



राजमार्ग RAJMAARG

NHAI BI-MONTHLY NEWSLETTER

Issue 4: July-August 2021/ Volume II

Inner Lanes



Project Launches

Qazigund-Banihal Tunnel Opened for Trial

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Chairman Speaks

Shri Girdhar Aramane, Secretary, Road Transport and Highways & Chairman, NHAI

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NHAI Milestone

Raipur-Vishakhapatnam Economic Corridor

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Revolutionising Highway Development through Data Lake



Digital technology and innovations are transforming our economy and society as never before. As a premier organisation for development of National Highway Infrastructure in the country, NHAI has been leveraging technology to facilitate transparency and ease of doing business.

Launched in July 2020, NHAI's cloud-based portal, Data Lake, has been implemented to track and monitor progress of projects and act as central

repository of documents across project lifecycle. The platform is currently being accessed by all key stake holders on highway projects viz. Contractors / Concessionaires, Authority Engineers / Independent Engineers (AE / IEs), Project Directors (PDs), Regional Officers (ROs) & HQ Users with role-based access.

Since its implementation, Data Lake has served as a centralised project repository supported with system

generated MIS reports and role-based dashboard for internal and external users.

From facilitating communication and coordination to ascertaining compliance of contractual obligations, quality control, and avoiding potential conflicts, Data Lake has enabled NHAI to usher in a digital transformation and thereby ensure enhanced transparency and efficiency in its functioning.



To watch the Rajmaarg video newsletter

[Click here](#)

Project Management Through Data Lake

With projects spread across the country, NHAI deals with huge flow of information from various sources. Data Lake as a system, not only channelises information flow, and communication coming from various regions and projects but also provides a holistic view by aggregating data and visualisation module by analysing contractual provisions, timelines, milestones, physical and financial progress and other issues by studying data from spatial and non-spatial systems.

Apart from expediting the decision making, it also facilitates taking correct and timely decisions. As majority of the disputes are generic in nature like delay in handing over of encumbrance free site, shifting of utilities, idling charges of plant, machinery, equipment, manpower and delay in decisions etc., Data Lake helps in minimising such disputes as the data analytics facilitate keeping track of all such constraints and ensures that the work is carried out within the stipulated timelines in a transparent manner. As all processes are now portal-based, decision-making has become faster and will eventually reduce the chances of litigation in projects thus directly minimising time and cost over-runs.

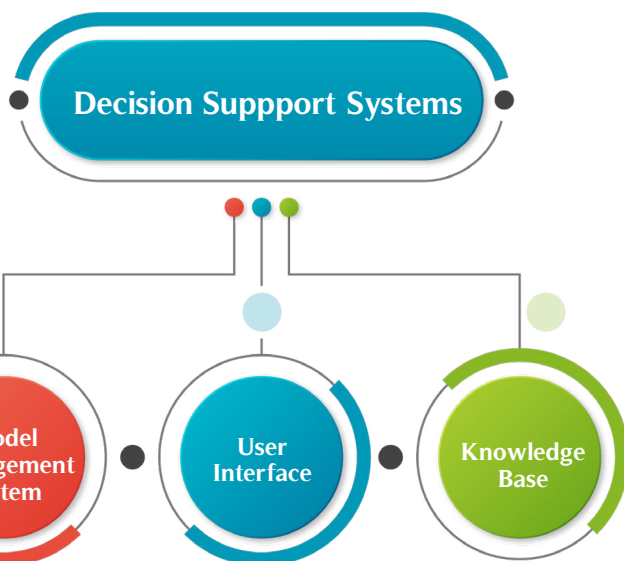
The Data Lake also stores survey data coming from different sources such as terrestrial, LIDAR and drone surveys which are critical for project design and implementation.

There is also a module for maintenance and management of transport and utility corridors which are the key to

successful operations. The module supports data acquisition, modelling, analysing, and viewing geospatial information to optimise operations.

The Decision Support System generates alerts when exceptions occur, enabling official concerned to make faster decisions and support

planning, design, and geospatial information management with a powerful 3D GIS and BIM.



Project Monitoring Through Data Lake

The monitoring and control processes in Data Lake provide a centralised project dashboard, live project feed 3D BIM Viewer and AI-based Document Management Software. Committed to develop world class highway infrastructure, NHAİ leverages technology to track, review, adjust and report on the projects' performance.

While tracking the progress of various projects Data Lake acts as a central repository of various documents created during a project life cycle. It identifies the level of official accessing the information and automatically display macro and micro-level details related to the project in a convenient & easy to use format as per industry standards.



Key capabilities of the system are

Cover all monitorable activities required to be performed by the stakeholder as per his Terms of Reference (ToR).



Integrated transaction and reporting system



Monitor project progress through on-site real-time data gathering facilitating improved visibility on projects



Communicate/ manage project correspondence and documents facilitated by web forms and workflows for approval process.



Collaborate, aggregate & visualise project parameters on dashboards & project monitoring reports



Automated alerts and escalations for proactive tracking and actioning on pendency respectively.

Data Lake with its efficient storage of data and support tools has enabled NHAİ to have a robust management system for projects ensuring their optimal performance.

Some of the significant advantages accrued by NHAİ with the implementation of Data Lake system have been:



Real-time tracking of construction progress, delayed projects and project issues that has enabled faster resolution of bottlenecks and timely decision-making.



Tracking and expediting closure of pending Extension of Time (EoT) and Change of Scope (CoS) through increased visibility on Turn Around Time (TAT) and user level pendency.



Tracking of blacklisted, unauthorised non-mobilisation and absenteeism of AE/IE manpower on project sites through implementation of Attendance Management System integrated with Data Lake. Compliance increased since Go-live with visible transparency.



Improved control over monitoring the AE/IE's obligation and its fulfilment through payment linked to key performance metrics like attendance, monthly progress reporting and equipment-based surveys.



System backed mechanism to capture Network Survey Vehicle (NSV) data and monitoring of road condition including tracking and closure of on-ground rectification works.



Remote visual inspection (incl. Right-of-Way (RoW), Encumbrances, road furniture and inventories) and project update through drone video reporting to flag project issues and provide objective evidence against unrealistic claims and support counter claims on Contractor/ Concessionaire defaults.



Automatic Storage of all documents exchanged between the stakeholders in a digital library.



Tracking of Contractual correspondence and Time bound notices to minimise exposure to Claims. Improved accountability and transparency in communication.



System based validations to help administer processing payments of the stakeholders as per prescribed milestones achievement.



Qazigund-Banihal Tunnel Opened for Trial



Construction of the 8.5 km all-weather Banihal-Qazigund tunnel, in Jammu and Kashmir, has been completed and open to traffic for trials before official inauguration.

Announcing on Twitter, Hon'ble Union Minister for Road Transport & Highways Shri Nitin Gadkari said

the tunnel will reduce travel time between Jammu - Srinagar by about 1.5 hours and distance by 16 km.

Built at 5,800 feet above sea level, the tunnel will replace the Jawahar tunnel and will provide all-weather connectivity.

Kuthiran Tunnel in Kerala Opened for Traffic

The Kuthiran Tunnel in Kerala was opened for traffic on 31st July 2021. This is the first road tunnel in the state and will drastically improve connectivity to Tamil Nadu and Karnataka. The 1.6 km long tunnel is designed through Peechi-Vazahani wildlife sanctuary. The road will improve connectivity to important ports and towns in North - South Corridor without endangering wildlife.



We will open one side of the Kuthiran Tunnel in Kerala today. This is the first road tunnel in the state and will drastically improve connectivity to Tamil Nadu and Karnataka. The 1.6 km long tunnel is designed through Peechi- Vazahani wildlife sanctuary.



Nitin Gadkari
@nitin_gadkari

The road will improve connectivity to important ports and towns in North - South Corridor without endangering wildlife. Under the leadership of PM Shri @narendramodi Ji, transformation in the infrastructure of the country is ensuring better economic opportunities to every citizen.

Ludhiana -Rupnagar Greenfield National Highway Approved

Hon'ble Union Minister for Road Transport & Highways Shri Nitin Gadkari announced that the construction of Ludhiana -Rupnagar Greenfield National Highway in Punjab has been approved with a budget of Rs. 1501.02 crore.

The 4-6 lane access-controlled greenfield project will connect Manewal village on the Delhi - Amritsar Expressway with Bheora village near Rupnagar (Ropar) in Punjab. This includes a 25 km spur to Kharar.

The project is envisioned to reduce the distance and travel time provide connectivity to remote areas and major cities in Punjab.



Nitin Gadkari
@nitin_gadkari

Construction work of Four/Six lane Greenfield Ludhiana - Rupnagar National Highway (NH-205K) including Spur to Kharar with Ludhiana bypass under Bharatmala Pariyojana has been approved in the state of Punjab with a budget Rs. 1501.02 Cr. #PragatiKaHighway



Nitin Gadkari
@nitin_gadkari

For faster and safer movement of traffic on 6 Lane Gurgaon - Jaipur - Kishangarh - Ajmer - Beawar NH, there have been demands for more structures such as Underpass, flyover and bridges.



Shri Giridhar Aramane
Secretary, Road Transport and Highways
& Chairman, NHAI

Dear Friends,

I am happy to present the latest issue of Rajmaarg, which is based on the central theme of 'Revolutionizing Highway Development through Data Lake'.

Over the years, NHAI has established itself as a robust and dynamic organization which is committed to nation-building. It has taken many innovative steps to improve efficiency, transparency and ease of doing business for all its stakeholders. Among these initiatives, introduction of the cloud based and Artificial Intelligence powered Big Data Analytics platform – Data Lake and Project Management Software has been among the most significant in changing the technological landscape of the organization.

As you may know, the entire project management workflow of NHAI has been transformed from manual to online portal using Data Lake Software, wherein the complete project execution operations including 'workflow with timeline' and 'alert mechanism' have been configured. All project documentation, contractual decisions and approvals are now being done through the portal only. With advance analytics, the Data Lake software forecast the delays, likely disputes and give advance alerts. It also facilitates taking correct and timely decisions as the system is capable of predicting financial impacts of different alternatives based on the historical data. Further, to enhance transparency and ease of doing business, all correspondence with Contractors and Consultants is now done digitally through the 'Data Lake' Portal.

This edition also carries highlights of the developments in the highway infrastructure of our country that have happened over the past two months.

I hope this edition of Rajmaarg will reflect on the significance of technological implementation and its impact on enabling greater transparency and faster decision making.

Lastly, I would like to mention that we are proud of team NHAI, who continue to innovate and work diligently towards our collective resolve of nation-building.

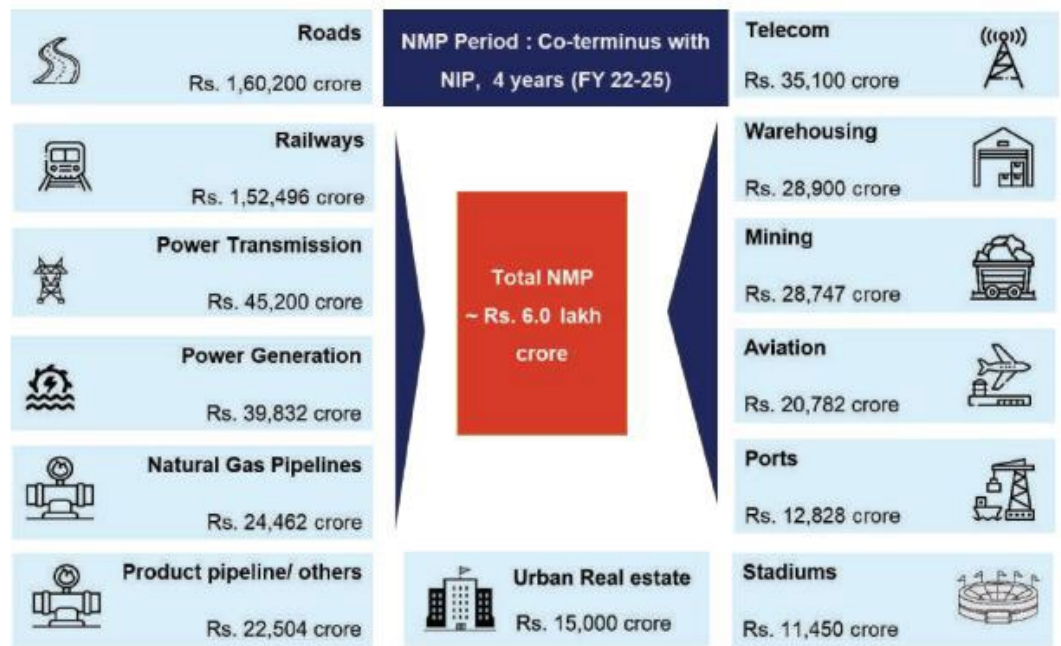
With Best Wishes

Giridhar Aramane



Assets Considered for Monetisation

The breakup of the overall pipeline and the sectoral share is as provided in the figure below:



Sector wise Monetisation Pipeline over FY 2022-25 (Rs crore)

The National Monetisation Pipeline (NMP) announced by the Government envisages monetising 26,700 km of highway assets over FY 2022 to 2025. The total indicative monetisation value of the highway assets considered for monetisation is estimated at Rs 1.6 lakh crore over the 4-year period. The NMP lists out government infrastructure assets that are to be monetised in the next four-years and includes highway assets, gas pipelines, railway assets, warehousing assets among others.

26,700 km of Highway Assets to be Monetised Under NMP

As per NMP, the 26,700 km of highway assets considered for monetisation constitutes around 22% of the total National Highways excluding the network operated by private sector under BOT (Toll) based PPP concessions.

Both operational National Highway assets and new projects which are constructed and operationalised over the next four years have been considered. The National Highway network of 4 lane and above configuration, where NHAI reserves tolling rights, has been considered as amenable for monetisation for the purpose of identification of asset under NMP.

The highways which will become operational over the NMP period are to be included in the assets base after the completion of one-two years of operations post establishment of base traffic. The asset pipeline has been phased out over the NMP period to ensure better preparedness and improved marketability.

Factors Influencing Monetisation

The monetisation of operating road assets has generated growth capital for construction of new roads under the Bharatmala programme, in line with the NHAI's mandate to diversify its funding for financing growth. Since 2017, NHAI

has been successfully monetising its brownfield road assets through TOT-based PPP concessions.

Indicative Monetisation Value

According to the NMP, the indicative monetisation value has been estimated on the 'market approach', and is based on the average blended factor at Rs 6 crore per km.

The estimate has been arrived at based on recent Toll Operate Transfer (TOT) transactions, asset mix to be monetised, and scale of monetisation. The average realisation

by NHAI under past TOT concessions successfully awarded has been in the range of Rs 9-14 crore per km. A lower range at Rs 6 crore per km has been assumed to assess indicative monetisation value to factor in certain lower traffic stretches in the portfolio and impact of scale on monetisation.

Evolved Regulatory Framework

The regulatory framework for roads sector especially that for PPP Projects including the NHAI's Model Concession Agreement, has strengthened considerably over the last decade. Pursuant to enabling

framework/ provisions by NHAI, multiple portfolio buyouts have been completed in the roads sector unlocking capital and enhanced participation of institutional investors

Greater Transparency in Operations

As per the NMP, introduction of measures such as FASTag, electronic tolling, etc., and the palpable behavioural change seen in the adherence to these initiatives, will usher in greater transparency in the asset management process and significantly improve user "willingness to pay".



Indicative value of Roads Monetisation pipeline (Rs crore)

भा रतीय राष्ट्रीय राजमार्ग प्राधिकरण मुख्यालय में हाल ही में 'कार्यालयी कामकाज में सूचना प्रौद्योगिकी - संपूर्ण परिचय' विषय पर हिंदी कार्यशाला का आयोजन किया गया। कार्यशाला में भाग लेने के लिए 30 प्रतिभागियों को नामित किया गया। कार्यशाला का आयोजन 2 सत्रों में किया गया जिसमें 15-15 प्रतिभागियों ने भाग लिया।



Raipur-Vishakhapatnam Economic Corridor

The Bharatmala Pariyojana entails the development of economic corridors with integrated networks of infrastructure to stimulate economic development. One such major corridor is the upcoming Raipur–Visakhapatnam Expressway designed to be the transport lifeline for Central and South-Eastern India.

The Expressway is to be developed in 18 packages entailing a total cost of Rs 16,343 crore. 204 km out of 464 km of the corridor has already been awarded with the remaining sections targeted to be awarded in the current financial year. The project is scheduled to be completed and opened to traffic by December 2023.

Linking Economic Hubs

The 6-lane 464 km long greenfield, access-controlled Expressway will pass through Chhattisgarh, Odisha, and Andhra Pradesh enhancing connectivity between several economic hubs that lie on the route including Jagdalpur, Umerkote, Papadahandi Navrangpur, Borigumma, Jeypore, Koraput, Semliguda, and Vizianagaram. The project will connect several industries of national importance including the aerospace and defence major Hindustan Aeronautics Limited (HAL) and mining & metal giant National Aluminium Company Limited (NALCO).

Reduced Travel Time

The existing route from Chhattisgarh capital Raipur to the port city of Visakhapatnam in Andhra Pradesh is 593 km in length and takes approximately 14 hours to cover the distance. Once completed, the Expressway will reduce the travel time by half to 7 hours. The reduction of around 130 km of travel distance will bring down vehicle operating costs.

Connecting Underdeveloped Regions

The Corridor will also pass through several underdeveloped regions of Chhattisgarh and Odisha catalysing their economic and infrastructural development. Besides facilitating the mineral-rich regions to realise their potential of developing into industrial zones, the corridor will also contribute towards



the socio-economic development of Chhattisgarh and Odisha through improved tourism and employment generation.

Smart, Safe, Comfortable

The Expressway will have 100 km/hr design speed and to meet the requirement even in mountainous terrain, three 10 km long tunnels

along with several viaducts will be constructed for a smooth and safe movement of vehicles. Wayside amenities have been planned across the expressway at intervals of about

Caring for Flora & Fauna

Like all NHAI projects, extreme care and caution are being taken

to ensure the preservation of the flora and fauna along the corridor which passes through forest and mountainous regions. The corridor will have adequate tree cover with rainwater harvesting facilities at every 500 metres. Solar-powered lights will be also installed at major structures, interchanges, toll plazas to improve road safety and rider comfort.

NHAI @NHAI_Official

Reducing the distance between the two cities, it provides all-weather connectivity to the people travelling between Jammu and Srinagar.

#HighwayFacts #DidYouKnow



DID YOU KNOW

The 9 Km long Dr. Syama Prasad Mookerjee Tunnel is located between Udhampur & Ramban connecting Chenani to Nashri. It cuts down 41 km of travel distance, reducing travel time between Jammu & Srinagar by 2 hours.

MORTHINDIA @MORTHIndia

Shri Giridhar Aramane, Secretary RT&H, Chairman NHAI, & additional charge Secretary DPIIT, clearing doubts and sharing insights about the National Monetisation Pipeline in an interview.

Watch the complete interview at: youtu.be/Zi6nFWpCBRM

@nitin_gadkari
@NHAI_Official



NHAI retweeted

Nitin Gadkari @nitin_ga... · 23 Aug · 917 KM long

Amritsar-Bhatinda-Jamnagar Access Controlled Highway is being constructed under Bharatmala Pariyojana Phase 1. 21% of the project has been completed and is targeted for completion by May 2024. #PragatiKaHighway

@capt_amarinder
@ashokgehlot51
@vijayrupanibjp

ACCESS CONTROLLED HIGHWAY



Amritsar - Bhatinda - Jamnagar

- Length: 917 km
- Physical Progress: 21%
- Under Construction: 70%
- Completion: Sep'23 (Trans Rajasthan), May'24 (Amritsar - Bhatinda)
- The corridor will provide connectivity between several economic hubs in Punjab, Rajasthan and Gujarat to the major port in Gujarat

Visit Udupi @VisitUdupi

This is #NH66 in #Udupi District.

मेरा देश बदल रहा है...आगे बढ़ रहा है !

#PragatiKaHighway
#VisitUdupi

Translate Tweet



NHAI retweeted

MORTHINDIA @MORTHIndia · 4d

#CircularEconomy
#SadakSurakshaJeevanRaksha



Objectives of the New Scrapage Policy:

Enable safer vehicle ecosystem and reduce road crash fatalities

NHAI retweeted

Nitin Gadkari @nitin_ga... · 19 Aug ·

Following projects have been included in Bharatmala Pariyojana Phase-1

1. Chambal Expressway (404 Km),
2. Greenfield connectivity of NH-26 and NH-75 outside Jhansi (16.8 Km) and
3. Dwarka Circle to Nashik Road section of NH-60 (5.9 Km). #PragatiKaHighway



Hindustan Times:

₹100L cr Gati Shakti plan to boost infra

₹100L cr Gati Shakti plan to boost infra

Rajeev Jaywal

NEW DELHI: Prime Minister Narendra Modi on Sunday said the government will spend a ₹100 lakh crore "holistic and integrated" approach to infrastructure construction — Prime Minister Gati Shakti National Master Plan — to create employment and make India manufacturers globally competitive. He also reiterated his resolve to nurture startups as emerging wealth creators.

"In the near future, we are going to launch Prime Minister Gati Shakti National Master Plan," the PM said in his Independence Day speech from the ramparts of the Red Fort.

"Gati Shakti will lay the foundation of holistic infrastructure and will lead to an integrated and holistic pathway to our economy. Right now, there is no coordination among our means of transport. Gati Shakti will break the silos, and will remove all these obstacles."

Modi was referring to an integrated approach to develop modern railways, roadways, waterways and airways. "This will reduce the travel time for the common man and the productivity of our industry will also increase," he said adding that it would also help in the creation of future economic zones. "In this decade, the power of speed will form the basis of India's transformation," he added.

The government considers infrastructure development as an engine of economic growth. In December 2020, finance minister Nirmala Sitharaman had announced a ₹1.11 lakh crore National Infrastructure Pipeline (NIP) with 6,835 projects. That has now expanded to 7,400 projects of which 277 worth ₹1.59 lakh crore have already been completed. The government is also setting up Development Finance Institutions (DFIs) to fund infrastructure sector projects.

The PM laid out steps at new wealth creators.

India has responded positively to the PM's speech, TV Narmada, president, Confederation of Indian Industry, said in a comprehensive outline of a strategic economic vision. "The proposed Pradhan Mantri Gati Shakti programme of ₹100 lakh crore provides to converge infrastructure, manufacturing and competitiveness to boost India's future growth and create employment," Narmada said.

Business Standard:

RBI's surplus funds can be used for road project, says Gadkari

RBI's surplus funds can be used for road project, says Gadkari

MEGHA MANCHANDA
New Delhi, 11 August

Union Road Transport and Highways Minister Nitin Gadkari on Wednesday said infrastructure projects in the country need low-cost financing and surplus funds of RBI can be utilised for the same. Addressing a virtual CII meet, Gadkari said that the National Highways Authority of India (NHAI) should also have a financial arm such as the Power Finance Corporation (PFC). "We have a surplus of dollar reserves in the country. I have decided to talk with the RBI governor, about how we can formulate a policy by which we can use this foreign exchange reserves for development of infrastructure in the country," he said.

Recently, a Parliamentary panel has also suggested that the RBI may consider the possibility of utilisation of surplus funds to finance long-term road infrastructure projects.

Financial Express:

Road Transport & Highways ministry built 13,327 km of Highways in FY21, says Gadkari

Road Transport & Highways ministry built 13,327 km of highways in FY21, says Gadkari

NRI DELHI: The Road Transport and Highways Ministry has completed 13,327 km of National Highways in 2020-21, which works out to about 18 km per day. The minister was informed on Thursday.

In a written reply to Lok Sabha, Gadkari said to manage COVID-19 pandemic effect, his ministry's road infrastructure and general annual 6,000 km of additional construction, cost containment and completion, including extension of time for 18 months. He stated that the cost of ongoing projects has increased due to rise in oil and project specific inflationary factors.

Gadkari said the Cabinet Committee on Economic Affairs (CCEA) had approved the proposal for investment approval for Phase II of Bharatmala Programme on October 14, 2017 for an amount of ₹1,50,000 crore.

"The Bharatmala Programme has not a target of construction of 12,000 km of National Highways in 2021-22. It is 50 per cent of National Highway Network will have a contribution to help and drive infrastructure," he said.

Ministerial Programme Phase II includes development of about 24,000 km NHI work such as Environmental, construction, lower corridor & feeder roads, National corridor-13,000 km, Improvements, Bundled and Bundled Corridor, Conventional roads, Conventional and Fast Corridor roads, Expressways as well as 10,000 km of roads under Bharatmala.

Replying to another question, Gadkari said the ministry has set a target of construction of 12,000 km of National Highways in 2021-22.

Financial Express:

₹30,000 cr to be mobilised from highway assets in FY22

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NEW DELHI: The National Highways Authority of India (NHAI) has decided to mobilise ₹30,000 crore from its highway assets in FY22, according to a report by PTI.

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The Times of India:

21 wildlife underpasses planned for Delhi-Doon away, HC told

21 wildlife underpasses planned for Delhi-Doon away, HC told

Prashant Jain

Nationalist: To protect animals on a 3.4 km stretch of the proposed Delhi-Delhi-Delhi bypass, which will pass through forest of the Shivalik hills, the National Highways Authority of India (NHAI) will build 21 wildlife underpasses, bridges and similar structures of passage.

In an affidavit filed with the Uttarakhand high court, NHAI project director Prashant Jain said that the two plans will be in place to "ensure" animals can pass safely under the underpasses and barriers will be installed on both sides of the road to reduce noise pollution. Noise barriers absorb sound waves and wall them off on one side.

Underpasses will be built in 2021, rise of them, beneath a section of the Shivalik-Bharatmala. NHAI between the Kumaon and Panch Kumaon regions. The weather that, Wildlife Institute of India scientists found it was working — 50% animals of 18 wildlife species were using them. This year, there was an 8% jump in the number of animals taking the underpasses, at 8,000 of 21 species.

The Times of India:

Lockdown effect: Road deaths in 2020 was lowest in 11 years

Lockdown effect: Road deaths in 2020 was lowest in 11 years

Dipak.Dash@timesgroup.com

New Delhi: Road accidents claimed around 1.5 lakh lives in 2020, which is the lowest in the past 11 years. The earlier lowest was 1.2 lakh in 2009.

The number of road accidents also fell to 3.7 lakh during last year, which was lowest in the past 20 years. The sharp decline in road deaths and crashes was primarily because of restriction on movement of vehicles during to Covid-induced lockdown across the country in 2019, around 1.51 lakh lives were lost in road crashes in India.

Replying to a question in the Lok Sabha, transport minister Nitin Gadkari questioned the reduction in deaths and said his ministry has formulated a multi-pronged strategy to address the issue of road safety based on education, engineering, enforcement and emergency care.

The road fatalities had witnessed sharpest decline in the April-June quarter of 2020 calendar year when 20,732 persons were killed compared to 41,032 during the same period in 2019. Most part of the country was under lockdown during this period. "This simply shows why we must not treat road crashes as a fate. We need to take all measures to avoid crashes, deaths and injuries," said Amar Srivastava, member of government's Road Safety Council and founder of India Road Safety Campaign.

BUILDING A NATION, NOT JUST ROADS.

@NHAI_Official | official.nhai | @nhai_official

For feedback and contributions, write to us at - nhaieditor@gmail.com