolkata has emerged as an important one for four laning fully. The need was always there, but did not get attention in the NHDP both due to political reasons (which brought in the Saurashtra to Silchar EW corridor) and lack of an earlier through NH route (the Mumbai Kolkata was a combination of NH 3 and NH 6).
- 2. Execution mechanism and financing:** GQ started with EPC (after PPP could not take off, being the first major attempt at PPPs) followed by a strong push towards PPP for other corridors (especially when the idea of viability gap funding was brought in, along with the central road fund). However, revenue risks have been a matter of concern

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and so Hybrid Annuity Model has come in, where only construction and maintenance related risks are with the Concessionaire, while the Authority takes on the revenue risks. This is expected to be more attractive to the concessionaires. Government is also open to EPC, since there is a greater confidence in financing, given the ability to leverage central road fund and the toll revenue shares.

3. Land acquisition and environmental clearances: These problems would remain and need to be addressed. Ideally, the concessionaire should be invited into a project on a 'plug and play' mode, with all clearances by the government(s) in place. One saving grace is that during the 2009-14 period, the land acquisition bill was passed, as also the stiffer environmental clearances, including one on forest conservation. This made it difficult for many concessions where the agreement was already signed, but the bills came as subsequent regulation. Hopefully, there may not be need for further regulations in this domain. However, 'plug and play' may still be a difficult ideal. Often, it is delays due to this that cause the 'corridor' sanctity to be broken and 'package' based execution creeps in.

4. Bolder visioning: While the GQ and NSEW were a bold vision, taking the key NH segments (GQ) and a national integration focus (NSEW), followed by the remaining phases of NHDP, there has been some fizzling out due to a variety of implementation issues, with many project segments ending up in litigation too. The current approach is to once again bring the commitment back to road development, with a recasting of project priorities. However, it could have been bolder, with more emphasis on expressways, much required to spur growth on key corridors. □

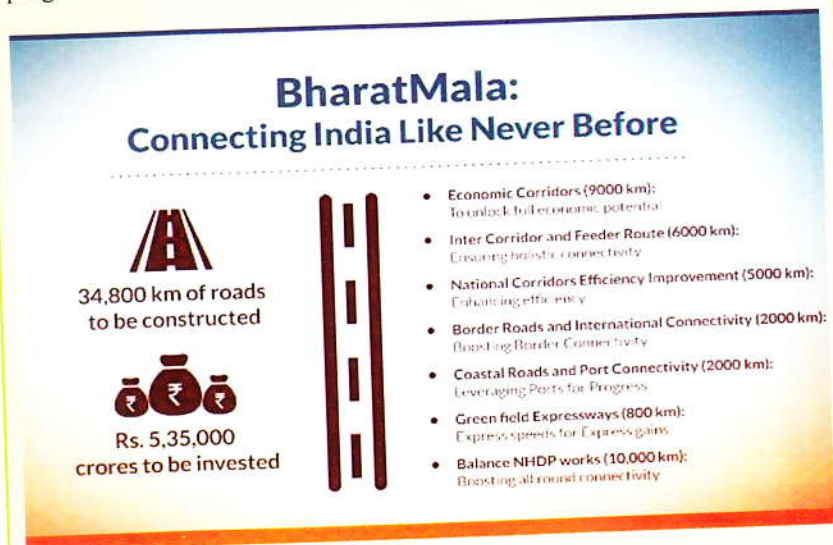
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Bharatmala will provide NH linkage to 550 districts

Highways works worth Rs 8 lakh crore are scheduled to begin before the end of 2018 under the Bharatmala Pariyojana according to an announcement by the Minister of Road Transport and Highways, Shipping, Water Resources, River Development Ganga Rejuvenation recently. Bharatmala is a new umbrella programme for the highways sector that focuses on optimizing efficiency of road traffic movement across the country by bridging critical infrastructure gaps.

Bharatmala will be a major driver for economic growth in the country, and help realize the Prime Minister's vision of a New India. The programme has been designed to bridge the gaps in the existing highways infrastructure so as to make the movement of man and material more efficient. Special attention has been paid to fulfill the connectivity needs of backward and tribal areas, areas of economic activity, places of religious and tourist interest, border areas, coastal areas and trade routes with neighbouring countries under the programme.



Bharatmala will give the country 50 national corridors as opposed to the 6 at present. With this, 70 – 80 percent of freight will move along NH as against the 40 percent at present. The programme will help to connect 550 Districts in the country through NH linkages. Currently, only around 300 Districts have NH linkages. Bharatmala will also have a positive impact on the Logistic Performance Index (LPI) of the country. Apart from this, the Minister said the programme will also help generate a large number of direct and indirect employment in the construction activity, the development of highways amenities and also as part of the enhanced economic activity in different parts of the country that will result from better road connectivity.

A total of around 24,800 kms are being considered in Phase I of Bharatmala. In addition, Bharatmala Pariyojana phase –I also includes 10,000 kms of balance road works under NHDP, taking the total to 34,800 kms at an estimated cost of Rs.5,35,000 crore. Bharatmala Phase I – is to be implemented over a five years period of i.e. 2017-18 to 2021-22. Components of Phase I and estimated expenditure are as follows:

Sl. No.	Components	Length -km	Outlay -Rs crore
a.	Economic corridors development	9,000	1,20,000
b.	Inter-corridor & feeder roads	6,000	80,000
c.	National Corridors Efficiency improvements:	5,000	100,000
d.	Border & International connectivity roads	2,000	25,000
e.	Coastal & port connectivity roads	2,000	20,000
f.	Expressways	800	40,000
	Total:	24,800	385,000
	Balance road works under NHDP	10,000	1,50,000
	Total		5,35,000

Bharatmala envisages improving the efficiency of the National Corridor (Golden-Quadrilateral and NS-EW corridor) by decongesting its choke points through lane expansion, construction of ring roads, bypasses/ elevated corridors and logistics parks at identified points. Around 5,000 kms of the National Corridor will be taken up in Phase-I of Bharatmala at an estimated cost of Rs 100,000 crore.

The programme has identified around 26,200 km of Economic Corridors or routes that have heavy freight traffic, of which 9,000 kms are being taken up for development in Phase-I at an estimated cost of Rs 1,20,000 crore. It is planned to develop these corridors end to end to ensure seamless and speedy travel and uniformity in standards. Besides this, around 8,000 km of Inter-Corridors and around 7,500 km of Feeder Corridors have also been identified under Bharatmala, of which around 6000 km will be developed in Phase I at an estimated cost of Rs 80,000 crore. Stretches of roads connecting more than 2 corridors are classified as Inter-Corridors routes, while other routes connecting to 1 or 2 corridors are termed as Feeder Corridors. These corridors will be developed so as to address the infrastructure asymmetry that exists at many places.



Bharatmala also envisages building 3300 kms of Border Roads of strategic importance along international boundaries and 2000 km of International Connectivity roads to promote trade with Nepal, Bhutan, Bangladesh and Myanmar. Out of this around 2000 km will be taken up under Phase-I at an estimated cost of Rs 25,000 crore.

In addition to the above, around 2,100 km of coastal roads and 2000 km of port connectivity roads have been identified under Bharatmala of which 2,000 kms are being taken up under Phase-I at an estimated cost of Rs 20,000 crore. About 1,900 km of stretches have been identified for development of green-field expressways of which around 800 kms will be taken up under Phase-I of the programme at an estimated cost of Rs.40,000 crore. The 10,000 km of balance road work under NHDP will be completed at a cost of Rs 1,50,000 crore.

In addition to Rs. 5,35,000 crore for Bharatmala Phase-I, there is a requirement of Rs. 1,57,324 crore for ongoing schemes like NH(O), SARDP-NE, EAP and LWE under implementation in the Highways Sector. Thus, the overall outlay for Bharatmala and all existing schemes put together will be Rs 6,92,324 crore over a period of 5 years.

Gross Budgetary Support for the Bharatmala programme and existing schemes from 2017-18 to 2021--22 will be restricted to Rs. 2,37,024 crore from Central Road Fund (CRF), Rs 59,973 crore as Budgetary support, Rs. 34,000 crore from expected monetization through Tolling, Operation Maintenance and Transfer (ToT) route and Rs. 46,048 crore collected as Toll-Permanent Bridge Fee Fund (PBFF) by NHAI.

A total of around 600 projects have been identified across the components for Bharatmala.