

REPORT NO.

342



सत्यमेव जयते

PARLIAMENT OF INDIA  
**RAJYA SABHA**

DEPARTMENT-RELATED PARLIAMENTARY STANDING COMMITTEE  
ON TRANSPORT, TOURISM AND CULTURE

**THREE HUNDRED FORTY SECOND REPORT**

**Demands for Grants (2023-24) of Ministry of Road Transport  
and Highways**

*(Presented to the Rajya Sabha on 13<sup>th</sup> March, 2023)*  
*(Laid on the Table of Lok Sabha on 13<sup>th</sup> March, 2023)*



Rajya Sabha Secretariat, New Delhi  
March, 2023/ Phalgun, 1944 (Saka)

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Hindi version of this publication is also available

# PARLIAMENT OF INDIA RAJYA SABHA

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STANDING COMMITTEE ON TRANSPORT,  
TOURISM AND CULTURE

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**RAJYA SABHA SECRETARIAT  
NEW DELHI**

**March, 2023/ Phalguna, 1944 (Saka)**

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\*To be appended

## COMPOSITION OF THE COMMITTEE

(2022-23)

(Constituted on 13<sup>th</sup> September, 2022)

1. **Shri V. Vijayasai Reddy** - **Chairman**

### RAJYA SABHA

2. Shri Mohammed Nadimul Haque
3. Shrimati S. Phangnon Konyak
4. Shri Jugalsinh Lokhandwala
5. Shri Manas Ranjan Mangaraj
6. Dr. Sonal Mansingh
7. Shrimati Rajani Ashokrao Patil
8. Shri A. A. Rahim
9. Dr. C. M. Ramesh
10. Shri Vinay Dinu Tendulkar

### LOK SABHA

11. Shri Anto Antony
12. Shri Margani Bharat
13. Shri Tapir Gao
14. Shri Rahul Kaswan
15. Shri Ramesh Chandra Majhi
16. Shri Sunil Baburao Mendhe
17. Shri K. Muraleedharan
18. Shri S. S. Palanimanickam
19. Shri Chhedi Paswan
20. Shri Kamlesh Paswan
21. Shri Sunil Kumar Pintu
22. Shri Prince Raj
23. Shri Tirath Singh Rawat
24. Shrimati Mala Roy
25. Shri Rajiv Pratap Rudy
26. Shri Dushyant Singh
27. Shri Rajbahadur Singh
28. Shri Ramdas C. Tadas
29. Shri Manoj Tiwari
30. Shri Krupal Balaji Tumane
31. Shri Dinesh Lal Yadav "Nirahua"

### SECRETARIAT

Shri Sumant Narain, Joint Secretary  
Shri Swarabji B., Director  
Shrimati Monica Baa, Additional Director  
Shrimati Subha Chandrashekar, Deputy Secretary  
Shri Ranajit Chakraborty, Under Secretary  
Shri Gaurav Singh Gahlain, Assistant Committee Officer

## INTRODUCTION

I, the Chairman, Department-related Parliamentary Standing Committee on Transport, Tourism and Culture, having been authorized by the Committee to present on its behalf, do hereby present this Three Hundred Forty Second Report on Demands for Grants (2023-24) of Ministry of Road Transport and Highways.

2. The Committee, at its meeting held on 16<sup>th</sup> February, 2023 considered the subject and heard the Secretary and other officials of Ministry of Road Transport and Highways.

3. The Committee wishes to express its thanks to the officers of Ministry of Road Transport and Highways for placing before the Committee, the material and information desired in connection with the subject and for clarifying the points raised by the Members.

4. The Committee considered and adopted the Report in its meeting held on the 6<sup>th</sup> March, 2023.

**NEW DELHI;**  
*March 6, 2023*  
*Phalguna 15, 1944 (Saka)*

**(V. Vijayasai Reddy)**  
*Chairman,*  
*Department-related Parliamentary Standing*  
*Committee on Transport, Tourism and Culture,*  
*Rajya Sabha*

## ACRONYMS

ABS	Anti-Lock Braking System
ACC	Advanced Chemistry Cell
ADB	Asian Development Bank
AE	Authority Engineer
AIS	Automotive Industry Standard
AM	Assistant Manager
ANPR	Automatic Number Plate Recognition
ATMS	Advanced Traffic Management System
ATS	Automated Testing Stations
BE	Budget Estimates
BG	Bank Guarantee
BHU	Banaras Hindu University
BIS	Bureau of Indian Standards
BMP	Bharatmala Pariyojana
BOT	Build-Operate-Transfer
BRO	Border Roads Organization
CALA	Competent Authority for Land Acquisition
CCEA	Cabinet Committee on Economic Affairs
CCIE	Conciliation Committee of Independent Experts
CCTV	Closed Circuit Television
CES	Central Engineering Service
CFI	Consolidated Fund of India
CGM	Chief General Manager
CNG	Compressed Natural Gas
COD	Commercial Operation Date
COS	Change of Scope
COVID	Coronavirus Disease
CPGRAMS	Centralised Public Grievance Redress and Monitoring System
CRF	Central Road Fund
CRIF	Central Road and Infrastructure Fund
CRRRI	Central Road Research Institute
CSR	Corporate Social Responsibility
DAC	Development of Advanced Computing
DAR	Detailed Accident Report
DGM	Deputy General Manager
DME	Di-Methyl Ether
DPR	Detailed Project Report
DR	Direct Recruitment
DRB	Dispute Resolution Board
DSCR	Debt-Service Coverage Ratio
DTC	Delhi Transport Corporation
EDS	Essential Details Sought
EFC	Expenditure Finance Committee
EMP	Environment Management Plan
EOI	Expression of Interest
EPC	Engineering Procurement and Construction
EPE	Eastern Peripheral Expressway
ERSS	Emergency Response Support System

FAME	Faster Adoption and Manufacturing of Hybrid and Electric Vehicles
FHWA	Federal Highway Administration
FRCM	Fortnightly Regional Coordination Meetings
FRP	Fiber Reinforced Polymer
FWD	Falling Weight Deflectometer
FY	Financial Year
GAD	General Arrangement Drawing
GBS	Gross Budgetary Support
GDP	Gross Domestic Product
GHD	Green Highways Division
GIS	Geographic Information System
GM	General Manager
GOI	Government of India
GPS	Global Positioning System
GSNMP	Gati Shakti National Master Plan
GSR	General Statutory Rules
HAM	Hybrid Annuity Model
HMV	Heavy Motor Vehicle
IAHE	Indian Academy of Highway Engineers
IDTR	Institute of Driving and Traffic Research
IE	Independent Engineer
IEBR	Internal and Extra Budgetary Resources
IECV	Initial Estimated Concession Value
IEM	Independent External Monitor
IIT	Indian Institute of Technology
IMS	Incident Management System
IRC	Indian Road Congress
IRF	<i>International Road Federation</i>
IRQP	Improvement of Riding Quality Programme
ISC	Inter State Connectivity Scheme
IT	Information Technology
ITS	Intelligent Transportation System
JICA	Japan International Cooperation Agency
JNPT	<i>Jawaharlal Nehru Port Trust</i>
JNTUA	Jawaharlal Nehru Technological University, Anantapur
JRA	Japan Road Association
KIOCL	Kudremukh Iron Ore Company Limited
KL	Kerala
KM	Kilometer
LA	Land Acquisition
LAP	Land Acquisition Plan
LIFE	Lifestyle for the Environment
LMV	Light Motor Vehicle
LWE	Left Wing Extremism
MCA	Model Concession Agreement
MD	Managing Director
MDR	Major District Road
MHTR	<i>Mukundra Hills Tiger Reserve</i>
MIS	Management Information system
MLA	Member of Legislative Assembly
MMLP	Multi-Modal Logistics Parks
MOEF	Ministry of Environment, Forest and Climate Change



MORTH	Ministry of Road, Transport and Highways
MP	Madhya Pradesh
MQCV	Mobile Quality Control Vans
MSWIM	Medium Speed Weigh-in-Motion
NCMC	<i>National Common Mobility Card</i>
NCR	National Capital Region
NDT	Non-Destructive Testing
NE	North-East
NER	North-Eastern Region
NGO	Non-Governmental Organization
NH	National Highway
NHAI	National Highways Authority of India
NHDP	National Highways Development Project
NHIDCL	National Highways & Infrastructure Development Corporation Limited
NHMLML	National Highway Logistics Management Limited
NIC	National Informatics Centre
NITI	National Institution for Transforming India
NMP	National Master Plan
NPG	Network Planning Group
NSV	Network Survey Vehicle
ODR	Other District Roads
OFC	Optical Fiber Cable
PBFF	Permanent Bridge Fee Fund
PCOD	Provisional Commercial Operation Date
PCU	Passenger Car Unit
PFRDA	Pension Fund Regulatory and Development Authority
PG	Performance Grade
PIARC	World Road Association ( <i>formerly</i> Permanent International Association of Road Congresses)
PLI	Production Linked Incentive
PM	Pradhan Mantri
PNB	Punjab National Bank
PPP	Public Private Partnership
PR	Park Road
PSV	Public Service Vehicles
MoPSW	Ministry of Ports, Shipping & Waterways
PUP	Pedestrian underpasses
PWD	Public Works Department
RAMS	Road Asset Management System
RDTC	Regional Driving Training Centre
RE	Revised Estimates
RFCTLARR	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act,
RFID	Radio Frequency Identification
RFP	Request for Proposal
ROB	Road Over Bridge
ROW	Right of Way
RSA	Road Safety Audit
RSO	Road Safety Officer
RUB	Road Under Bridge
RVSF	Registered Vehicle Scrapping Facility
RW	Roads Wing

SARDP	Special Accelerated Road Development Programme
SBR	Seat Belt Reminder
SFC	Standing Finance Committee
SH	State Highway
SOP	Standard Operating Procedure
SPM	Special Project Monitor
SPV	Special Purpose Vehicle
SSA	State Support Agreement
SWB	Static Weigh Bridge
TN	Tamil Nadu
TOT	Toll, Operate and Transfer
TPC	Total Project Cost
TRW	Transport Research Wing
TSP	Tribal Sub-Plan
UI	User Interface
UN	United Nation
UPI	Unified Payment Interface
USD	United States Dollar
UT	Union Territory
VCF	Value Capture Finance
VLТ	Vehicle Location Tracking
VTS	Vehicle Tracking System
WHO	World Health Organization
WII	Wildlife Institute of India
WIM	Weigh-in-Motion
WL	Wild Life
WSA	Way Side Amenities

# REPORT

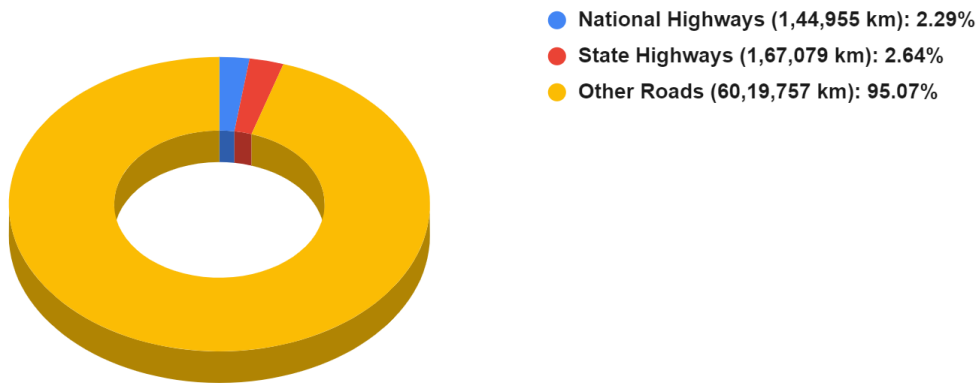
## BRIEF BACKGROUND

An efficient, robust road network is a critical infrastructural requirement that enables the efficient movement of goods, people, and services across a region. It connects businesses to markets, workers to jobs, and people to vital services like healthcare and education. A well-maintained road network can also help to reduce traffic congestion and improve safety, saving lives and time for commuters. The development of road networks has been shown to promote economic growth, as it facilitates trade and commerce, encourages investment, and boosts productivity. In rural areas, road networks can also connect isolated communities, providing access to critical resources and services. Overall, the importance of a well-connected, efficient road network cannot be overstated, as it plays a vital role in shaping the economic and social fabric of any society.

2. India has the second largest road network in the world of about 63.32 lakh km. This comprises National Highways, Expressways, State Highways, Major District Roads, Other District Roads and Village Roads as under:

### Road Network in India

Total Length: 63,31,791 km



## Introduction and Mandate of the Ministry of Road Transport and Highways

3. The Ministry of Road Transport and Highways was formed in 2009 by bifurcating the erstwhile Ministry of Shipping, Road Transport and Highways into two independent Ministries, *i.e.*, Ministry of Road Transport & Highways and Ministry of Shipping.

4. The tasks and responsibilities of the Ministry encompass, *inter alia*, construction and maintenance of National Highways (NHs); administration of the National Highways Act, 1956; National Highways Authority of India Act, 1988; National Highways Fee (Determination of Rates and Collection) Rules, 2008; Motor Vehicles Act, 1988; and Central Motor Vehicles Rules 1989, as also formulation of broad policies relating to road transport and automotive norms, besides making arrangements for the movement of vehicular traffic with neighbouring countries.
5. The associated offices under the Ministry are as follows:-

#### **National Highways Authority of India**

The National Highways Authority of India (NHAI) was set up through an Act of Parliament, namely the National Highways Authority of India Act, 1988. The NHAI is responsible for the development, maintenance and management of the National Highways entrusted to it and for matters related or incidental thereto. The NHAI became operational in February, 1995.

#### **National Highways & Infrastructure Development Corp. Ltd. (NHIDCL)**

The Cabinet, in its meeting held on 13 March, 2014, approved the setting up and operationalization of a new corporate entity, the NHIDCL, under the Ministry of Road Transport and Highways to exclusively carry out the task of construction/upgrading/widening of National Highways in parts of the country which share international boundaries with neighbouring countries in order to promote regional connectivity on a sustainable basis.

#### **Indian Academy of Highway Engineers (IAHE)**

IAHE is a registered Society under the administrative control of the Ministry. It is a collaborative body that was set up in 1983 with the objective of fulfilling the long felt need for training of Highway Engineers in the country, both at the entry level and during their service period.

#### **Indian Roads Congress (IRC)**

IRC was formally registered as a Society on 24 September, 1937 under the Societies Registration Act of 1860 for the periodical holding of road conferences to discuss issues related to road construction, maintenance & development. IRC has over 16,850 registered members comprising engineers & professionals of all stakeholders of the road sector, from Central and State Governments; Public Sector; Research Institutions; Academic Institutions; Local bodies; Private sector; Concessionaires; Contractors; Consultants; Equipment manufacturers; Machinery manufacturers; Material producers & suppliers; Industrial Associations; and Multilateral & Institutional organisations like World Bank, ADB, JICA, JRA, IRF etc.

## **National Highway Logistics Management Limited (NHLML)**

NHLML is a 100% owned subsidiary company of NHAI. It is a Special Purpose Vehicle (SPV) company incorporated by the Ministry in the year 2020 with the intent of spearheading the development and inter-departmental coordination pertaining to the Multi-Modal Logistics Parks (MMLPs) for Cargo Traffic and first/last mile Port Connectivity Road projects under the Bharatmala Pariyojana. NHLML has also been delegated by the Ministry of Road Transport and Highways for the development of other allied highway infrastructure such as Inter-modal Stations for passenger traffic and development operations and management of Way-side amenities along National Highways, Utility corridor along NH. NHLML has been pivotal in accelerating the pace of coordination with various State Governments and Partner Government Agencies in terms of on-boarding them as equity stakeholders for development of MMLPs and signing of MoUs with various agencies. Since its inception, the organisation, under the supervision of Ministry of Road Transport and Highways, has prioritised action on fast-tracking first/last mile direct road connectivity for various major and non-major ports and Inland Waterway Terminals under Bharatmala Pariyojana, while coordinating with the Ministry of Ports, Shipping and Waterways and various Port agencies.

## **ANALYSIS OF DEMANDS FOR GRANTS (2023-24) and PAST PERFORMANCE OF THE MINISTRY**

### **Analysis of Demands for Grants (2023-24)**

6. The Ministry has been allocated Rs. ~2.70 lakh crores as part of Budgetary Estimates (BE) in Financial Year 2023-24 - about 98.7% of the projected demand of Rs. 2.74 lakh crores. The allocation made is 35.8% above the BE 2022-23 of Rs. ~1.99 lakh crores. No major reduction has been made in the demand of the Ministry.

7. The Ministry has stated that as such no shortfall in fund and adverse effects thereof on any programme/ schemes are expected at this stage.

8. Scheme-wise projections made and the actual allocations proposed for the year 2022-23 are as under:-

<b>Central Sector Road</b>				
<b>Budget 2023-24</b>				
<b>(Amount in Rs. crore)</b>				
<b>Sr.</b>	<b>Scheme</b>	<b>Demand</b>	<b>Actual</b>	<b>Allocation/</b>

No.			Allocation	Demand %
	<b>Roads Wing (RW)</b>			
1	Externally Aided Projects	4,825.59	3,900.00	80.8%
<b>2</b>	<b>Other Schemes</b>	<b>49,773.34</b>	<b>49,513.08</b>	<b>99.5%</b>
a	NH (O)	49,770.34	49,510.08	99.5%
b	Travel Expenses, Machinery & Equipment	3.00	3.00	100%
<b>3</b>	<b>Development of IT</b>	<b>7.00</b>	<b>15.00</b>	<b>214.3%</b>
<b>4</b>	<b>R&amp;D and Training (a+b)</b>	<b>79.10</b>	<b>79.10</b>	<b>100%</b>
a	R&D Planning Studies	9.10	9.10	100%
b	Training, Quality Assurance	40.00	40.00	100%
c	Professional Services	30.00	30.00	100%
<b>5</b>	<b>Charged Expenditure</b>	<b>5.00</b>	<b>5.00</b>	<b>100%</b>
<b>6</b>	<b>NHAI (Investment)</b>	<b>1,60,807.00</b>	<b>1,60,807.00</b>	<b>100%</b>
a	NHAI-Gross Budgetary Support (GBS)	1,30,000.00	1,30,000.00	100%
b	NHAI-Toll Remittance, PBFF	20,807.00	20,807.00	100%
c	NHAI – Monetization of National Highways Fund	10,000.00	10,000.00	100%
<b>7.</b>	<b>Bharatmala Pariyojana – work under State PWDs/NHIDCL/BRO etc</b>	<b>1,400.00</b>	<b>1,400.00</b>	<b>100%</b>
<b>9</b>	<b>Capital Outlay for N-E States</b>	<b>18,690.00</b>	<b>18,591.20</b>	<b>99.5%</b>
a	SARDP-NE	4,657.49	4,610.00	99.0%
b	NH(O) for NE States	14,032.51	13,981.20	99.6%
<b>10</b>	<b>Capital Outlay for development of road connectivity in LWE affected</b>	<b>24,125.93</b>	<b>23,380.00</b>	<b>96.9%</b>

	<b>areas and other tribal areas</b>			
a	LWE – Non TSP	5.00	5.00	100%
b	LWE-TSP	315.00	280.00	88.9%
c	Tribal Sub-Plan - NH works in NE States, Rajasthan, MP, Chhattisgarh, Jharkhand, etc.	3,805.93	3,095.00	81.32%
d	Bharatmala Pariyojana – work under State PWDs/ NHIDCL/ BRO in Tribal Area	20,000.00	20,000.00	100%
<b>11</b>	<b>EI&amp;ISC for States /UTs from CRF</b>	<b>300.00</b>	<b>400.00</b>	<b>133%</b>
<b>12</b>	<b>Development of Ropeways</b>	<b>200.00</b>	<b>200.00</b>	<b>100%</b>
<b>13</b>	<b>Maintenance of NHs including Swachhta Action Plan</b>	<b>3500.00</b>	<b>2,600.00</b>	<b>74.3%</b>
	<b>Total for Road Wing</b>	<b>2,63,712.96</b>	<b>2,60,882.38</b>	<b>98.9%</b>
<b>14</b>	<b>Road Transport</b>	<b>453.00</b>	<b>330.00</b>	<b>72.8%</b>
<b>(A)</b>	Total Central Sector Road	2,64,165.96	2,61,182.38	98.9%
<b>(B)</b>	Central Road Infrastructure Fund (CRIF) for State Roads for State and UTs	9,600.00	9,030	94.0%
<b>(C)</b>	Secretariat Expenditure	184.83	184.33	99.7%
	<b>Grand Total</b>	<b>2,73,950.79</b>	<b>2,70,434.71</b>	<b>98.7%</b>

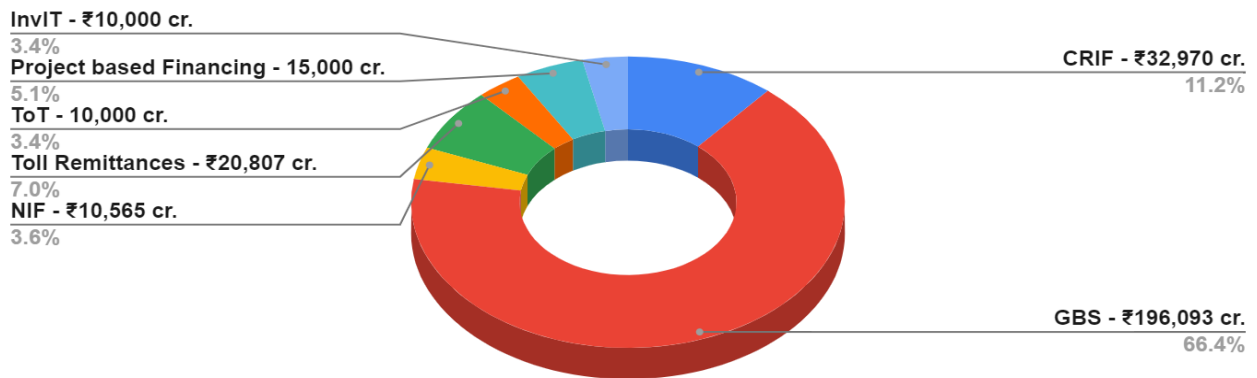
9. Net RE for the financial year 2022-23 for MoRTH was Rs. 217,026.62 crores which has been increased to Rs. 270,434.71 crores in BE 2023-24, which is a major jump of about 25%. Next year target of construction has been kept as 12,500 km. A good portion of this shall be spent for development of greenfield expressway/ access controlled NHs corridors, 4-lane roads including the roads under Tribal Sub Plan and in North Eastern Region States. As such, the entire Budget of the Ministry shall be well utilised and absorbed as there are increased no. of projects which will be in progress as compared to the previous years and higher target of achievement.

10. The Committee notes that about 99 percent of the projected demand of the Ministry has been met in BE 2023-24. Enhanced focus on transportation infrastructure, as evinced by the increase in the allocation to the Ministry, will have a multiplier effect on the economy. The Ministry should chalk out a detailed month-by-month plan to ensure optimal utilisation of the allocated funds. It may make efforts to identify and bridge gaps in connectivity to hinterland regions as well as economic and tourist hubs.

11. The Ministry has received more than 90 percent of its projected requirement for most heads in BE 2023-24. However, several heads critical to the good health of the National Highways network in the country have received much less than the projected demand. These *inter alia* include 'Road Transport' (73%) and 'Maintenance of NHs including Swachhta Action Plan' (74%). The Committee desires to know the reasons for the shortfall in allocations under these heads, vis-a-vis demands. The Ministry may inform how it plans to tackle the shortfall under these important heads. The Committee recommends that the Ministry may devise an effective quarterly plan to ensure that the allocated amounts under these heads are optimally utilised. This would permit the Ministry to seek additional funds under these heads in Revised Estimates and in the next financial year.

### MoRTH - Source of Funds (BE 2023-24)

Total Budgetary Outlay: ₹270,435 crores Total with Project based financing and InvIT: ₹295,435 crores





## MoRTH - Source of Funds (RE 2022-23)

Total Budgetary Outlay: ₹217,027 crores Total with Project based financing and InvIT: ₹242,027 crores

InvIT - ₹10,000 cr.

4.1%

Project based Financing - ₹15,000 cr.

6.2%

ToT - ₹10,000 cr.

4.1%

Toll Remittances - ₹18,006 cr.

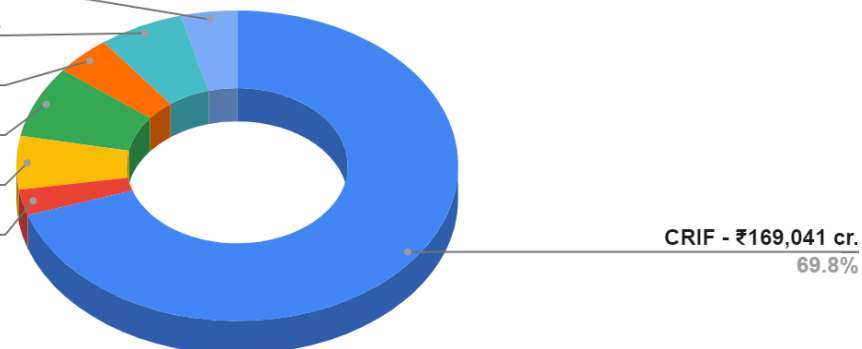
7.4%

NIF - ₹13,505 cr.

5.6%

GBS - ₹6,475 cr.

2.7%



## Focus Areas of the Ministry for the year 2023-24

12. The Ministry informed the Committee that its focus areas for the year 2023-24 are as follows:

(i) **Green Field Expressway and Access-Controlled Corridors :-**

- 27 Expressway and Access-Controlled Corridors are being developed by the Ministry with a length of 9,860 km at a total capital cost of about Rs. 4,08,000 Cr.
- Out of this 9,860 km, 6,235 km has been awarded till 31<sup>st</sup> Jan, 2023 at a total capital cost of Rs. 2.83 Cr. Out of this, 383 km has been awarded in the current financial year. Further, 1,667 km will be awarded in next two months.
- In addition, the remaining 1,958 km will be awarded in the next financial year (FY 2023-24)
- As of 31<sup>st</sup> Jan, 2023, 2,475 km out of the total 6,235 km awarded has been constructed. The entire length is expected to be completed by FY 2026-27
- 574 km will be dedicated to the nation in FY 2022-23 and ~1,350 km is planned to be dedicated to the nation in FY 2023-24

In addition, multiple sections of other Expressway and Access-controlled corridors are planned to be initiated for development by FY2023-24

(ii) **Multi-Modal Logistics Parks (MMLPs)**

MoRT&H has identified 35 locations for the development of Multi Modal Logistics Parks (MMLPs), in order to enhance logistics efficiency across the country. Out of these 35 MMLPs, 15 are prioritised for development under Phase-I of Bharatmala Pariyojana. Within these 15 MMLPs, the MMLP at Jogighopa is currently under development with a

total cost of Rs. 694 Crores and will become operational in FY 2023-24. Jetty work has been awarded separately and that work shall also be completed in 2023-24. 4 MMLPs are planned to be awarded in FY 2022-23. Out of these 4 MMLPs, the MMLP at Chennai has been awarded in November, 2022 for development at a total cost of Rs. 1,424 Crores and 3 MMLPs (Nagpur, Bengaluru and Indore) have been tendered. Furthermore, 5 MMLPs (Pune, Anantapur, Coimbatore, Hyderabad, Jammu) are planned for award in FY 2023-24.

**(iii) Parvatmala: National Ropeways Development Programme**

MoRT&H is implementing the Parvatmala Pariyojana for the development of ropeways to improve accessibility & convenience for passengers and to promote tourism in hilly regions. Along with hilly areas, ropeways are being developed as an alternate mode of transportation to ease traffic movement in congested urban areas e.g., Varanasi, Ujjain. 8 ropeway projects have been planned for award during FY 2022-23, out of which the ropeway project at Varanasi has been awarded and bids for 7 projects (Kedarnath, Hemkund Sahib, Ujjain, Gwalior Fort, Bijli Mahadev, Shivkhori and Doshi Hill) have been tendered. Furthermore, 20 additional ropeways are planned for award in FY 2023-24.

**13. The Committee notes the various focus areas of the Ministry for the year 2023-24. The Ministry has awarded 383 km of Expressway and Access-Controlled Corridors in the ongoing year. It will award 1667 km in the next 2 months and the remaining 1958 km in the next financial year. The Committee desires to be apprised of the slow pace of award in the ongoing financial year. The Ministry may inform how it plans to ensure that the remaining length is awarded by the next financial year.**

**14. The Committee observes that the MMLPs offer a significant boost to the regional and overall economy through enhanced connectivity and improved efficiency. The Ministry has prioritised 15 out of the 35 locations identified for development of MMLPs. The Committee recommends that the Ministry may come up with a clear targeted timeline for awarding the remaining 20 MMLPs.**

**15. The Committee feels that it is the responsibility of the Ministry to enable transportation access to the remotest areas of the country. The Ministry should work out a balance between the transportation needs of both remote areas and tourist spots while planning projects under the Parvatmala programme. The Committee recommends that the Ministry may lay due focus on enhancing connectivity through ropeways as last mile connectivity to remote areas and hamlets in hilly regions. This would help the local residents to contribute more to the local economy, besides improving their quality of life.**

## Expenditure under various heads in the ongoing Financial Year 2022-23

16. Details of the approved outlay for the Ministry for the year 2022-23 and the head-wise actual expenditure till 31<sup>st</sup> January, 2023 is given below. The Ministry has stated that no major saving / excess is being envisaged at this stage.

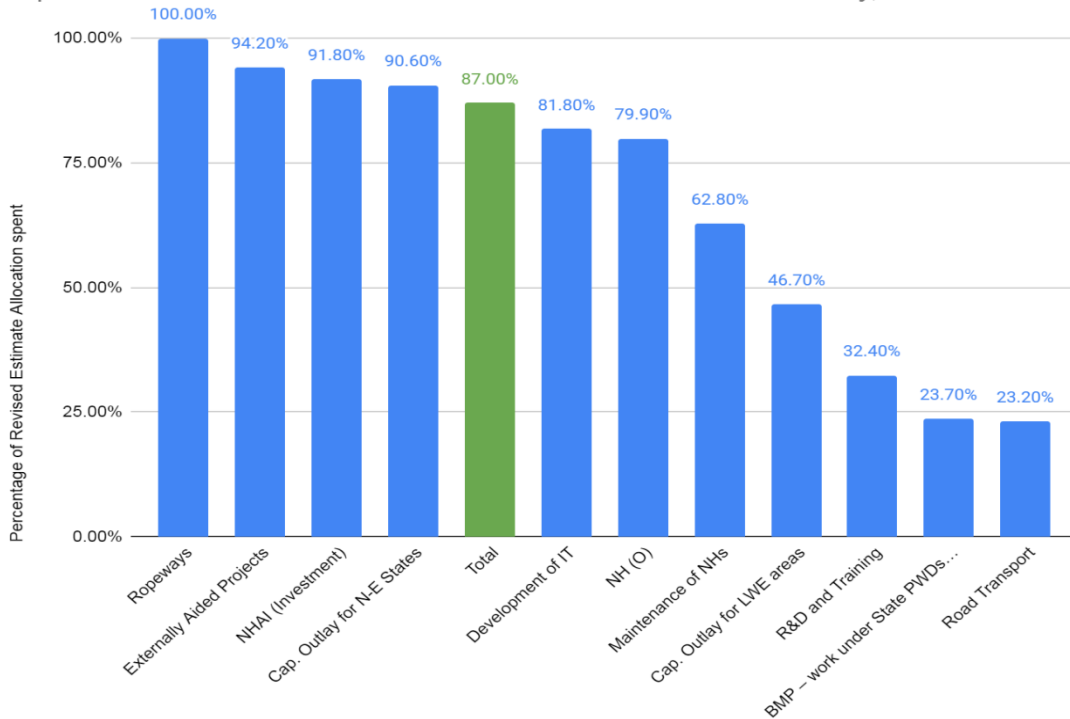
(Amount Rs. in crore)

Sr. No.	Scheme	BE 2022-23	RE 2022-23	Expenditure till 31.01.2023	Expenditure / R.E. %
	<b>Roads Wing (RW)</b>				
<b>1.</b>	<b>Externally Aided Projects</b>	<b>4,231.00</b>	<b>3,393.00</b>	<b>3,195.91</b>	<b>94.2%</b>
<b>2.</b>	<b>Other Schemes</b>	<b>33,596.00</b>	<b>40,562.90</b>	<b>32,414.08</b>	<b>79.9%</b>
a	NH (O)	33,594.00	40,560.40	32,412.50	79.9%
b	Travel Expenses, Machinery & Equipment	2.00	2.50	1.58	63.2%
<b>3.</b>	<b>PIARC</b>	<b>0.10</b>	<b>0.12</b>	<b>0.02</b>	<b>16.6%</b>
<b>4.</b>	<b>Development of IT</b>	<b>7.00</b>	<b>7.00</b>	<b>5.73</b>	<b>81.8%</b>
<b>5.</b>	<b>R&amp;D and Training (a+b)</b>	<b>79.00</b>	<b>78.98</b>	<b>25.59</b>	<b>32.4%</b>
a	R&D Planning Studies	9.00	9.00	1.31	14.5%
b	Training, Quality Assurance	60.00	49.98	6.61	13.2%
c	Professional Services	10.00	20.00	17.67	88.3%
<b>6.</b>	<b>Charged Expd.</b>	<b>5.00</b>	<b>5.00</b>	<b>0.37</b>	<b>7.4%</b>
<b>7.</b>	<b>PBFF (States)</b>	<b>5.62</b>	<b>0</b>	<b>0</b>	<b>-</b>
<b>8.</b>	<b>NHAI (Investment)</b>	<b>1,33,815.00</b>	<b>1,41,405.62</b>	<b>1,30,060.72</b>	<b>91.8%</b>
a	NHAI-CRIF	99,900.00	1,13,400.00	1,12,055.10	98.8%
b	NHAI-Toll Remittance, PBFF	13,915.00	18,005.62	18,005.62	100%
c	NHAI – Monetization of National Highways Fund	20,000.00	10,000.00	0	0%
<b>9.</b>	<b>Bharatmala Pariyojana – work under State PWDs/ NHIDCL/ BRO etc</b>	<b>200.00</b>	<b>200.00</b>	<b>47.49</b>	<b>23.7%</b>
<b>10.</b>	<b>Capital Outlay for N-E States</b>	<b>10,565.00</b>	<b>13,505.00</b>	<b>12237.58</b>	<b>90.6%</b>
a	SARDP-NE	4,840.00	4,860.00	4,250.09	87.4%
b	NH(O) for NE States	5,725.00	8,645.00	7,987.49	92.4%
<b>11.</b>	<b>Capital Outlay for development of road connectivity in LWE</b>	<b>4,595.00</b>	<b>6,427.96</b>	<b>3,000.57</b>	<b>46.7%</b>

Sr. No.	Scheme	BE 2022-23	RE 2022-23	Expenditure till 31.01.2023	Expenditure / R.E. %
	<b>affected areas and other tribal areas</b>				
a	LWE – Non TSP	50.00	32.00	26.62	83.2%
b	LWE-TSP	220.00	281.00	232.37	82.7%
c	Tribal Sub-Plan - NH works in NE States, Rajasthan, MP, Chhattisgarh, Jharkhand, etc.	3,575.00	3,532.00	2,741.58	77.6%
d	Bharatmala Pariyojana –work under State PWDs/NHIDCL/BRO in Tribal Area	750.00	2,582.96	0	0%
<b>12.</b>	<b>EI&amp;ISC for States /UTs from CRF</b>	<b>250.00</b>	<b>350.00</b>	<b>252.99</b>	<b>72.3%</b>
<b>13.</b>	<b>Development of Ropeways</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100%</b>
<b>14.</b>	<b>Maintenance of NHs including Swachhta Action Plan</b>	<b>2,580.00</b>	<b>2,580.00</b>	<b>1,620.05</b>	<b>62.8%</b>
	<b>Total for Road Wing</b>	<b>1,90,028.72</b>	<b>2,08,615.58</b>	<b>1,82,961.10</b>	<b>87.7%</b>
<b>15.</b>	<b>Road Transport</b>	<b>356.00</b>	<b>273.50</b>	<b>63.35</b>	<b>23.2%</b>
<b>(A)</b>	Total Central Sector Road	1,90,384.72	2,08,889.08	<b>1,83,024.45</b>	<b>87.6%</b>
<b>(B)</b>	Central Road Infrastructure Fund (CRIF) for State Roads for State and UTs	8,559.76	7,974.31	5,736.16	71.9%
<b>(C)</b>	Secretariat Expenditure	163.23	163.23	<b>127.31</b>	<b>78.0%</b>
	<b>Grand Total</b>	<b>1,99,107.71</b>	<b>2,17,026.62</b>	<b>1,88,887.92</b>	<b>87%</b>

17. The percentage of RE 2022-23 allocation spent by the Ministry on major schemes till 31.01.2023 is visually depicted below.

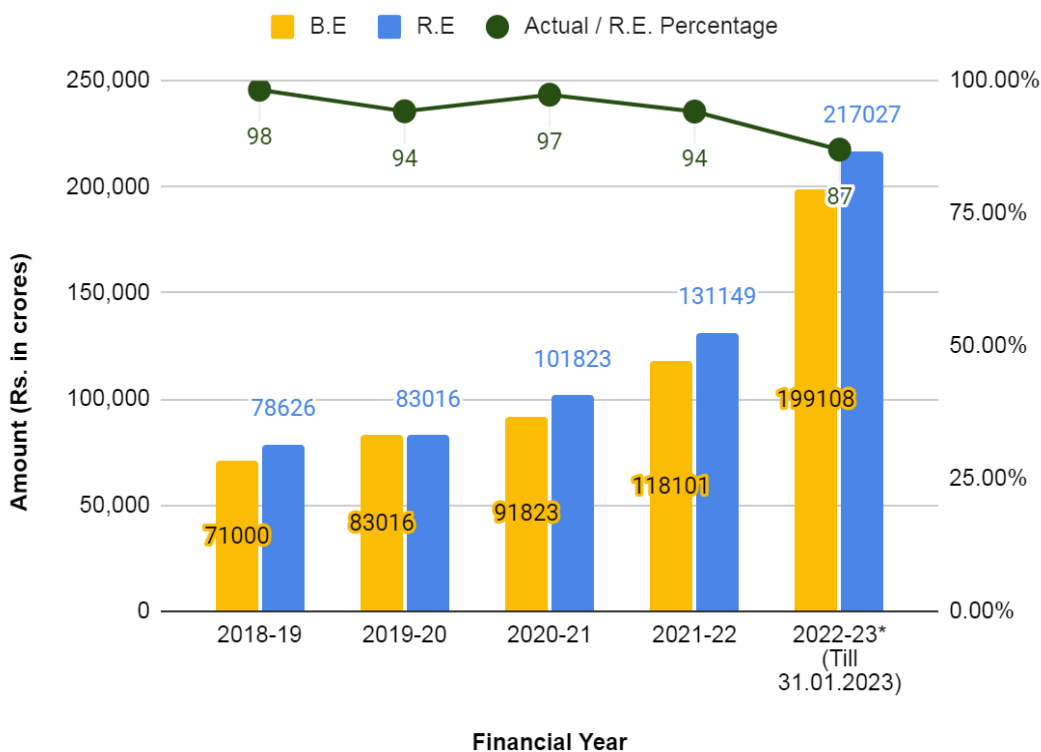
Expenditure vis-à-vis R.E. 2022-23 Allocation - As on 31st January, 2023



18. The Committee is pleased to note that the Ministry has spent 87 percent of its overall RE 2022-23 allocation. The Ministry received an increase of 9% in RE 2022-23, compared to BE 2022-23. This reflects good overall fund utilisation throughout the ongoing financial year. The Committee, however, notes that the utilisation rate for several important heads is slow. These heads are ‘R&D and Training’, ‘Capital Outlay for development of road connectivity in LWE affected areas and other tribal areas’, ‘Bharatmala Pariyojana – work under State PWDs/ NHIDCL/ BRO etc’, ‘Maintenance of NHs’ and ‘Road Transport’. Since only two months remain in the ongoing financial year, it is likely that there will be savings under these heads. The Committee desires to know the reasons behind underutilisation under these heads. The Ministry may also highlight its plans to tackle the reasons behind this underutilisation in FY 2023-24.

19. The budgetary allocation and expenditure trend of the Ministry for the Ministry is given below.

## MoRTH - Allocation vs Expenditure Trend over last 5 years



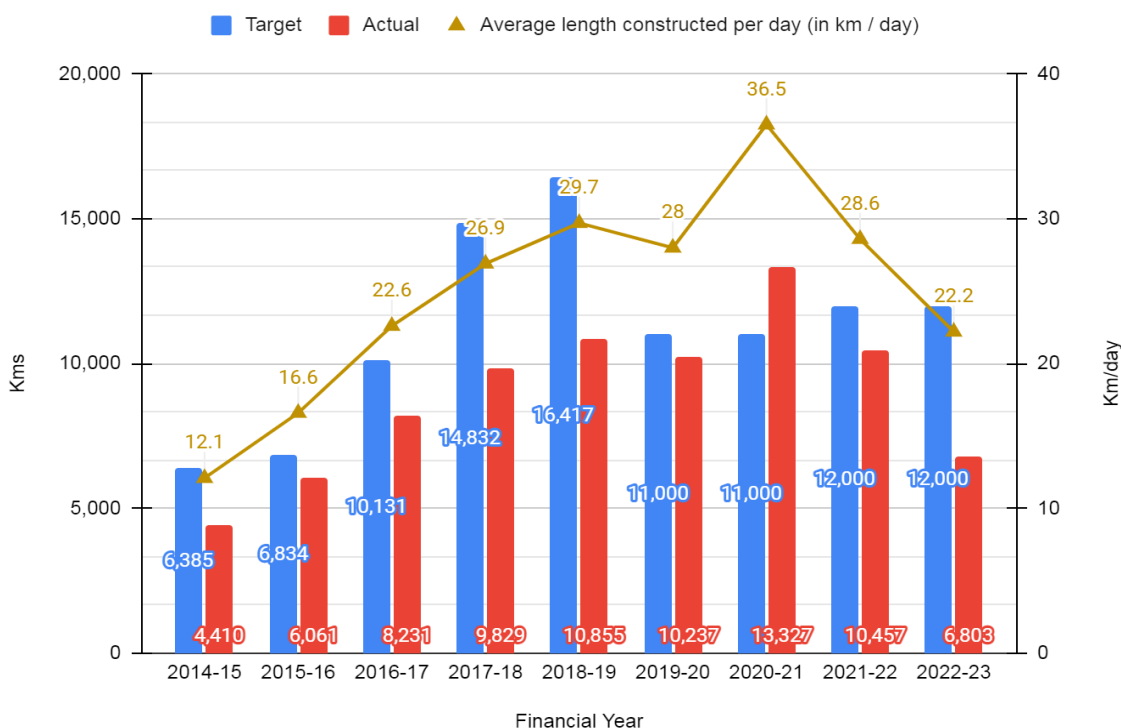
20. The Committee observes that over the last few years, the Ministry has consistently made satisfactory utilisation of the available funds. This is including the period wherein Coronavirus restrictions were in place. The Committee hopes that the Ministry may continue to make optimal use of the funds available to it in the coming years.

### Targets and Achievements of the Ministry

21. As against the target of awarding 12,000 km length of NHs projects and completing construction of about 12,000 km length of NHs during FY 2022-23, projects in about 6,883 km length of NHs have been awarded and construction completed in about 6,803 km length up to month ending January, 2023. There has been some shortfall in achieving award and construction targets during the first half of the financial year, due to intervening monsoon season, and the pace picks up in the second half of the financial year, however, no major shortfall is envisaged at this stage for achieving required physical targets during the year 2022-23 due to any reason.

22. Details of length of NHs constructed *vis-à-vis* the targets set are shown below:

### Target, Actual and Average length constructed per day (in km / day)



23. The Ministry continuously monitors the progress of construction and has observed that the pace of construction was generally slower during the first half of the financial year, due to intervening monsoon season, and picks up in the second half of the financial year. The Ministry has also assessed that this year above average rainfall during monsoon adversely impacted the construction progress. Total length of 4/6/8 lane NHs constructed during this financial year up to January, 2023 is 2,847 km, which is more than 2,399 km constructed during the previous financial year for the same period.

24. During 2023-24, the Ministry intends to award works in 12,000 km length of NHs and construct 12,500 km length of NHs. The targeted Outputs and Outcomes of the Ministry for FY 2023-24 are placed at **Annexure-I**.

25. The Committee notes that the Ministry has made 57% progress in the targeted length of 12,000 km for both award and construction till January, 2023. However, the Ministry has already spent 87% of its RE 2022-23 allocation. It seems likely that given the time as well as budgetary constraints, the Ministry would fall short of its award and completion targets. The Committee suggests that the Ministry may look into possible cost overruns in the projects given the physical progress of 57% compared to 87% expenditure.

26. The Committee recommends that the Ministry may make sincere efforts to reach as close as possible to its targets for 2022-23. The Ministry should also factor in rainfall forecasts while setting monthly/ quarterly targets for 2023-24. The Ministry may also analyse the reasons behind the slow awarding of road projects till January 2023, since awarding of projects is not impeded by monsoon.

27. The Committee would like to know the reasons for the decrease in targeted and actual construction of roads since FY 2018-19. Further, the Committee notes that the Ministry has not set any quantifiable target for reduction of road accident deaths under the Output Outcome Monitoring Framework for 2023-24. The Ministry may furnish specific reasons for this omission of quantifiable targets pertaining to road safety.

28. Details regarding the progress made so far by the Ministry towards the various outputs and outcomes targeted for the ongoing FY 2022-23 under the Output Outcome Monitoring Framework are placed at **Annexure-II**.

29. The Committee takes note of the progress made till Q3, 2022-23 under the Output Outcome Monitoring Framework. The Ministry has performed well under the major indicators such as development of NH road network in all schemes. However, progress under various crucial output and outcome indicators leaves much to desire. These indicators include length of roads having Incident Management System (providing Ambulances, Cranes, etc.), constructed length of coastal and port connectivity roads, number of NGO partnerships to create road safety awareness, etc. The Committee recommends that the Ministry may analyse the hurdles impeding the progress under these indicators. Further, the Ministry should implement suitable remedial measures to ensure achievement of targets under these indicators in the next financial year.

### **PM Gati Shakti National Master Plan**

30. Prime Minister launched PM Gati Shakti National Master Plan (NMP) for multimodal connectivity on October 13, 2021. It is a giant stride in India's ambitious goal of achieving US \$5 trillion economy. PM Gati Shakti focuses on India's citizens, industries, manufacturers, farmers, and villages among others. The PM Gati Shakti NMP is aimed at breaking departmental silos and bringing in more holistic and integrated planning and execution of projects with a view to addressing the issues of multi-modal connectivity and last-mile connectivity.

31. The Ministry is primarily responsible for development and maintenance of National Highways (NHs). All the NHs development projects of the Ministry are planned in line with PM Gati Shakti National Master Plan (NMP).

32. 62 NHs / road projects / Corridors in about 14,453 km for a total tentative cost of Rs. 6,78,505 Crores have been examined leveraging the PM Gati Shakti National Master Plan



(NMP) Portal and were consulted within the Network Planning Group (NPG) of PM Gati Shakti NMP headed by the Ministry of Commerce and Industry (MoCI).

33. Presently 1,510 NHs Projects in a length of 41,005 km of NHs with a total capital cost of Rs. 8,72,484 Crores have been taken up in the country.

34. MoRT&H informed that it will focus on improved connectivity with 861 nodes identified under PM Gati Shakti National Master Plan with an annual target of ~12,500 km road construction in FY 2023-24

35. The Ministry further stated that the Government's initiatives to on-board all State Governments and UTs on the PM Gati Shakti National Master Plan is envisaged to draw synergy and optimization of planning and implementation of road projects both at the Central and State levels.

36. Through her powerpoint presentation, the Secretary deposed that Multi-Modal Logistics Parks (MMLPs) have been planned for development under PM Gati Shakti National Master Plan on PPP mode. In this regard, Special Purpose Vehicles (SPVs) have been formed with Railways, Ports, Inland Waterways and State Industrial Corporations. Out of these 35 MMLPs, 15 MMLPs are prioritised for award by FY2024-25.

**37. The Committee welcomes the Ministry's efforts in examining 62 NHs/ road projects/ Corridors for a total tentative cost of Rs. 6,78,505/- crore leveraging the PM Gati Shakti National Master Plan (GSNMP) Portal. The Committee feels that the GSNMP would help tackle long-standing issues in the infrastructure sector in India, such as disjointed planning and lack of standardisation and synergy among the various Ministries and Departments. The Committee would like to know the present status of these 62 NHs in terms of progress percentage and expected date of completion. The Committee recommends that the remaining NHs out of the total 1,510 NHs projects may also be considered for examining through the PM GSNMP Portal. This will ensure smoother execution of the ongoing and upcoming road projects, in coordination with other Ministries/ Departments/ State Governments under the GSNMP.**

38. The Committee observes that the Ministry has not presented a clear roadmap regarding the completion of the projects it has taken up under GSNMP. The Committee desires to be apprised in this regard. The Committee may be apprised regarding the provisions, if any, under PM GSNMP to ease the process of land acquisition, environmental clearances etc.

39. The Committee notes that the Ministry is planning to develop 35 MMLPs on PPP mode, under the GSNMP. Out of these 35 MMLPs, 15 MMLPs are prioritised for award by F.Y. 2024-25. The Committee desires to know the details regarding the MMLPs identified, road length and project cost involved. The Committee opines that the DPRs for

these MMLPs should be formulated in consultation with all other participating Ministries including Railways and Ports, Shipping & Waterways and suitable amendments may be carried out in the proposals based on the feedback. The Committee further recommends that a robust monitoring framework may be put in place to ensure the timely completion of the development of MMLPs.

### National Monetisation Pipeline (NMP)

40. The National Monetisation Pipeline has been developed by NITI Aayog, in consultation with infrastructure line ministries, based on the mandate for 'Asset Monetisation' under Union Budget 2021-22. NMP estimates aggregate monetisation potential of Rs 6.0 lakh crores through core assets of the Central Government, over a four-year period, from FY 2022 to FY 2025.

41. The Ministry informed that the identification of assets under NMP is a continuous process. NHAI has identified more than 100 stretches for asset monetization so far.

42. Broad guiding Principles for identification of NH stretches for Asset Monetization **of completed** 4 lane or more under Public Funding, i.e. EPC/HAM/BOT Annuity which are

- Completed and with 1 year proven tolling history after COD/PCOD.
- Projects having assured annual remittance is around Rs.1 Cr./Km.

43. 30 stretches with an aggregate length of 2250 km have already been monetized through TOT and InvIT in addition by Securitization through SPV (DME).

44. The Ministry furnished the following reasons for non-monetisation of certain assets:

In some TOT bundles (2,6,8 & 10), H1 Bids were found less than their respective Reserve Price and TOT Bundle 4 was withdrawn for a decision not to disclose Reserve Price. However, most of the stretches included in these bundles were monetized/proposed to be monetized through InvIT mode. In addition, technical due diligence and traffic study is in progress in some cases, mode and priority for monetization will be finalized as per its viability in light of prevalent market conditions.

45. Total Rs.64,200 crore has been realised so far. [TOT : Rs. 26,365 crore (Rs.3,144 crore is expected to receive by end of FY23); InvIT – Rs.10,200 crore; and Securitization through SPV (DME)- Rs.27,637 crore]

46. The Ministry stated that the key benefits realised through such monetisation are as under

- The Asset Recycling corpus generated from the proceeds of such asset monetization can be used to construct, develop and maintain more Highways;

- Enhance Execution Capability, where government and private agencies can take up multiple marquee projects simultaneously;
- Access to patient capital (for 20-30 years), predictable and cheap capital in Highways Sector;
- It also facilitates to address development/strengthening of highways in unviable geographies;
- Asset Monetization facilitates an O&M framework requiring reduced involvement of NHAI in projects post construction completion in addition an efficient O&M through private sector;
- It creates new business opportunities for the following:
  - a) A new vertical of developers who specialize in O&M of highways;
  - b) Category of Investors, which is averse to taking construction risks but is adequately equipped for making long term investments; and
  - c) Retail domestic savings and corpus of special institutions (such as mutual funds, PFRDA etc.) to be invested in infrastructure sector through InvIT.

47. The Ministry informed the Committee of the following challenges in Monetization of such assets (National Highways):

- Realizing Adequate Value from the Assets
  - a) Calculation of IECV & Standardization of assumptions
  - b) Clarity about Framework for Negotiation with for H1 Bidder
- Regulatory Challenges-more stability of regulatory environment;
- Enlarging the Bidders participation;
- Operational issues and Dispute Resolution Mechanism & Legal framework;
- State Government Cooperation in State Support Agreement to build confidence amongst bidders.

48. The Ministry is targeting to realise about Rs. 35,000 crores in FY 2022-23 out of which Rs. 14,268 crores has been realised till date. The Ministry submitted the following details regards its asset monetization plan for FY 2022-23:

Asset Monetization	FY 22-23 Target as per proposed RE 2022-23	Achievement till January, 2023	Remarks
<b>ToT</b>	10,000	7,518	<b>TOT Bundle 9 of ~Rs. 3,100 cr.</b> has been awarded

			In addition, <b>TOT Bundle 11 &amp; 12</b> are under bidding with due date as 12.03.2023
<b>InvIT</b>	10,000	2,850	<b>Phase III</b> stretches of length ~ <b>635 km</b> planned with a likely amount of <b>Rs. 8,000 Cr.</b>
<b>Project based Financing</b>	15,000	3,900	Additional Rs. 11,100 Cr. planned to be raised through project-based financing (DME SPV)
<b>Total</b>	<b>35,000</b>	<b>14,268</b>	

49. The Committee opines that the National Monetisation Pipeline will play a pivotal role in fulfilling India's infrastructural aspirations in the near future. The Committee agrees with the various key benefits listed by the Ministry. The monetization of existing NH assets is crucial to fund the desired pace of improvement of the road network in the country. In this light, the Committee desires to know the year-wise targets of the Ministry under the NMP for FY 22-25.

50. The Committee recommends that the Ministry may seek feedback from the various stakeholders involved in the monetisation process. This will help the Ministry understand their concerns so that the same can be adequately addressed through suitable regulatory modifications. In the long term, this would help boost the participation of bidders and the increased competition would help the Ministry to realise adequate value from its assets.

51. The Committee notes that the Ministry has managed to achieve 41 percent of its desired monetisation target for the ongoing FY till January, 2023. The Ministry has to ramp up its efforts in this direction to try and raise targeted amounts. The Ministry may inform the Committee how it would address the shortfall, if any, that might be caused if the monetisation targets for 2022-23 are not met.

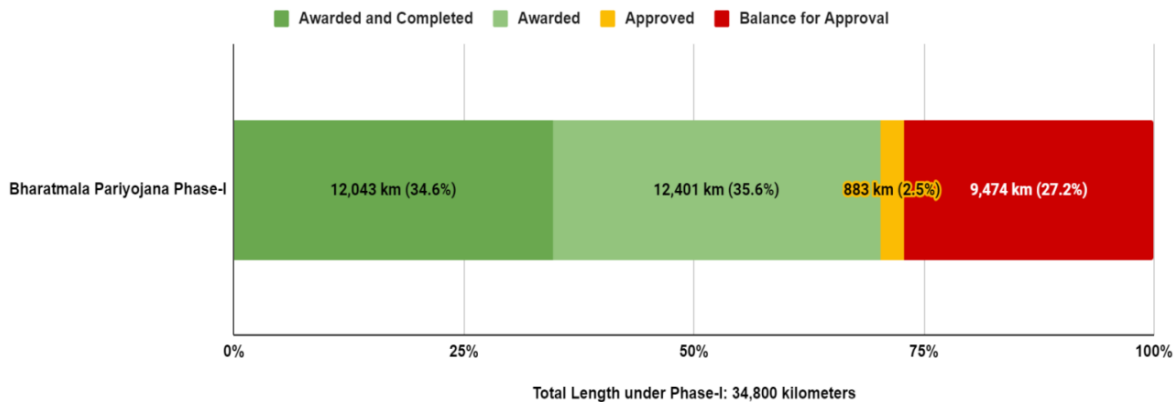
### **Bharatmala Pariyojana Phase-I**

52. The Cabinet Committee on Economic Affairs (CCEA) has approved Phase-I of Bharatmala Pariyojana (BMP) entailing development of 34,800 km of National Highway corridors with an investment of Rs 5,35,000 Cr. on 24<sup>th</sup> October 2017. Out of 34,800 km, 24,444 km of projects have been awarded and 12,043 km constructed till 31<sup>st</sup> January 2023. The remaining length shall be awarded by FY 2024 – 25. The detailed status is as follows:-

<b>Corridor Type</b>	<b>Awarded</b>	<b>Approved</b>	<b>Balance</b>	<b>Total</b>
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	Length (km)	Length (km)	for			
			Approval	Length (km)	Completed Length (km)	Completed Percent
Economic Corridors	7,581	371	4,051	12,002	3,230	26.9%
Inter-corridor Roads	2,815	76	1,065	3,956	1,150	29.1%
Feeder Roads	885	140	59	1,084	259	23.9%
National Corridor	1,777	0	0	1,777	922	51.9%
National Corridor Efficiency Program	824	0	0	824	520	63.1%
Peripheral Connectivity Rods	1,854	120	704	2,678	1,309	48.9%
Expressways	2,422	0	57	2,479	801	32.3%
Residual NHDP	6,284	176	3,539	10,000	3,850	38.5%
<b>Grand Total</b>	<b>24,444</b>	<b>883</b>	<b>9,474</b>	<b>34,800</b>	<b>12,043</b>	<b>34.6%</b>

Bharatmala Pariyojana Phase-I  
Status as on 31.01.2023



53. Bharatmala Pariyojana Phase-I was initiated with an ambitious target of completion by 2022. The Committee appreciates that the Ministry has made record progress in pace of highway construction in recent years. However, only about 35 percent of the BMP Phase-I has been completed till January, 2023. About 27 percent of the Phase-I is yet to be awarded. The Committee notes that the Ministry has stated that it would award most of the remaining length by FY 23-24. The Ministry may inform the Committee regarding the targeted timeline for physical completion of the BMP Phase-I. The Committee recommends that the Ministry may proactively tackle possible hurdles and avoid any further delays.

54. The Committee hopes that the Ministry would benefit from its experience of BMP Phase-I implementation in the planning and execution of the Phase-II. The Ministry may analyse the shortcomings in the estimations made in the targeted date of completion of BMP Phase-I and come up with a realistic timeline for award & construction of BMP Phase-II. The Committee desires to know about the planned initiation date for Bharatmala Pariyojana Phase-II.

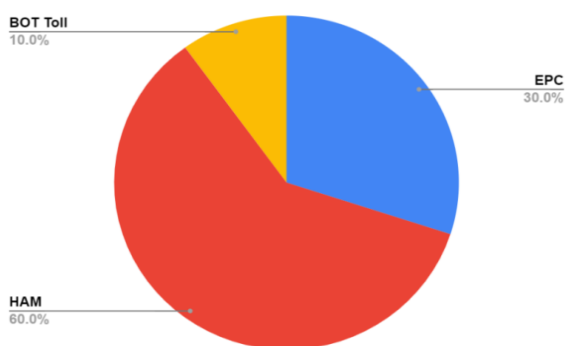
#### Mode of Implementation - HAM, EPC and BOT (Toll)

55. Projects under the Bharatmala Pariyojana (BMP) Phase-I are taken up under various modes of implementation. These are Engineering Procurement and Construction (EPC) Mode, Hybrid Annuity Mode (HAM) and Build Operate Transfer (Toll) [BOT (Toll)]. In its Annual Report (2022-23), the Ministry has presented the following information with regard to mode of implementation of Bharatmala Pariyojana Phase-I.

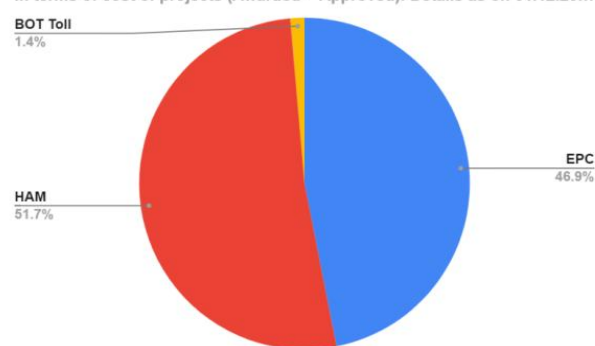
As on 31.12.2022		
Corridor type	Awarded + Approved	
	Length (in km)	Cost in Rs. crores
EPC	14,317	366,657
HAM	10,989	404,441
BOT Toll	408	10,747
<b>Total</b>	<b>25,713</b>	<b>781,845</b>

56. The envisaged share and present share of the various modes of implementation under BMP Phase-I, is depicted below.

Bharatmala Pariyojana: Envisaged Share of HAM, EPC and BOT Toll



Bharatmala Pariyojana: Actual Share of HAM, EPC and BOT Toll  
In terms of cost of projects (Awarded + Approved): Details as on 31.12.20...



57. The Ministry informed that the existing bottlenecks and future plans to promote Public Private Partnership in road infrastructure sector are as under:-

S. No.	Bottlenecks	Future Plans
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1	Huge claims and other issues in BOT(Toll) Projects.	NHAI is presently working on various modes of project implementation with efforts on adoption of mix as 60% HAM, 30% EPC and 10% BOT (Toll). Keeping in view past experience of huge claims in BOT (Toll) projects, NHAI is first making efforts to achieve 10% target of project implementation on BOT (Toll) mode with adequate safeguards in terms of proposed changes in MCA (Model Concession Agreement) of BOT (Toll) projects. The contribution of BOT (Toll) projects can be gradually increased based on the response of developers. NHAI has also made provisions of DRB and CCIE as part of dispute resolution process in the MCA for timely and quick disposal of disputes.
2	Grey areas in Model Concession Agreement with developers	NHAI is proposing certain changes in RFP/MCA of BOT (Toll) to handle grey areas in MCA observed from its past experience.
3	Unviability in Project Returns	The projects, which are viable on BOT (Toll) with or without viability gap funding, will only be attempted on BOT (Toll) mode. Other projects may continue to be implemented on other successful modes i.e. EPC or HAM. HAM projects also have 60% private contribution.

**58. The Committee is glad to note that the 52% share of HAM projects in terms of the cost of projects awarded under BMP Phase-I is close to the target of 60%. The Committee recommends that the Ministry may look into the reasons why the share of BOT (Toll) projects is much behind the 10% target. The Ministry may review the Model Concession Agreement for BOT (Toll) Projects and revise the same, if needed, after due consultation with the stakeholders.**

**59. The Committee notes that the Kerala Government had requested for the inclusion of the Thrippunithura bypass under the Bharatmala Project. The Ministry may apprise the Committee regarding the present status of the same.**

**Critical Transport Infrastructure Projects for first-mile and last-mile connectivity for ports, steel, fertilizers, etc.**

60. Out of the 100 critical transport infrastructure projects to be taken up on priority with an investment of Rs. 75,000 Cr., MoRT&H has planned to award 16 projects requested by M/o Steel (2), M/o Fertilizers (1) and MoPSW (13) in FY 2023-24. One project has been requested by both M/o Fertilizers and MoPSW and they have been considered under the same head, hence bringing the total number to 16. These 16 projects of total length ~397 km are planned to be developed at a cost of ~Rs. 9,643 Cr. 2 of these projects are planned for completion by FY 2025-



26 while the remaining 14 projects are planned for completion by FY 2026-27. The list of projects is placed at **Annexure-III**.

**61. The timely completion of the 16 road projects requested by the Ministries of Steel; Fertilizers; and Ports, Shipping & Waterways would have a strong multiplier effect on the overall economy. The Committee suggests that the Ministry may chalk out a detailed roadmap for the various stages of completion of these projects. The Ministry should ensure that the delays faced at any stage are tackled at the earliest, in close coordination with the concerned Ministries/ Departments.**

### **Connectivity to Tourist Destinations**

62. The Finance Minister announced in the Budget Speech 2023-24 that at least 50 tourist destinations will be selected wherein each destination would be developed as a complete package. Physical connectivity will be an important aspect in the development of these destinations.

**63. Stellar road connectivity can significantly boost the tourism prospects of any given region. The Committee desires to be apprised of the roadmap for improving highway connectivity to the 50 iconic tourist destinations mentioned in the Budget Speech. The Ministry may inform regarding the budgetary allocation made in this regard.**

64. One of the goals laid out in the 'Five Year Vision Plan (2019-24) for Infrastructure Sector' prepared by the Sectoral Group of Secretaries, is to strengthen connectivity to top 100 tourist destinations. The Ministry informed that out of total 100 tourist destinations, about 87 Nos. of tourist destinations are either on NH or located within 10 Km of NH.

**65. The Committee notes that the Ministry has not made any mention of its plans to improve NH connectivity to the 13 tourist destinations which are not within 10 km of any NHs. The Committee desires that all the 100 tourist destinations may be connected with the National Highways. The Ministry may inform regarding its plans in this regard.**

### **Assessment of Quality of NH works**

66. Ministry has awarded the work of engaging the services of 4 nos. Mobile Quality Control Vans (MQCV) equipped with using Non-Destructive Testing (NDT) equipment for conducting quality checks on a regular & proactive basis on NH projects being implemented by NHAI & State PWDs in the States of Gujarat, Karnataka, Odisha and Rajasthan on a pilot basis.

67. The Agreement for the same in all the 4 states were signed in the month of August, 2022. A pilot run of MQCV has been conducted in about 150 km of NHs works in the State of Gujarat as on date. All the 4 nos. of MQCVs in the above states are targeted to be commissioned by the end of February, 2023.



68. MQCV survey is being done for assessing the quality of NHs works on regular basis but not for assessing the maintenance requirements.

**69. The Committee desires to be apprised of the outcome of the pilot project of engaging the services of Mobile Quality Control Vans for conducting quality checks on a regular basis. The Committee would also like to know from the Ministry regarding the existing mechanism for conducting quality checks on NH projects.**

### **Increasing Land Acquisition Costs**

**70. The Committee feels that tapping the increase in the value of land adjacent to highways can help bear the increasing land acquisition costs of NH projects across the country. In light of this, the Committee desires to be apprised of the status of implementation of NHAI's Value Capture Finance policy.**

## **NATIONAL HIGHWAYS AUTHORITY OF INDIA**

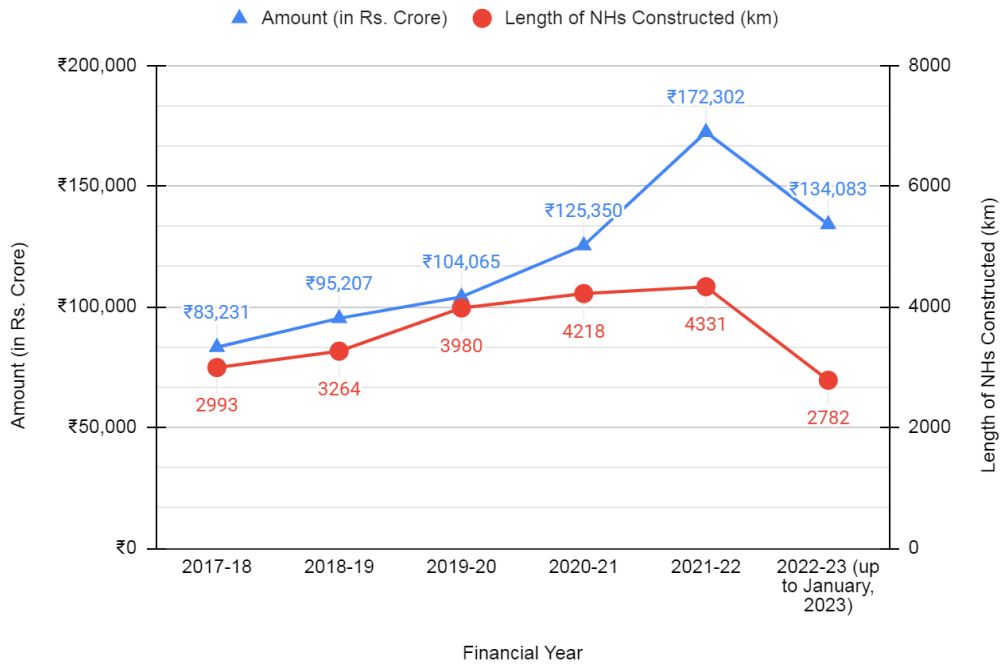
### **Physical and financial performance in the last 5 years**

71. Allocation under the head 'Investment in NHAI' has been increased from Rs. 1,41,605.62 crores in RE 2022-23 to Rs. 1,62,207 crores in BE 2023-24. The Ministry informed that the increase is to meet the expenditure under the ongoing Bharatmala Pariyojana Phase-I.

72. Expenditure made and length of National Highways constructed by NHAI during last 5 years and current year (up to January, 2023) are shown below:

## NHAI performance - Last five years

Length of NHs constructed vis-a-vis Amount spent by NHAI



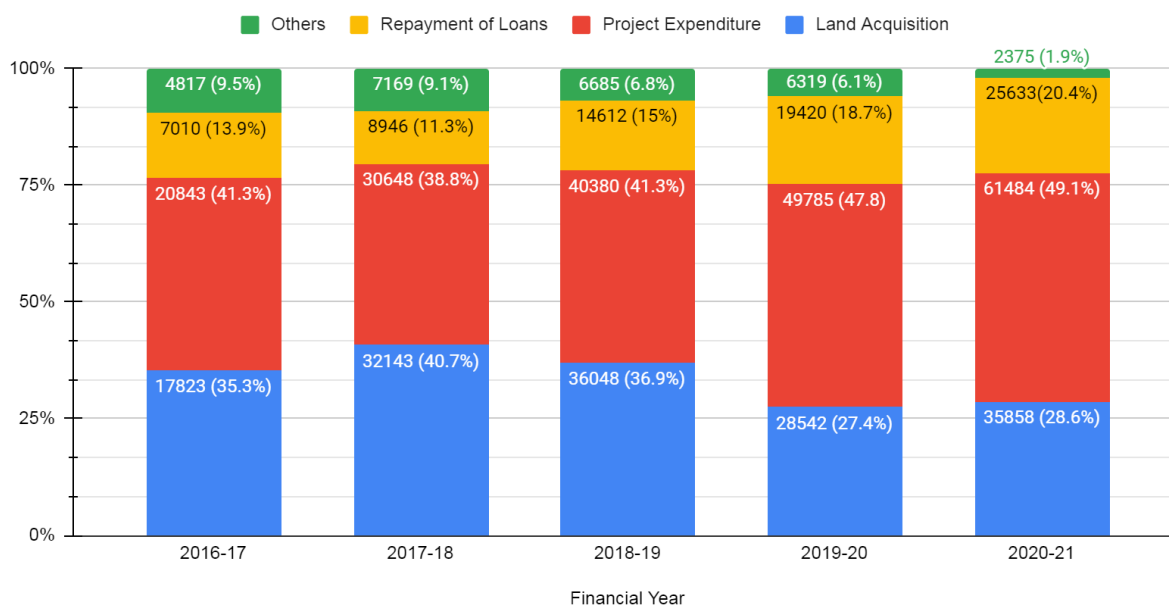
73. The Committee notes that NHAI has benefitted from the trend of increase in the budgetary allocation of the Ministry over the last few years. NHAI has consistently managed to increase the length of NHs it constructs each year. The physical progress in the ongoing FY 2022-23 till January, 2023 is lagging behind when compared to the previous years. The Committee recommends that NHAI may put in maximum efforts to increase the pace of construction of NHs in the remaining two months of FY 2022-23.

### Funding the Increasing Land Acquisition Costs

74. Annual Reports of NHAI present the following breakup of its expenditure from the year 2016-17 to 2020-21.

## Breakup of NHAI's Expenditure - 2016-17 to 2020-21

Amount Rs. in Crores (% of total expenditure)



75. The Ministry informed that the average rate of land acquisition has increased mainly because of applicability of RFCTLARR Act, 2013 w.e.f. 01.01.2015 which provided the benefit of 100% solatium & 12 % interest rate to land owners. In this connection, following steps have been taken in order to smooth LA process to reduce Land Acquisition cost:

- The draft Umbrella State Support Agreement (SSA) which include provision of Value Capture Finance (VCF) under which the State Governments are requested to fund the land acquisition cost for development NHs. The same has been sent to the State Govt. for approval before signing.

- MORTH & NHAI has already implemented the online Bhoomirashi portal which has expedited land acquisition and payment process.
- NHAI has started GIS based Land Acquisition Plan (LAP) in order to reduce error in land acquisition and for expedition of land acquisition process.

76. The Committee notes that the share of expenditure on land acquisition has gradually come down from 35.3% in 2016-17 to 28.6% in 2020-21. This would partly be because certain State Governments have agreed to share some percentage of land acquisition cost for NH projects. The Committee feels that innovative mechanisms such as Value Capture Financing are much needed to fund the increasing land acquisition prices in

**the country. NHAI needs the support of State Governments as well as the Value Capture Financing mechanism to ensure an increasing pace of expansion of the NH network in the country. The Committee recommends that NHAI may pursue more innovative ways of monetization to offset the increasing input costs. The Ministry may look into the feasibility of non-invasive advertising/ sponsoring of signages, way side amenities etc. The Ministry may also consider permitting retail investors to invest through InvITs in road sector projects.**

### **Rising Debt of NHAI**

77. On the issue of rising debt of NHAI, the Ministry informed that NHAI has been primarily assigned the mandate of implementation of Bharatmala Pariyojana during the year 2017. Prior to that NHAI was primarily executing projects under various phases of National Highways Development Projects (NHDP). In addition to the Government Budgetary Support, NHAI has been raising debt from the market as per approved IEBR (Internal and Extra Budgetary Resources) to meet its target fund requirement as per the limits approved in the Union Budget. This resulted in increase in NHAI debt. Nevertheless, NHAI raised funds judiciously as approved in Union Budget and with planned repayment options.

78. Considering increase in debt service obligations of NHAI, the Government has not mandated NHAI to raise funds through market borrowings under IEBR since FY 2022-23 and 2023-24 and has provided additional budgetary outlay to bridge the gap. Thus, reduction in debt servicing liability has already started and as per present situation there shall be no further increase in the debt liability of NHAI at least till 31<sup>st</sup> March, 2024.

79. NHAI is carrying out Asset Monetization programme for raising additional fund by monetizing its Road assets through TOT (Toll – Operate – Transfer) / InvIT (infrastructure Investment Trust) mode. NHAI is also carrying out securitization in the form of SPVs (Special Purpose Vehicles) to raise the funds to minimize the debt and also to reduce the outstanding debt. One such SPV has already been formed exclusively for Delhi Mumbai Expressway. This will eliminate debt dependency of NHAI.

80. The Ministry has come out with several innovative funding mechanisms to increase private investments after 2014. During 2007-14, private investments were confined to only BOT projects. Now, apart from BOT, HAM projects, we are also getting private investments through monetization of National Highways under TOT, InvIT (Infrastructure Investment Trust) and through SPVs (Special Purpose Vehicles).

81. Further additional steps have been taken to resolve apprehensions of the private sector, including but not limited to:

- **Resolving Stuck projects** – NHAI has implemented a Stuck Projects policy and is trying to resolve pending disputes through one-time settlement process. Through this process,

NHAI hopes to recycle money in the infrastructure space and promote investment in new projects. NHAI has also introduced a Termination Projects guideline to standardize the implementation of complex MCA (Model Concession Agreement) clauses.

- **Encouraging of new industry categories** – NHAI is encouraging new investor classes, like institutional investors, specialized O&M (Operation & Maintenance) contractors, specialized tolling agencies etc. in the roads sector to diversify the investor base and encourage traditional investors to focus on their core competencies.
- **Amendment in Model Concession Agreements** – NHAI has introduced various amendments in the MCAs for BOT (Toll), and Hybrid Annuity to encourage private participation and these amendments have received positive feedback from the market. Innovations such as Dispute Resolution Board, sharing of traffic risk etc. have been appreciated. Further, NHAI is now committing 90% of Construction Zone in BOT Toll projects at Appointed Date. This, when added with the removal of requirement of Capacity Augmentation by the Concessionaire, removes a lot of chances of disputes in the Contracts

82. Details of Budgetary allocation made to NHAI through Union Budget, IEBR (Internal and Extra Budgetary Resources) and Debt servicing are as follows:-

**Amount in Rs. Crore**

S. No	Year	Budgetary Allocation	InvIT	Project based financing	IEBR	Debt servicing done/due	Debt servicing / Total Allocation %
1.	2018-19	31,222			61,217	14,403	15.6%
2.	2019-20	27,675			74,987	19,355	18.9%
3.	2020-21	45,945		9,731	65,080	25,497	21.1%
4.	2021-22	73,043	7,350	14,006	65,150	40,191	25.2%
5.	2022-23	1,58,300 (RE)	10,000*	15,000*	797.58	32,443	17.6%
6.	2023-24	1,62,207			0.00	33,261	20.5%
7.	2024-25	1,87,000			-	31,636	16.9%
8.	2025-26	2,20,000			-	40,839	18.6%
9.	2026-27	2,50,000			-	42,109	16.8%
10.	2027-28	2,60,000			-	53,239	20.5%

\* target

# Budget data for 2024-25 onwards are based on projected expenditure.

**83. The Committee appreciates the step taken by the Government to not mandate NHAI to raise funds through market borrowings under IEBR since FY 2022-23. The projected debt servicing cost and its share in the projected allocation for NHAI in the coming years paint a viable future wherein NHAI would use around 20% of its total allocation for debt servicing. The Committee hopes that NHAI will be able to raise higher amounts through its asset monetisation programme as part of the National Monetisation Pipeline. This would help NHAI keep a check on its debt servicing costs.**

**84. The Committee recommends that the Ministry/NHAI may undertake effective measures to ensure that its stuck projects are completed at the earliest without further delays. This would permit NHAI to free up a part of its capital for new road projects and also to monetise the completed assets for further revenue generation.**

### **Vacancies in NHAI**

85. NHAI has a very lean & thin manpower structure. To keep NHAI as a lean and thin organisation, technical manpower is being engaged on deputation from other organisations and simultaneously, regular intake of officers is being undertaken in a phased manner at Deputy Manager level through GATE/Engineering Services Examination.

86. At present, the distribution of the posts sanctioned in NHAI is in the ratio of 50:30:20 for NHAI cadre, Deputationists from other Departments and CES (Roads) officers respectively. Out of the sanctioned posts, most of the posts under DR (Direct Recruitment) and promotion modes have been filled up. The process for recruitment of officers is a continuous process as the deputation quota officers keep rotating.

87. The present sanctioned strength of officers is sufficient to meet the present mandate. NHAI has taken several steps like cloud based Project Management Software Data Lake with Big Data Analytics platform to manage NHAI projects, computerised accounting system, creation of F&A Units at Regional Offices of NHAI, initiation of recruitment process for various posts, etc. to make efficient use of enhanced allocation.

88. Details regarding sanctioned strength, manpower in position and vacancies status are placed at **Annexure-IV**. NHAI has recruited about 969 officers during the last 3 years and has planned to recruit another 501 officers in 2023-24.

**89. NHAI shoulders a heavy responsibility of developing and maintaining the NH network of the country. The increasing allocation made to NHAI each year reflects the**

**importance of its mandate. The Committee recommends that NHAI may ensure that it is adequately staffed at all times to ensure optimal utilisation of its budgetary allocation.**

### **Sukhad Yatra app**

90. The year-wise number of complaints received on Sukhad Yatra App is provided as below:-

<b>Year</b>	<b>No. of Complaints received</b>
2018	333
2019	242
2020	60
2021	272
2022	585

91. As per existing process, the complaints received on Sukhad Yatra are forwarded to respective field offices for resolution. Upon resolution/rectification, the concerned field offices close the compliant at their end. Upon pendency, a reminder/ follow up emails are sent to concerned field offices.

92. Currently, the feature for verification of the action taken by concerned field offices is not available on the App. As per existing functionalities developed, no feedback/confirmation is being sought from the complainant after the issue is resolved by the concerned field office.

93. Notwithstanding above, there is a functionality in the App to rate the services of NHAI (1-star to 5-star ratings) and also provide comment.

94. Various initiatives have been undertaken to improve the user experience of Sukhad Yatra App as below:-

- The usage of Google Map APIs extended to pay-as-you-use basis in a month to allow unhindered usage by users
- Updated version of the App available in both iOS and Android platform with improved User Interface (UI)
- Additional new options under “Report an Issue” section such as Report an accident (automatically dials to NH Helpline 1033 on clicking the Option), Report non-availability/non-cleaning of Toilets at Toll Plaza, Others, etc. and Nearby Police Station under Nearby Section.
- Regular update of all NH fee plazas, toll rates etc.

95. Further, in FY 2022-23 in order to improve user experience, NHAI has signed an agreement with C-DAC (Centre for Development of Advanced Computing), under aegis of

MeitY (Ministry of Electronics and Information Technology) for holistic revamp of the existing App The revamped App will have new functionalities under broad heads as under:-

- Highway Information & Services
- Compliant/Grievance Redressal mechanism
- FASTag related services
- Feedback/Suggestions
- Others

96. Development of the revamped App is in advanced stage and is being proposed to be launched by March 2023.

**97. The Committee applauds the digital initiative of NHAI to bring all information about NHs for highway users. The Committee is at a loss to understand why only a few hundred users are using the App. The Ministry may give wider publicity to the App and encourage people to use it. Promotional billboards etc. may be put in place at toll plazas to make NH users aware of the app and its features. The Committee, however, notes that the public reception of the application has not been up to the mark. The application has been rated 2.1 stars and 2.5 stars out of a maximum 5 stars, on Google Play Store and Apple App Store respectively. This implies that the application is not functioning as per the expectations and requirements of the users. The Committee recommends that NHAI may work on the feedback received from the app users.**

**98. The Committee notes from the trend of year-wise complaints that the adoption of the Sukhad Yatra app has not picked up the much desired pace. The app can help NHAI gather valuable real-world data about its highways and the maintenance/safety requirements thereon. The Committee recommends that a mechanism may be devised to ensure that the complaints filed through the Sukhad Yatra app are actually resolved on ground. The App may seek confirmation from the complainant before marking the complaint as resolved. The Committee further recommends that NHAI may make budgetary provisions for promoting the App after its revamped version is launched this year.**

**99. The Committee recommends that NHAI may take immediate steps to ensure that the Sukhad Yatra app is available in Hindi as well as regional languages so as to enable more people to utilise its services. Various services like emergency services, police assistance, roadside assistance, road side amenities, restaurants/ hotels which are available along the specific stretch of the National Highway may be provided on the app. The Committee further recommends that the Ministry should give wider publicity to the app through media – both print and electronic – advertisements.**



**100. The Committee recommends that the Ministry may ensure that the progress made regarding updation of the Sukhad Yatra app and the resolution of complaints received on the application may be taken up with the local MPs in the District DISHA meetings.**

## **ROADS AND BRIDGES**

### **Works under Roads Wing**

101. The Committee noted an increase in BE 2023-24 allocation of Rs. 73,113.08 crores has been made under the head ‘Works under Roads Wing’, as compared to RE 2022-23 allocation of Rs. 47,238.86 crores. The Ministry informed that major increase is in the scheme of Bharatmala Pariyojana under Tribal Sub Plan from Rs.3,000 crore at RE stage 2022-23 to Rs.20,000 crore in proposed BE 2023-24. Further, significant enhancement has been proposed under National Highways (Original) scheme from Rs.40,696 crore at RE 2022-23 stage to Rs.49,510 crore in BE 2023-24.

### **Development of National Highways under NH(O)**

102. The development works on the National Highways not covered under any specific scheme / program are taken up through the Annual Plan of works during every financial year. Various types of development works on NHs, such as widening, strengthening of weak pavements, construction of missing links, construction/rehabilitation/reconstruction of bridges, culverts, bypasses and improvement of riding qualities, etc., are identified and included in the list of Annual Plan of National Highways (Original) [NH (O)] works well in advance of the beginning of a particular financial year in order of priority. These works are being implemented by National Highways Authority of India (NHAI), National Highways and Infrastructure Development Corporation (NHIDCL), Border Roads Organisation (BRO) and State Public Works Department (PWD).

103. Apart from this, cost of project preparation and pre-construction activities for non-NHDP projects proposed to be undertaken through proposed External Assistance is also met from NH (O).

104. The status of fund allocation under NH(O) is as under:-

(Amount in Rs. Crore)			
	<b>BE 2022-23</b>	<b>RE 2022-23 (Proposed)</b>	<b>BE 2023-24 (proposed)</b>
NH(O) – States/UTs	33,594.00	40,560.40	49,510.08
Additional NH(O) for North East (NE)States	5,725.00	8,645.00	13,981.20

Tribal Sub-Plan - NH works in NE States, Rajasthan, MP, Chhattisgarh, Jharkhand, etc.	3,575.00	3,314.00	3,095.00
<b>Total</b>	42,894.00	52,519.40	66,586.28

105. Achievements under NH (O) during 2022-23 up to December, 2022 is 2,372 km as against target of 7,000 km. Targets under NH(O) for 2023-24 is construction of 7,000 km length of highways.

106. The total Outlay recommended under NH(O) is **Rs. 66,586.28 crore** for BE 2023-24 (including provision of Rs.3,095.00 crore under Tribal Sub Plan for NH works in Rajasthan, MP, Chhattisgarh, Jharkhand, Andhra Madhya Pradesh and Maharashtra etc and additional NH(O) outlay of Rs.13,981.20 crore for NE states).

**107. The Committee notes that the BE 2023-24 allocation for National Highways (Original) has increased by 47% compared to BE 2022-23. The Committee may be apprised of the length of construction targeted to be undertaken in 2023-24 as compared to 2022-23. The Ministry may furnish the reasons behind the reduction under ‘Tribal Sub-Plan - NH works in NE States, Rajasthan, MP, Chhattisgarh, Jharkhand, etc.’ in RE 2022-23 and further in BE 2023-24.**

**108. The Committee notes that 2,372 km of NH has been constructed under NH(O) till December, 2022 as against a target of 7,000 km. The Committee is unable to understand why there is such low achievement in NH (O). The Ministry may inform the Committee about the reasons behind this slow progress and the way forward.**

### **Schemes of States and UTs financed from CRIF**

109. The Central Road Fund Act, 2000 was enacted to give statutory status to the existing Central Road Fund governed by the Resolution of Parliament passed in 1988, for development and maintenance of national highways and improvement of safety at railway crossings, and for these purposes to levy and collect by way of cess, a duty of excise and duty of customs on motor spirit commonly known as petrol, high speed diesel oil and for other matters connected therewith. The CRF Act, 2000 has been replaced by the Central Road and Infrastructure Fund, 2000 through Finance Act, 2018.

110. More sectors were included through amendment of 2018, viz. Ports, Shipyards, Inland Waterways, Airports, Railway track & Commercial Infrastructure/ Stations, Urban Public Transport, etc., in Transport Sector besides other Sectors (Energy, Water and Sanitation, Communication, Social and Commercial Infrastructure).

111. The CRIF Act, 2000 was further amended vide Finance Act, 2019. Now the fund is earmarked as per Section 7A of the amended Act by a Committee headed by the Hon'ble Finance Minister and there is no fixed share of apportionment now. For this a committee is constituted as per Gazette Notification No. S.O. 3226(E) dated 02.07.2018. The Act is administered by the Department of Economic Affairs as per the amendments to the Government of India (Allocation and Business) Rules, 1961 dated 26.07.2018.

112. Details of the allocations under CRIF scheme is as under.

Central Road Fund (CRF) for State Roads for State and UTs	BE 2022-23 (Rs. crore)	RE 2022-23 (Rs. Crore)	Expenditure (Rs. Crore) - till January, 2023	Projected Demand for BE 2023-24 (Rs. Crore)	BE 2023-24 Allocation (Rs. Crore)
	8,559.76	7,974.31	5,736.16	9,600	9,030

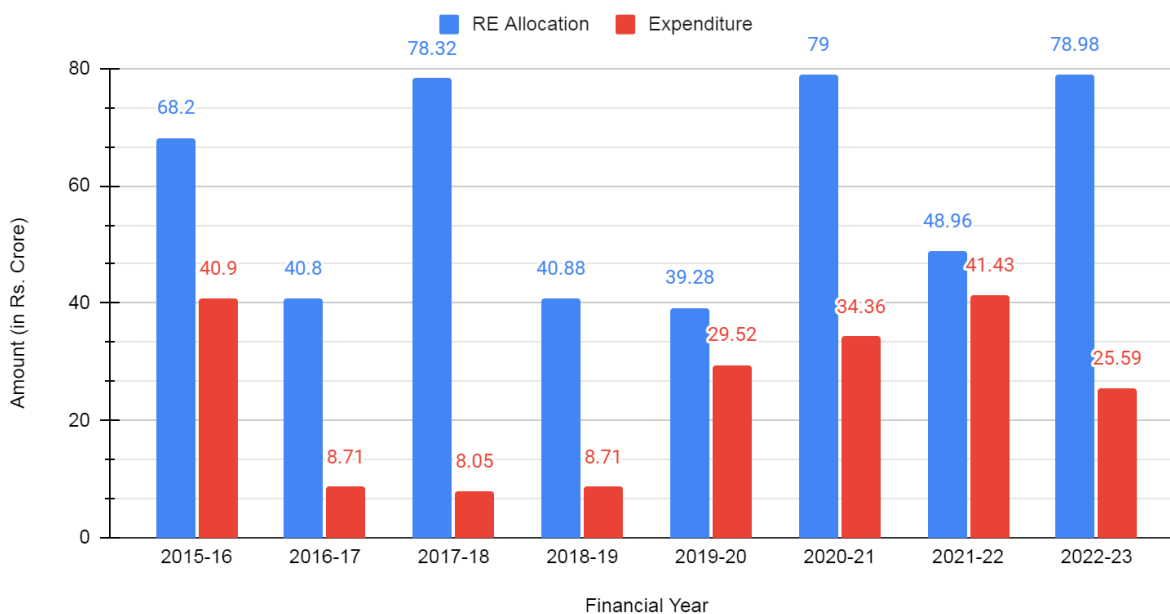
113. Development and maintenance of State Road projects as per the recommendation of the State Government are taken up under this scheme. Reduction under this head is on account of overall reduction under Revenue head.

**114. The Committee notes that the Ministry has spent about 72 percent of the RE 2022-23 allocation of Rs. 7,974 crores under CRIF for State Roads for States and UTs. The Committee recommends that the Ministry may proactively reach out to the State/UT Departments concerned to ensure that the available budgetary allocations are optimally utilised.**

#### **Development, Planning, Quality Assurance, Research and Training – Financed from CRIF**

115. The Ministry furnished the following details regarding the allocation and expenditure under budget head of 'Research and Development':

## Research and Development - R.E. Allocation vs Expenditure



116. Details of the research activities/ schemes in the financial year 2022-23 and proposed to be taken in subsequent financial year 2022-23 and 2023-24 is at **Annexure-V**.

**117. The Committee notes a consistent pattern of underutilisation of funds allocated for Research and Development. High quality research and development in the road infrastructure sector will go a long way in improving the efficacy and health of India's NH network. The Committee desires to be apprised of the reasons behind this underutilisation. The Committee recommends that the Ministry may award more R&D schemes and work towards making optimal utilisation of funds under this head in FY 2023-24.**

118. The Ministry in collaboration with JICA (Japan International Cooperation Agency) has undertaken preparation of following 5 guidelines for sustainable development of roads in hilly region to address the unique challenges faced in the construction of hill roads: -

- i. Planning of Hill Roads
- ii. Slope Protection and Embankment with Advanced Technology
- iii. Mountain Bridges
- iv. Tunnel on Arterial Road in Hill Area
- v. Operation and Maintenance

119. On the basis of the outcome of the above and other related research being sponsored by the Ministry, guidelines are being evolved to enhance the quality and performance durability of NH in different geological, terrain and climatic conditions across India.

120. The Committee takes cognizance of the Joshimath land subsidence. The Committee recommends that the Ministry may undertake detailed research into the environmental impact of the highway projects in the Himalayan region. Improving connectivity to the Himalayan region is crucial from a strategic as well as tourism point of view. However, the Ministry needs to ensure that the same is done without causing any damage to the ecologically fragile region.

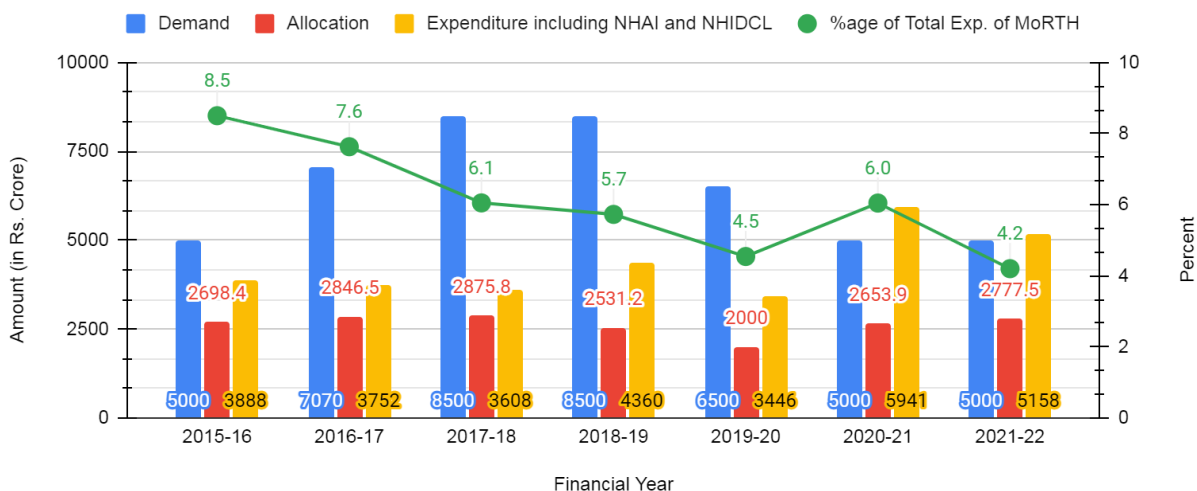
121. A Member of the Committee highlighted that the Ministry and NHAI work construct roads on the guidelines of Indian Road Congress (IRC) but no fund has been allocated to IRC.

122. The Indian Roads Congress plays a significant role in developing Standards, Specifications, Codes of Practices, Guidelines, and research-based state-of-the-art reports related to roads and bridges. However, despite its crucial role in research-led development in the road sector in the country, no fund is allocated to IRC. The Committee suggests that the Ministry may review the budgetary needs of the Indian Roads Congress and take steps to meet the same.

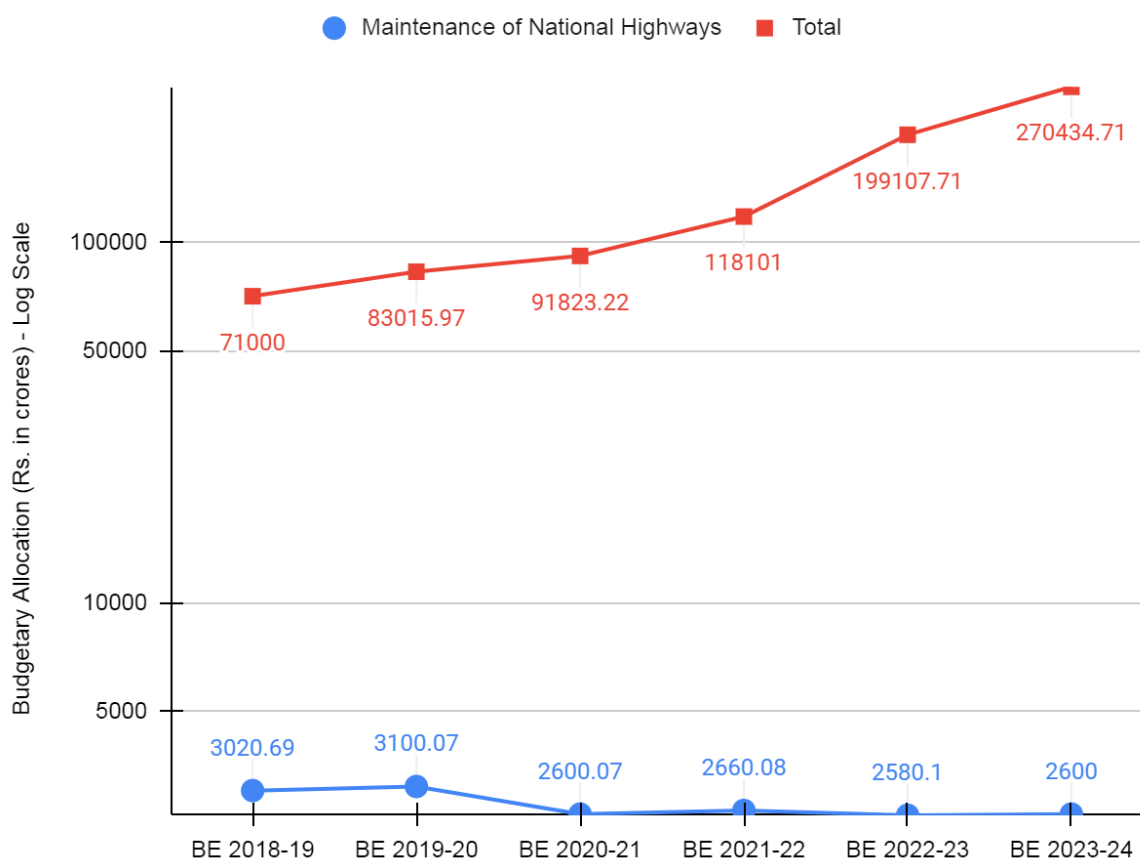
### Maintenance of National Highways

123. The Ministry furnished below details regarding the effective budgetary demand, allocation and expenditure for Maintenance and Repair (M&R) of National Highways (NHs) including that of NHAI and NHIDCL across the country for the last 7 years:-

Maintenance of National Highways - Allocation and Expenditure Pattern



## B.E. Allocation Trend: Overall Allocation vs Maintenance of National Highways



124. The Ministry added that actual allocations and expenditures under M&R since 2020-21 is in the range of Rs. 5000 to 6000 crores and as such there is no under allocation under this head.

125. Although the allocation under M&R head of the Ministry proposed for 2023-24 is Rs. 2,600 crore, however actual expenditure on M&R in last 2 years is about more than Rs. 5,000 crore. Year-wise details of actual expenditure under M&R and NHs length completed under PR / IRQP programme is as under.

Year	Allocation (in Rs. crores)	Actual Expenditure including expenditure incurred by NHA and NHIDCL (in Rs. crores)	Length completed under PR / IRQP (in km)
2015-16	2,698.4	3,888	840
2016-17	2,846.5	3,752	1,500
2017-18	2,875.8	3,608	3,357
2018-19	2,531.2	4,360	1,795

2019-20	2,000.0	3,446	1,160
2020-21	2,653.9	5,941	2,874
2021-22	2,777.5	5,158	1,709

126. At present there is no shortage in availability of funds for M&R of NHs. In addition, all remaining length of NHs, which are presently neither covered under ongoing works nor under the liability / responsibility of any Contractor / Concessionaire, are maintained as per their requirement to keep them in traffic worthy condition.

**127. The Committee notes that the net allocation under the head 'Maintenance of National Highways – financed from CRIF' has decreased from Rs. 2,701.47 crores in BE 2015-16 to Rs. 2,600 crores in BE 2023-24. The overall budgetary allocation of the Ministry has increased from about Rs. 45,750 crores to Rs. 2.7 lakh crores during this period. The Committee acknowledges that the actual expenditure including expenditure incurred by NHA and NHIDCL has increased from Rs. 3,888 crore in 2015-16 to Rs. 5,158 crore in 2021-22. There is also a clear pattern of under-allocation as compared to the Ministry's projected demand in the last 7 years. However, the Ministry has stated that there is no shortage in availability of funds for M&R of NHs.**

**128. High quality, proactive maintenance of NHs is key to enhancing the safety of passengers, besides reducing travel time. The Ministry invests lakhs of crores into developing the NH network across the country. It is imperative that sufficient budgetary allocation is made to ensure that the highways serve their desired purpose of high speed, safe road connectivity. The Ministry must ensure that the highways permit the vehicles to safely travel at the speeds envisaged at the time of their conceptualization. With low allocation for maintenance, the Ministry would be forced to follow a "worst first" approach wherein the worst roads are maintained first. This approach cannot ensure that the highways are maintained in the best possible shape. The Ministry instead needs to ensure that a proactive, preventative approach is followed.**

**129. The Committee finds it likely that delayed road maintenance would lead to premature need for complete relaying of the road. The Ministry may look into the comparative analysis of the cost of performing road maintenance at early stages of wear and tear versus after deterioration. A study may also be commissioned regarding the cost borne by the road users because of poorly maintained NHs, in terms of lost fuel, time, productivity and increased safety risk. In the past, NITI Aayog and this Committee have also recommended increased allocation for the maintenance of NHs. The Committee, therefore, recommends that MoRTH may request the Ministry of Finance to enhance the allocation under this head at the R.E. stage and in the coming years.**

130. The Committee notes that 10% of the CRIF fund allocated to the State Governments/ UTs for State roads is earmarked for road safety works. The Committee feels that ensuring proactive maintenance of roads has a direct positive impact on road safety. The Committee recommends that the M/o Finance may consider earmarking a certain percentage of the CRIF fund for road maintenance as well. This will ensure that a greater focus is laid on road maintenance across the country.

131. The Committee was informed that about 25,000 km lengths of NHs are neither the liability of any contractor nor under the Periodic Renewal/Improvement of Riding Quality Programme (PR/IRQP).

132. Details regarding amount of funds allocated and actual expenditure made during the last 5 years for the maintenance of NHs stretches, for which the maintenance is neither the liability of any contractor nor under the Periodic Renewal/Improvement of Riding Quality Programme (PR/IRQP), are as under:-

Amount in Rs. Crore		
Year	Allocation	Actual Expenditure
2017-18	1,412.5	2,213
2018-19	1,517.1	3,533
2019-20	1,374.0	2,932
2020-21	1,353.9	4,660
2021-22	2,053.5	4,490

133. The Committee notes that an amount of around Rs. 4,490 crore is being spent for the maintenance of about 25,000 km of NHs i.e. about 17 percent of India's present NH network. The Committee feels that the amount is inadequate considering the vast length of NH network covered under it. The actual expenditure has exceeded the allocation every year since 2017-18. The Committee recommends that the MoRTH may communicate with the Ministry of Finance to know the reasons behind the consistent under-allocation under this head.

134. The Committee may also be apprised of the mechanism in place to assess the requirement of maintenance on this 25,000 km of National Highways which is neither under the contractor's liability, nor under PR/IRQP. The Ministry may also inform about the present procedure to ensure maintenance of other important aspects besides road quality, such as adequate lighting, signage, barriers, lane demarcation etc.



135. An Asian Development Bank (ADB) publication<sup>1</sup> states that Performance Based Road Maintenance Contracts (PBCs) have been implemented in various developed, developing and transitional countries including US, Indonesia, Malaysia etc.. It noted that PBCs deliver good value for money and help save substantial amounts of reconstruction work. It also stated that as a rule of thumb, each dollar spent in time on routine maintenance can save \$3–\$5 on future necessary rehabilitation or reconstruction works

**136. The Committee feels that the Ministry should also focus on increasing private sector participation in the road maintenance sector. The Committee desires to know whether performance-based road maintenance contracts are being utilised in India for NH maintenance. The Committee recommends that the Ministry may come up with guidelines as to the performance-based indicators that must be delivered by the contractors to ensure high-quality maintenance of roads. The Ministry may issue clear quantifiable definitions of length of potholes, width of cracks on roads, etc. Stringent empirical checks may be enforced to verify the quality of the maintenance works. The Committee recommends that the Ministry may ensure sufficient budgetary allocation for this regard.**

137. Network Survey Vehicle (NSV) survey has been mandated to capture road conditions before start of work, before issue of provisional final completion certificate and thereafter at regular intervals of 6 months after completion of the work. As on date, NSV data for around 48,000 km length of NHs has been received at least once and efforts are being made to ensure that the periodicity of the NSV data is maintained. Further, NHAI has also initiated procurement process so to appoint NSV & Falling Weight Deflectometer (FWD) agencies across all States so as to bring uniformity and more independent monitoring of the road condition.

**138. The Committee notes that even though NSV survey has been mandated to capture road conditions every 6 months, NSV data has only been received for 48,000 km length of NHs so far. The Committee desires to know why the Ministry is not carrying out the mandated periodical NSV surveying across the entire NH network in the country. The Ministry may inform about the bottlenecks being faced in this regard and how the Ministry plans to address the same. The Committee would also like to know the targeted timeline by which the Ministry would ensure that the periodicity of the NSV data is being maintained for the entire NH network.**

**139. The Committee took cognisance of the issue of rutting, lack of demarcation and cleanliness on NH-52 from Ambala to Haryana border. The Committee recommends that necessary action may be taken to ensure that the highway is properly maintained and demarcated as per the specifications in place.**

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<sup>1</sup> ADB: Guide to Performance-Based Road Maintenance Contracts, April 2018  
<https://www.adb.org/documents/guide-performance-based-road-maintenance-contracts>

## Special Accelerated Road Development Program for North Eastern Areas

140. The Ministry has a dedicated Special Accelerated Road Development Programme for North-East (SARD-NE) and has spent Rs. 49,002 Cr. under the scheme till Dec'22. The scheme is being taken up in 2 parts.

141. Phase A of SARDP-NE including Arunachal Pradesh Package has identified a length of 5,998 km to be taken up. Out of the 5,998 km, 4,475 km has already been completed.

142. Initially it was targeted to complete SARDP-NE Phase-A & Arunachal Pradesh Package of SARDP-NE by March, 2014. However completion of projects/Scheme is delayed mainly due to following:

- (i) Land Acquisition
- (ii) Less working season
- (iii) Non-availability of local Agencies
- (iv) Scarcity of good quality quarry materials/Aggregates
- (v) Poor performance of contractors.

143. SARDP-NE Phase-A and Arunachal Pradesh Package is targeted to be completed by 2023-24. The enhanced allocation under the head is for mandatory 10% provision in allocation for NER Regions; it includes proposed outlay for SARDP-NE and also NH(O) works to be undertaken in North Eastern Region. The Ministry has also notified the NH-913 (Frontier Highways) in a length of 1748 km in the state of Arunachal Pradesh. DPR of this NH is under progress. Likely investment for development of this NH is about Rs. 27,000 crore. In addition, the Ministry has also identified six inter corridor routes for interconnecting the NH-13, Trans Arunachal Highways and NH 913 for facilitating the movement of traffic towards the border. DPR has been initiated.

**144. The Committee notes that allocation made under the head 'SARDP for North Eastern Areas financed' has increased from Rs. 13,505 crores at RE 2022-23 to Rs. 18,591 crores at BE 2023-24. The Committee hopes that this boost in budget allocation will aid in the completion of the various projects under SARDP for North Eastern Areas.**

**145. The Committee observes that the Ministry had the target to complete SARDP-NE Phase-A & Arunachal Pradesh Package of SARDP-NE by March, 2014. The Committee suggests that the Ministry must ensure that road projects are not awarded to contractors with poor track records. The contractors performing poorly should be promptly replaced to avoid further delays. Finally, the Committee recommends that the Ministry may ensure the completion of SARDP-NE Phase A and Arunachal Pradesh within the revised targeted timeline of FY 23-24.**

## **ROAD TRANSPORT AND SAFETY**

### **Research, Training, Studies and Other Road Safety Schemes**

146. The schemes which are funded under the Budget Head ‘Research, Training, Studies and other Road Safety Schemes’ include Setting up of Inspection & Certification (I&C) Centres for automated fitness check of vehicles, setting up of Institute of Driving Training & Research (IDTRs), setting up of Regional Driving Training Centres (RDTCs) in the States/UTs and Award to Good Samaritans.

147. The Ministry had been allocated Rs. 273.50 crores under the head ‘Research, Training, Studies and other Road Safety Schemes’ at RE 2022- 23, a drop from B.E. 2022-23 allocation of Rs. 356.00 crores. Out of this decreased RE 2022-23 allocation, Rs. 64.54 crores i.e. 23.2% has been utilised till January, 2023. For comparison, the overall expenditure of the Ministry during this same period is about 87% of the RE 2022-23 allocation.

148. The Ministry informed that the schemes of setting up of I&C, IDTRs, RDTCs and Award to Good Samaritans are implemented through the Transport Commissioners of the States/UTs. Due to lower demand from the Transport Commissioners for funds for these schemes and CoERS, IIT Madras, the Budget at RE has been reduced.

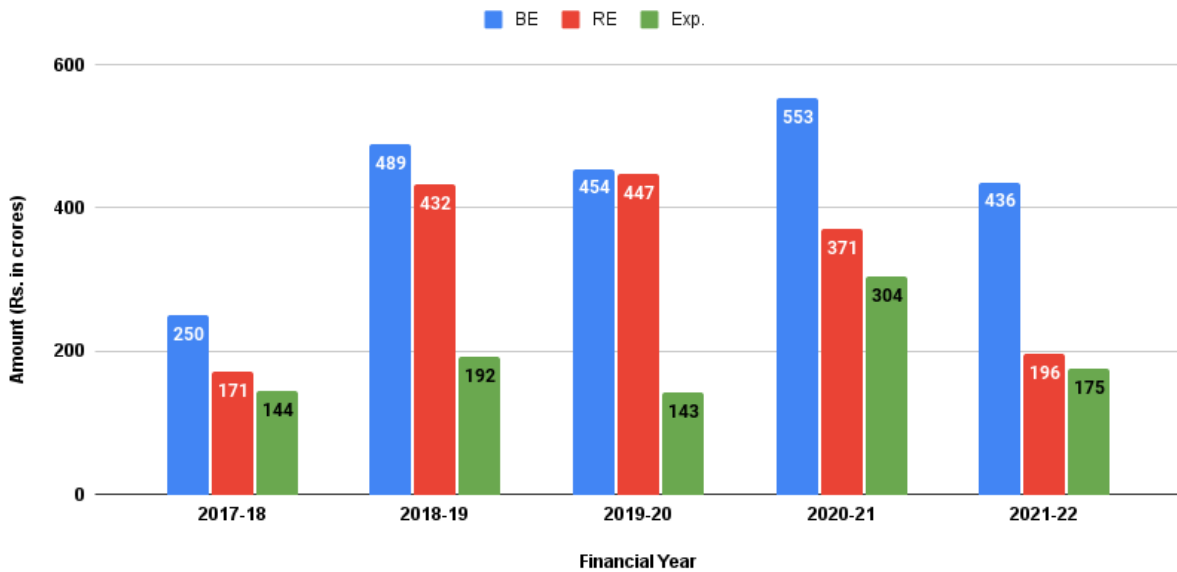
149. The Committee notes that the head ‘Research, Training and Studies’ has received a B.E. 2023-24 allocation of Rs. 330.00 crores, which is less than BE 2022-23 allocation of Rs. 356.00 crores. For comparison, the Ministry’s overall budgetary allocation has increased by about 35% as compared to B.E. 2022-23 allocation.

150. The Ministry stated that the BE of Rs. 330.00 crore under the Budget Head ‘Research, Training, Studies and other Road Safety Schemes’ for the FY 2023-24 has been worked out taking into account the present pace of implementation of ongoing projects under the schemes which are funded from the Budget Head ‘Research, Training, Studies and other Road Safety Schemes’.

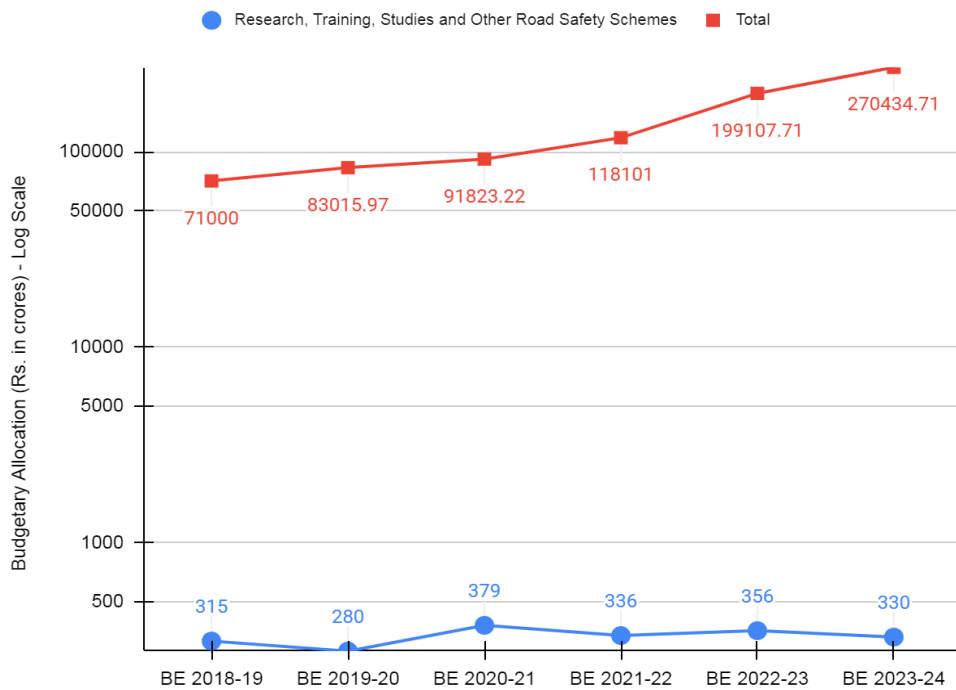
151. Details of BE allocation, RE allocation and actual expenditure under the Budget Head ‘Research, Training, Studies and other Road Safety Schemes’ for the last five years are shown below. The primary reasons for underutilisation of funds under this budget head during the given period were lower demand from the Transport Commissioners and slow down due to Covid -19 induced epidemic.

## Road Transport Head - B.E., R.E. and Expenditure - Last 5 Year Trend

Road Transport Head contains minor heads 'Research, Training, Studies and Other Road Safety Schemes' and 'Scheme on Women Safety'



## B.E. Allocation Trend: Overall Allocation vs 'Research, Training, Studies and Other Road Safety Schemes'



**152. The Committee notes that Budget Head ‘Research, Training, Studies and other Road Safety Schemes’ include several schemes which are fundamental to improving the standards of driver training and road safety in the country. There has been a clear trend of underutilisation of funds under this scheme in the last 5 years. This would be one of the reasons for which the allocation under this head has remained constant or decreased, while the overall allocation has increased manifolds in the recent past.**

**153. The Ministry has stated that the primary reason for underutilisation of funds under this budget head during the given period were lower demand from the Transport Commissioners and slow down due to Covid -19 induced epidemic. The Committee does not accept this justification. The overall expenditure of the Ministry over this same period has consistently been above 90 percent. Further, the expenditure under this head has been low even before the onset of the pandemic. Even in 2023, after a reduction in allocation at RE 2022-23, the Ministry has spent only 23.2% of the allocation under this head till January, 2023. The Committee recommends that the Ministry may work on the schemes under this head with a renewed zeal to ensure optimal utilisation of allocated funds. The Ministry must hold meetings with the State Government Departments concerned to understand their lack of interest in full utilisation of the funds available under this head. The feedback thus collected may be used to make the training and road safety schemes more effective.**

## **Road Safety**

### **• Steps taken by the Ministry**

154. The Committee enquired the Ministry about the measures taken to improve road safety on NHs across the country during the FY 2022-23. The Ministry furnished the following details:

- Road Safety on NHs is a continuous process and is taken up as integral part of new upgradation/widening projects. To further enhance road Safety on NHs, sanction ceiling of Rs 1,200 Crores for standalone Road Safety works during FY 2022-23 has been conveyed. 35 projects at cost of Rs 169.91 Crore has been sanctioned and another 98 projects at cost of Rs 1136.53 Cr are in advanced stage of sanction.
- To enhance Road Safety, Road Safety Officers have been appointed at Regional Offices of MoRTH and assigned following functions: -
  - i. Coordination and Liaison with State PWD for timely submission of Road Safety Estimates
  - ii. Regular update of Black Spot information on BS MIS portal and Spreadsheets for monitoring by the Ministry
  - iii. Taking advance action for Rectification of potential Black Spots
  - iv. Monitoring of Sanctions under Road Safety Annual Plan

- v. Monitoring award of sanctioned Road Safety works
- vi. Monitoring of Road safety audits at design, construction and operation stage
- vii. Monitoring of DPRs and COS proposals for permanent rectification of Black Spots
- viii. Undertaking site inspections for Road safety related proposals
- ix. Monitoring of already rectified Black spots
- x. All Road safety works assigned by the Ministry.

- Ministry has developed a Black Spot MIS portal where details of all blackspots, IDs, photographs, and rectification status and post rectification feedback shall be collected and monitored.
- Regular review meetings are done by senior officers of the Ministry with Regional/field officers of Ministry, NHAI and NHIDCL to formulate action plans for identification and rectification of Black Spots with a targeted Timeline.
- Ministry is encouraging engineers for certificate course in road safety audit for which MOUs are signed with IITs and other leading technical education/research institutions.

155. The Ministry and IRC have issued various codes and guidelines, from time to time, to implement various road safety measures so as to minimise accidents on National Highways. Also, Supreme Court Committee on Road Safety, during various meetings, has issued direction to various state governments for implementation of Road safety measures including Engineering measures.

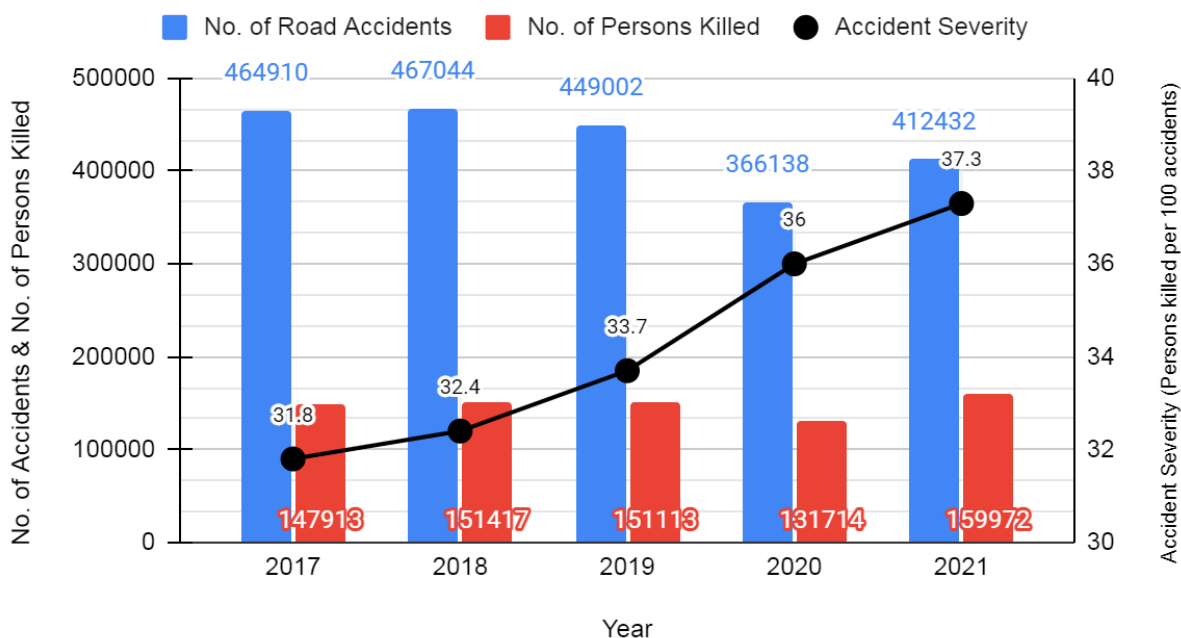
156. The Ministry of Road Transport & Highways is committed to reduce road accidents in the Country. The Ministry has formulated a multi-pronged strategy to address the issue of road safety based on Education, Engineering (both of roads and vehicles), Enforcement and Emergency Care in the country. Accordingly, various initiatives have been taken by the Ministry for Road Safety including reduction in accidents on NHs as detailed in **Annexure-VI**.

157. Transport Research Wing (TRW) has identified 5,803 black spots for the year 2016-18, out of which 5,352 are lying on NHs. 3,728 black spots on NHs have been permanently rectified as on 31.01.2023. Out of balance black spots on NHs, 1,234 are targeted to be rectified by September, 2023 and all black spots by December, 2024.

158. TRW has so far identified 1,381 black spots for the year 2017-19 for 16 States. Executing agencies of MoRTH have been directed to confirm the black spots lying on NHs within their jurisdiction and take temporary / permanent rectification measures.

159. The Ministry, in its Annual Report, has presented the following information with regard to road accidents in the last few years:

## No. of Road Accidents and No. of Persons Killed



160. The Committee appreciates the work that MoRTH/NHAI is doing to make NHs across the country better in terms of safety. The Committee, however, notes that India contributes to about 10% of all road accident deaths worldwide, with just 1% of the world's vehicles. A World Bank Report<sup>2</sup> estimates that Road crash and serious injury cost to be 7.5% of India's GDP. The poor households suffer a huge socio-economic burden of accident deaths due to loss of income. The Committee is also aware that the 'Right to Safe Travel' has been recognized to be the fundamental right of every citizen in a recent Patna High Court ruling. In light of this, the Committee recommends that the Ministry needs to formulate and execute a multi-pronged road safety strategy on a war-footing. Allocation for maintenance of NHs and road safety is crucial and is not increasing commensurately with the overall allocation of the Ministry. The budgetary allocation and expenditure for road maintenance and road safety schemes needs a major boost.

161. The Committee further suggests that the Ministry may review the progress made regarding the implementation of the National Road Safety Policy, 2010. The Ministry may make necessary modifications in the same and lay stress on technological measures that can be employed to lower road accidents in the country. The Ministry may also look into the reasons for the consistent increase in accident severity over the years.

<sup>2</sup> World Bank Report 'Traffic Crash Injuries and Disabilities: The Burden on Indian Society' <https://documents1.worldbank.org/curated/en/761181612392067411/pdf/Traffic-Crash-Injuries-and-Disabilities-The-Burden-on-Indian-Society.pdf>



- **UN Decade of Action for Road Safety 2021-30**

162. In September 2020, the UN General Assembly adopted resolution A/RES/74/299 “Improving global road safety”, proclaiming the Decade of Action for Road Safety 2021-2030. The resolution sets an ambitious target of preventing at least 50% of road traffic deaths and injuries by 2030.

**163. The Committee recommends that the Ministry may also target a quantifiable amount of reduction of road accident deaths in the ongoing decade. The Ministry may come up with a detailed year-by-year plan with measurable targets and ensure that the plan is scrupulously implemented. The Ministry may request the State Government Departments concerned to coordinate and assist in the matter to reduce road accident deaths on all roads in the country. The State Governments may be requested to identify and rectify black spots on roads other than National Highways. The Ministry/ NHAI may provide assistance to the relevant departments regarding the strategies to be followed for temporary and permanent rectification of such black spots on State roads. The Ministry/NHAI and State Government Departments, where concerned, should come up with proposals for construction of flyovers for rectification of black spots. The Ministry may also request State Governments to work on the maintenance and adequate lighting of State roads.**

- **Five Year Vision Plan (2019-24) for Infrastructure Sector**

164. Current status of the goals laid out in the Five Year Vision Plan (2019-24) for Infrastructure Sector, prepared by the Sectoral Group of Secretaries, which include strengthening public transport and shared mobility through regulatory reforms, strengthening connectivity to top 100 tourist destinations, etc. is placed at **Annexure-VII**. Some of the road safety related goals wherein the Ministry is presently lagging behind are given below.

Recommendation	Action Taken
Provision of Intelligent Traffic Systems on National Highways to strengthen Road safety- 15,000 km length of NHs covered with ITS / ATMS	ATMS operationalized in 300 km upto FY 20. ATMS implementation in 120 km TOT Project in Andhra Pradesh – Installation completed, IE inspection completed, Synchronization testing done, and system made operational. Two (02) bids has been received for ATMS Delhi - Agra NH 19 stretch (240Km.) within scheduled Bid due date i.e. 05/01/2022. PoC (Proof of Concept) conducted twice and technical evaluation is under process.



<p>State support programme to strengthen Road safety- 25% Reduction in Road Accident fatalities</p>	<p>Expenditure Finance Committee (EFC) has recommended the implementation of the Scheme for Rs. 7270 Crore (USD 1 Billion) with 50% of contribution from Government of India and the remaining 50% financed equally by the World Bank and Asian Development Bank through a loan to Government of India. Scheme is in process of approval of Cabinet.</p>
<p>Development of 60000 Km of safe and efficient National Highways Network in the country into a road network of international standards</p>	<p>4766 Kms. Developed in FY 22-23 as on 30.11.2022. 10237 km developed in FY 20. 13,327 km developed in FY 21. 10457 Km developed in FY 22. Total 38,787 km developed since FY 19-20.</p>

**165. The Committee appreciates that the Ministry has overall made good progress with regard to the goals laid out in the Five Year Vision Plan (2019-24) for Infrastructure Sector. The Committee, however, observes that the Ministry is lagging behind in the achievement of targets against some crucial recommendations pertaining to road safety. The Committee may be apprised regarding the action that the Ministry plans to take to make up for the slow progress in the operationalisation of ATMS and the development of 60,000 km of safe and efficient NH network.**

**166. The Committee notes that the Ministry has developed 38,787 km of ‘safe and efficient’ NH network in the country as against the 2019-24 target of 60,000 km. The Ministry may inform the Committee regarding the average number of accidents and road deaths happening on these safer NHs, as compared to the rest of the NH network.**

**167. The Committee notes that the Expenditure Finance Committee has recommended the implementation of the State Support Programme for Road Safety at a cost of USD 1 billion, with 50% contribution from Government of India and remaining 50% financed equally by the World Bank and the Asian Development Bank. From the World Bank’s latest Implementation Status & Results Report<sup>3</sup> of this programme, the Committee observes that the project targets to reduce 30% annual accident deaths in the participating States by 2028. The Committee feels that the Ministry should target a more ambitious 50% reduction till 2030, in tune with the UN resolution on road safety. The Committee recommends that the Ministry may provide similar support to all the remaining States with clearly defined targets of reduction.**

- **Road Accident Statistics**

<sup>3</sup> Implementation Status and Results Report - India State Support Program for Road Safety: World Bank (<https://documents1.worldbank.org/curated/en/099235010052225711/pdf/P17766801dc3780fd09758091bc070a8242.pdf>)

168. MoRTH's 'Road Accidents in India 2021' Report presents the following statistics regarding road accidents in India.

**Road Accidents and Fatalities on different categories of NH by Traffic rule violations (2020 - 2021)**

Category	2020		2021		% Change	
	Accidents	Fatalities	Accidents	Fatalities	Accidents	Fatalities
Over-speeding	85,616	32,873	95,785	40,450	11.9	23.0
% Share	74.2	69.0	74.4	72.2		
Drunken driving/consumption of alcohol & drug	3,416	1,862	2,949	1,352	-13.7	-27.4
% Share	3.0	3.9	2.3	2.4		
Driving on wrong side	6,050	3,099	5,568	2,823	-8.0	-8.9
% Share	5.2	6.5	4.3	5.0		
Jumping red light	919	476	555	222	-39.6	-53.4
% Share	0.8	1.0	0.4	0.4		
Use of mobile phone	2,697	1,389	1,997	1,040	-26.0	-25.1
% Share	2.3	2.9	1.6	1.9		
Others	16,753	7,971	21,971	10,120	31.1	27.0
% Share	14.5	16.7	17.1	18.1		
<b>All India</b>	<b>1,15,451</b>	<b>47,670</b>	<b>1,28,825</b>	<b>56,007</b>	<b>11.6</b>	<b>17.5</b>

\* Total does not include data from Himachal Pradesh

**Accidents, Persons killed and Injuries by Road Feature**

Road feature	Number of accidents			Persons killed			Persons injured		
	2020	2021	%age change	2020	2021	%age change	2020	2021	%age change
Straight road	2,37,943	2,78,218	16.9	85,032	1,02,623	20.7	2,26,651	2,59,402	14.4
Curved road	47,772	49,581	3.8	16,746	19,120	14.2	48,213	48,888	1.4
Bridge	12,836	12,709	-1.0	5,049	5,337	5.7	12,211	11,546	-5.4
Culvert	6,724	6,663	-0.9	2,762	2,960	7.2	6,017	6,029	0.2
Potholes	3,564	3,625	1.7	1,471	1,481	0.7	3,064	3,103	1.3
Steep grade	4,244	3,967	-6.5	1,604	1,635	1.9	3,977	3,398	-14.6
Ongoing road works/ Under construction	9,173	9,075	-1.1	3,894	4,014	3.1	8,005	7,539	-5.8
Others	43,882	48,594	10.7	15,157	16,802	10.9	40,141	44,543	11.0
<b>Total</b>	<b>3,66,138</b>	<b>4,12,432</b>	<b>12.6</b>	<b>1,31,714</b>	<b>1,53,972</b>	<b>16.9</b>	<b>3,48,279</b>	<b>3,84,448</b>	<b>10.4</b>

169. The Committee notes that 1,481 people lost their lives in 2021 in accidents on roads with potholes. This underscores the urgent need to maintain the roads in the country in a better shape. The Ministry may ensure an extensive audit of NH stretches wherein accidents have taken place to record the state of maintenance at the time of the accident. Suitable action may be taken against the contractor/ organisation responsible for NH maintenance in cases of negligence and poor maintenance.

170. As per ‘Road Accidents in India 2021’, a majority of road accidents fatalities are due to over-speeding, drunken driving and wrong-side driving. Such dangerous driving behaviour can be curtailed through better training of drivers, awareness campaigns and enforcement. The Committee recommends that the Ministry may strengthen its efforts in this direction.

Road user category wise Road Accident and Deaths on NH in 2021

Category	2020		2021		% Change	
	Accidents*	Death*	Accidents	Death	Accidents	Death
Pedestrians	13,882	7,753	17,113	9,462	23.3	22
Bicycles	2,468	1,232	3,009	1,667	21.9	35.3
Two wheelers	44,784	18,200	52,416	22,786	17	25.2
Auto Rickshaws	4,741	1,836	5,360	2,214	13.1	20.6
Cars,Taxis,Vans	23,589	8,081	25,431	9,191	7.8	13.7
Trucks/Lorries	12,752	5,213	12,075	5,008	-5.3	-3.9
Buses	3,578	1,367	3,738	1,397	4.5	2.2
Others	9,657	3,988	9,683	4,282	0.3	7.4
<b>Total</b>	<b>1,15,451</b>	<b>47,670</b>	<b>1,28,825</b>	<b>56,007</b>	<b>11.6</b>	<b>17.5</b>

\* Total does not include data from Himachal Pradesh

171. The Committee noted that about 17% victims of road accident fatalities were pedestrians, as per MoRTH’s ‘Road Accidents in India 2021’ Report. In this regard, the Ministry informed the Committee that following measures w.r.t. improvement in road engineering are being taken regularly, thereby improving the safety of pedestrians and preventing accidents on NHs with NHAI.

172. Pedestrian Markings are being done at median openings and junctions, Footpaths/Walkways constructed in Urban/inhabited areas, and Street lighting in the inhabited section of NHs.

173. Lighting/illumination provisions have been made at vulnerable locations/intersections of NH with SH/MDR/ODR/Village roads for improving road safety and avoiding accidents during the night in addition to locations mentioned in 4/6 laning IRC Manual.

174. Foot Over Bridges (FoB), Pedestrian underpasses (PUP) and Pedestrian Subways (PSW) are constructed to ensure a reduction in accidents involving pedestrians. Around 737 Pedestrian Underpass (PUP), 14 Pedestrian Subway (PSW), 231 Foot over Bridges (FoBs), 1629 Vehicular Underpasses with Footpath and approximately 3663 KM of Footpath along main carriageway/ Service Roads have been constructed on NHs by NHAI since Jan 2018.

175. The issue of pedestrian safety becomes highly vulnerable in absence of effective compliance/implementation of traffic rules from concerned authorities. However, necessary steps are being taken regularly by NHAI for improvement in road engineering w.r.t safety aspect for pedestrian as well as emergency/trauma care during the golden hour of accident.

176. There is no separate fund allocated since adequate pedestrian safety measures are made an essential part of the project scope.

177. A Member of the Committee shared his experience of traveling from Sohna to Alwar on the newly inaugurated Delhi-Mumbai Expressway. He highlighted that the Expressway is the benchmark of road construction in India. However, he pointed out that from Alwar, between a stretch of 20 to 60 kilometers on the corridor, several villagers were crossing the road on which vehicles ply at 120 km/hr.

**178. The Committee feels that the Ministry needs to undertake more efforts towards improving the prospects of pedestrian safety on National Highways. The vulnerable points may be properly barricaded to prevent the entry of pedestrians. The Committee recommends that the Ministry/NHAI may ensure that adequate provisions are made for vehicular underpasses/ flyovers/ foot over-bridges etc. to permit pedestrians and villagers living on either side of the highways to cross the road in a safe manner. Special focus may be laid on ensuring provisions for foot over-bridges near educational institutions such as schools and colleges. Such unsafe crossings pose a safety risk to both the pedestrian as well as the drivers and passengers. A detailed survey may be carried out to assess the requirements for underpasses/ over-bridge especially in the case of greenfield projects.**

179. The Ministry furnished the following details regarding the percentage of accidents involving two wheelers (as impacting vehicle) in the last 5 years:

Year	Percentage (%)
2017	33.93%
2018	35.18%
2019	37.23%
2020	43.42%
2021	44.60%

180. With regard to steps taken to improve the safety of two-wheeler drivers, the Ministry informed that in all high speed corridors of Expressways, plying of two wheelers have been

prohibited. Further, enforcement of safety rules pertaining to two-wheelers falls within the purview of the State Government.

181. There is no separate fund allocated since adequate all road safety measures are made an essential part of project scope itself.

**182. The Committee notes that two-wheelers make up for about 41% of all road accident fatalities in the year 2021. The Committee feels that road safety awareness campaigns promoting the usage of helmets would go a long way in saving the lives of two-wheeler drivers. The Ministry may consider levying penalties for two-wheelers plying on expressways using automated systems to improve effective enforcement. The Committee further recommends that the Ministry must ensure proper signage, safety grills on dividers/ boundaries and lighting of highways in coordination with the departments concerned. The Ministry may ensure that high mast lights are installed at all junctions on NHs across the country. A robust audit mechanism may be put in place to ensure that these road safety provisions are well-maintained across the NH network in the country.**

183. The Committee takes note of the following data based on the World Health Organisation's 'Global Status Report on Road Safety, 2018' of six countries on road fatalities:

<b>Country</b>	<b>Total deaths reported by country</b>	<b>Total deaths Estimated by WHO</b>	<b>Deaths/100k Estimated by WHO</b>
<b>India</b>	150,785	299,091	22.6
<b>United States of America</b>	35,092	39,888	12.4
<b>Canada</b>	1,858	2,118	5.8
<b>China</b>	58,022	256,180	18.2
<b>Australia</b>	1,296	1,351	5.6
<b>Russian Federation</b>	20,308	25,969	18.0

**184. The Committee notes that unlike the other countries listed in the table above, the total number of deaths estimated by WHO is significantly higher than the total deaths reported by India. The Committee feels that this could point to a significant underreporting of road accident deaths in the country. Accurate statistics are required to**

enable decisive policy prescriptions for road safety. The Committee desires that the Ministry may look into the methodology used by WHO to arrive on their estimated figures. Urgent remedial actions may be taken to plug the gaps that seem to exist in the collection of accident-related statistics.

- **Role of citizens**

185. The Ministry highlighted that citizens can report the lack of safety provisions on National Highways or any other issues related to road safety through both online and offline mediums.

**Online mode:** Citizens can submit reports/grievances via online mode through CPGRAMS (Centralised Public Grievance Redress and Monitoring System). It is an online platform available to the citizens 24x7 to lodge their grievances to the public authorities on any subject related to service delivery. The status of the grievance filed in CPGRAMS can be tracked with the unique registration ID provided at the time of registration of the complainant. CPGRAMS also provides appeal facility to the citizens if they are not satisfied with the resolution by the Grievance Officer. After closure of grievance if the complainant is not satisfied with the resolution, he/she can provide feedback. If the rating is 'Poor' the option to file an appeal is enabled. The status of the Appeal can also be tracked by the petitioner with the grievance registration number.

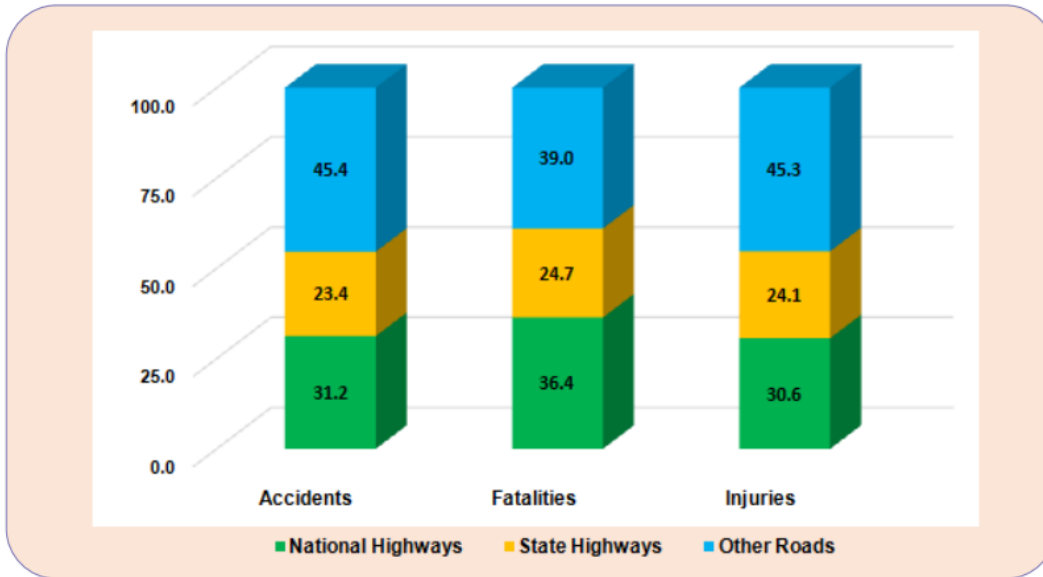
Further, Complaints are also being registered by citizens online through Sukhad Yatra mobile application, 1033 Helpline telephone no., "feedback/report an issue" option on NHAI website and via e-mails and social media platforms (like Instagram, Twitter etc.).

**Offline mode:** Reports can be submitted via offline mode at Ministry's official address. Further, Complaints can be registered offline through visiting field unit offices, contact/address details of which can be obtained from NHAI / Ministry website, nearby toll plazas or 1033 Helpline number.

186. The Committee feels that road safety awareness is a key component to reducing road accident deaths in India. The Ministry should launch extensive public awareness campaigns to educate the public about the importance of safe driving and road safety regulations. This will help create a culture of safe driving in India. NH users may also be made aware of the various available options to submit feedback regarding safety provisions, or lack thereof, on National Highways. Crowdsourcing of data regarding road safety lapses will help the Ministry to proactively prevent road accidents.

- **Role of State Governments**

Categories of Roads Accidents, Fatalities and Injuries during 2021 (in percent)



**187.** The Committee notes that about 64 percent of road accident fatalities take place on roads other than National Highways. This highlights the need for the Ministry to guide the State Government Departments concerned with improving the safety prospects of State Highways and other local roads.

- **Other road safety related issues**

188. The Central Government is allocating funds for the development of State roads under the Central Road and Infrastructure Fund (CRIF) based on the decision taken by the Committee headed by the Finance Minister as per Section 7A & Section 11 of the CRIF Act, 2000. Broad criteria for such allocation of funds includes that “Out of the fund thus allocated to the State Governments/ UTs, 10% of the fund shall be earmarked for road safety works”. However, many of the works taken up under CRIF Scheme also enhance Road Safety aspects and the Ministry is committed to continuing the same.

**189.** The Committee desires to know whether the reduced CRIF allocation to MoRTH at BE 2023-24 will impact the amount of funds earmarked for road safety works, as compared to FY 2022-23.

**190.** The Committee feels that the existing traffic offence penalties are not enough of a deterrent for people who drive/ ride in premium luxury vehicles. To curb incidents of overspeeding and other violations in such cases, the Committee recommends that the Ministry should implement a vehicle-cost/income based traffic penalty system. Such a system is already in place in countries such as Finland. The fines should be a factor of the



**vehicle cost or the income of the vehicle owner. Repeat offences should also be charged in a similar manner. The present penalty charges may be kept as minimum charges.**

**191. The Committee desires to know the reasons why no dedicated entry and exit lanes are provided on most National Highways in India. The Ministry may inform whether it has conducted any cost-benefit analysis of mandating entry and exit lanes for NHs across the country. The Ministry may also study the positive impact of the same in terms of road safety.**

**192. The Committee recommends that the Ministry may work in coordination with concerned local authorities to tackle the problem of stray animals trespassing National Highways, to mitigate accident risk. Authorities should erect barriers in stretches where this problem is faced frequently to prevent stray cattle and other animals from coming onto NHs. The Ministry should also explore other possible solutions to minimise such incidents across the entire NH network in the country. The Ministry may also tie up with local veterinary hospitals and animal rescue centers every hundred kilometers or so, to treat injured animals and to minimise the incidents of accidents involve stray animals and cattles.**

**193. The Committee took up the issue of frequent accidents at a flyover on NH-58 on the Gogasar bypass connecting Sujangarh city. The Committee recommends that suitable rectification measures may be taken to prevent accidents on the stretch in the future.**

**194. The Committee enquired about how the road safety standards followed in the construction of NHs in India compare with the best international standards. The Committee was informed that MoRTH and its executing agencies follow IRC standards for road safety during construction of National Highways & Expressways which is equivalent to international standards. However, no study has been undertaken by NHAI w.r.t comparison of IRC/MoRTH standards with international standards.**

**195. The Committee recommends that the Ministry may look into the areas in which India lags behind the highway networks of developed countries. The Committee suggests that the Ministry may conduct a detailed study regarding the lessons that can be learned from the road construction techniques and safety provisions implemented in the safest highway networks in the world.**

**196. The Committee recommends that the Ministry should ensure that regional officers, especially road safety officers and State Public Works Department (PWD) representatives, participate in district DISHA meetings. The DISHA meetings should cover the status of rectification of black spots and construction & maintenance of NHs in the district. This would enable coordination among the executive and the elected representatives to work in tandem toward improving the regional NH network.**



**197. The Committee notes that Indian Roads Congress develops Standards, Specifications, Codes of Practices, Guidelines, and research-based state-of-the-art reports related to roads and bridges. Such guidelines play a vital role in deciding the quality of road safety provisions being implemented on Indian highways from an engineering standpoint. The Committee therefore recommends that the Ministry may ensure that sufficient budgetary allocation is made to IRC in order to ensure that the guidelines are developed after thorough research.**

### **Driving Training Centres**

**198. The Ministry has been implementing a three tier scheme for setting up of model Institute of Driving Training and Research (IDTR), Regional Driver Training Center (RDTC) and Driver Training Center (DTC) in the States/UTs. Under the scheme, total 31 IDTRs, 10 RDTCs and 9 DTCs have been sanctioned till date. Out of these centres, 20 IDTRs are functional and rest centres are at different stage of implementation. State-wise break up of these projects is given at Annexure-VIII.**

**199. During the current FY 2022-23, three Regional Driving Training Centres (RDTCs) and nine Driving Training Centres (DTCs) have been sanctioned till date. Besides, in-principle approval for three more RDTCs have been granted and formal sanction order will be issued upon receiving land Hypothecation document and registration of society to oversee the construction and operation of the Centres. Some more proposals for setting up of DTC are in process for sanction in the Ministry.**

**200. The Ministry has a target to set up 10 model Institute of Driving Training & Research (IDTR), 25 Regional Driving Training Centres (RDTCs) and 50 Driving Training Centres (DTCs) in States/UTs during the 15<sup>th</sup> Finance Commission Period under its scheme.**

**201. The Committee desires to know the number of districts that have driver training facilities, be it DTCs, RDTCs or IDTRs. The Ministry may also furnish the number of districts in the country where no such facility is presently available. The Committee recommends that the Ministry may target opening driving training centres in all districts of the country since this basic facility must be accessible to all in order to improve their driving standards. The Ministry should come up with a timeline for this purpose and inform this Committee regarding the same.**

**202. The Committee is of the view that improving driver training standards in India will have a major role in reducing accidents and fatalities on the roads. The Committee recommends that the Ministry should develop a standardised driver training curriculum that covers all aspects of safe driving, including lane discipline. This curriculum should be updated regularly to reflect changes in road safety regulations and best practices.**

**203.** The Ministry may also assess the length of driver training programs in terms of adequacy to prepare drivers for the challenges they will face on the road. The length of these programs may be increased to ensure that drivers receive comprehensive training. The Ministry may put in strict checks to ensure that all driving training centres meet the specified standards before they are allowed to operate. This can include requirements for the qualifications of driving instructors and the quality of training facilities. The Committee recommends that the Ministry may mandate all drivers to undergo a comprehensive driver training program and pass a standardised driving test before they are allowed to obtain a driver's licence.

**204.** The Committee notes that the Government is planning to pilot a program to offer ratings for drivers, similar to credit ratings, wherein safe driving would be rewarded by a high score. The ratings can be used by insurers to offer lower premiums and by logistics companies while hiring drivers for commercial vehicles as well. The Committee appreciates this innovative program and recommends that the Ministry may introduce comprehensive driving training programmes wherein those who complete it get a high default rating. The incentive of lower insurance premium, increased job opportunities etc. could act as an impetus for drivers to get well-trained. Those with lower scores should be offered refresher courses.

**205.** The Committee further recommends that the Ministry may consider sponsoring the stay arrangements of underprivileged drivers, who must travel long distances from their homes to get trained at a driving training centre.

**206.** The Committee desires to know about the reasons why the Regional Driving Training Centers at Vidarbha and Amravati have not been operationalised despite completion. The Ministry may take urgent action to ensure their operationalisation at the earliest.

### **Speed limit on National Highways**

**207.** The Ministry is planning to undertake a research scheme on “Impact of Speed Limit on Road Capacity and Safety”. This will enable for framing the policy guidelines for interurban / urban roads which will include factors affecting speed limit, relationship between operating speed, Capacity and posted speed.

**208.** The Committee notes the observation of the United States Federal Highway Administration (FHWA)<sup>4</sup> that variable speed limits reduce up to 34% of crashes on freeways. The Committee recommends that the Ministry/NHAI may analyse the feasibility

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<sup>4</sup> FHWA: Variable Speed Limits

<https://safety.fhwa.dot.gov/provencountermeasures/variable-speed-limits.cfm>

**of variable speed limits on NHs in India on a pilot basis since speed limits should also factor in constantly varying factors such as traffic congestion and visibility.**

**209. The Committee notes that overspeeding accounts for a large number of deaths in road accidents. The Committee recommends that the Ministry may look into the size and specifications of speed limit signages. It is sometimes seen that the speed limit signs are easy to miss, or are partially covered by foliage and hoardings. It should be ensured that drivers do not have to actively look for speed limit signs in order to keep a track of the permitted speed limit. The Ministry may analyse the possible benefits of overhead signages for speed limits since this would offer better visibility to NH users in all lanes.**

### **Improvement in Signages**

210. The Committee sought to know about the mechanism in place to ensure that road safety provisions such as signboards, street lights, etc. are well-maintained.

211. The Ministry informed that adequate provisions have been made in agreements for accountability of Contractors towards lapses during both construction and post-construction/Defect Liability period. Third-Party Road Safety Audits are being carried out at construction / operation & maintenance stages of development of highways as per IRC guidelines and audit observations are being complied. NHAI has empanelled 75 teams of Road Safety Auditors (RSA) for carrying out 3<sup>rd</sup> party road safety audit of National Highways. With regard to Signboards, Ten year warranty for satisfactory field performance of Retro-reflectance and Seven year warranty of High intensity grade for retro-reflective sheeting is stipulated under Section 801.3.11 of MoRTH Specifications for Road and Bridge Works. The road sign inspection using Retro-reflectometer is provisioned twice a year. Also, Completion of Safety works for issuance of Provisional Completion Certificate has been made mandatory by NHAI.

**212. The Committee is of the view that proper installation/ maintenance of signages is a low-cost exercise that can pay huge dividends in terms of enhancing road safety. The Committee recommends that the Ministry may introduce mandatory provisions to conduct regular inspections of signages on highways to identify any damage or maintenance needs. These inspections should be done by trained professionals who can assess the condition of the signages and recommend repairs or replacements. High-quality materials should be used for signages on highways to ensure their durability and longevity. The materials used should be able to withstand weather conditions such as wind, rain, and extreme temperatures. NHAI may provide an option in its Sukhad Yatra app to permit NH users to report a damaged or missing sign.**

213. The current practice of carrying out third-party road safety audits at the construction, operation, and maintenance stages is a positive step. The Committee recommends that NHAI should ensure that these audits are conducted periodically on all

NHs and due focus is given to the inspection of road signages and other road safety provisions. Faded signages may be replaced at the earliest. The Committee desires to know what length of the NH network is inspected using a retro-reflectometer twice a year.

214. NHAI should launch public awareness campaigns to educate road users on the importance and interpretation of road signages. This will help improve compliance and reduce accidents due to improper usage of road signages. NHAI could explore the possibility of using large displays at toll plazas to educate users about the meaning of various signages. The Ministry may approach the Ministry of Education to make basic knowledge of road signs a part of school curriculum.

### **NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (NHIDCL)**

215. NHIDCL is a Public Sector Undertaking under the Ministry of Road Transport and Highways. It was incorporated on 18 July, 2014 with the objective to develop National Highways and other infrastructure at fast pace in the North East and Strategic areas of the country sharing International Borders.

216. In its Annual Reports, the Ministry has furnished the below breakup of the expenditure incurred by NHIDCL in the last 5 years.

(Amount in Rs. Crores)

<b>Year</b>	<b>Land Acquisition</b>	<b>Utility Shifting</b>	<b>Authority Engineer</b>	<b>Civil Works</b>	<b>Total</b>
2018	1093	150	87	4,144	5,474
2019	1,297	52	53	1,885	3,286
2020	2,353	167	121	5,020	7,661
2021	2,089	437	189	9,269	11,984
2022	2,826	252	254	12,969	16,301

217. The Committee appreciates that NHIDCL has shown a consistent increase in its expenditure since the last three years. The Committee notes that the share of funds being spent on land acquisition has decreased since 2020. The Ministry may inform the Committee regarding the factors that have permitted NHIDCL to bring down land acquisition costs in 2021 and 2022.

**218. The Committee further desires to know whether NHIDCL makes use of NHAI's technological solutions and pilot projects, in its road projects. The Committee recommends that the Ministry may ensure that NHIDCL also makes use of NHAI's Data Lake platform, Vendor Performance Evaluation System, Sukhad Yatra app etc. to enhance its output. The Committee further recommends that NHIDCL may also come up with rating of NH stretches under its purview. The ratings may be used to identify contractors with poor performance history.**

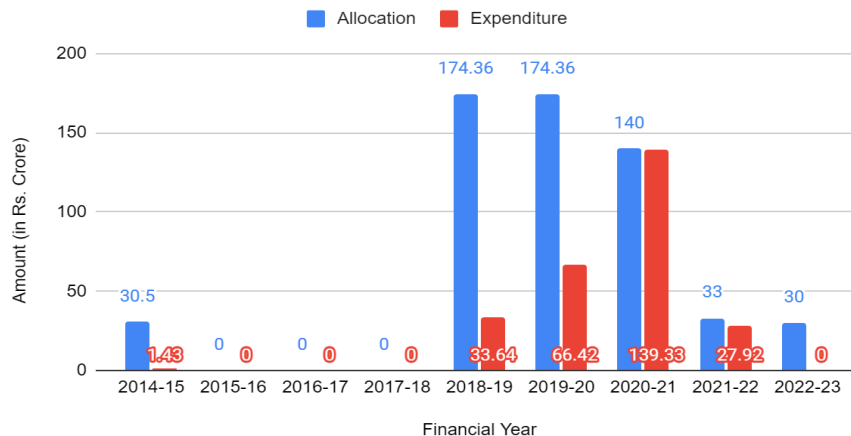
## **SCHEME ON WOMEN'S SAFETY ON PUBLIC ROAD TRANSPORT**

219. The Ministry has approved a scheme on 15th January, 2020 for implementation of "Development, Customization, Deployment and Management of State-wise vehicle tracking platform for Safety & Enforcement as per AIS-140 Specifications in States / UTs under Nirbhaya Framework" at total estimated cost of Rs. 463.90 Crores (including Central and State share, as per Nirbhaya Framework).

220. The proposed system envisages enhancing the safety of women and girl children by establishing Monitoring Centers across States/UTs, which shall track all the public service vehicles (PSV) that are fitted with location tracking device and emergency buttons for raising an alert in case of emergency. The Monitoring Centre will monitor the alerts and coordinate with State ERSS (emergency Response Support System) for responding to distress calls. The Ministry had earlier issued a notification dated 28th November, 2016, wherein VLT (Vehicle location tracking) device and emergency buttons were mandated to be fitted in all public service vehicles. Further, the responsibility of fitting VLT device and emergency buttons lies with the vehicle owner, and this scheme shall finance only the setting up of Monitoring Centre in each State/UT for the tracking of PSVs.

221. Year-wise details in respect of the funds allocated and released to the States under the 'Scheme on Women Safety on Public Road Transport' are shown below:

### Scheme on Women Safety on Public Road Transport



222. The Committee notes that for the last five years barring the year 2020-21, there has been a consistent pattern of under-utilisation of funds under the Scheme on Women Safety on Public Road Transport. The Ministry must take concrete steps to encourage better participation of State Governments under this scheme. The Ministry may invite feedback from States which show lack of interest in the scheme, regarding the reasons for the same.

223. The Committee desires to know whether the Ministry has put in place any mechanism under the scheme to check the efficacy of the vehicle tracking platform and the emergency button. The Committee recommends that the Ministry may allocate funds for creating awareness about the safety provisions in place for women on public transport. The Ministry may explore the possible usage of artificial intelligence to identify instances of mishaps on public transport based on route, vehicle speed etc.

224. In response to a query, the Ministry informed that there is no new innovative scheme being chalked out by MoRTH other than the existing scheme for Vehicle Tracking Platform.

225. The Committee feels that more needs to be done in order to improve the level of safety of women on public road transport. The Committee, therefore, recommends that the Ministry may consult relevant experts, stakeholders and Departments in order to come up with innovative schemes to improve women safety on public transport. This would enable the Ministry to make optimal use of the funds available under this head.

### DELAYS IN ROAD PROJECTS

226. The Committee noted that as per government data, road sector has the maximum number of delayed projects - 428 out of 724 central sector road projects are delayed. The total original cost of implementation of the total 724 projects when sanctioned was Rs. 3,82,180 crore but this was subsequently anticipated at Rs. 4,02,958.36 crore, implying a cost overrun of 5.4%.

227. The Ministry, in its reply, informed that National Highways (NHs) projects get delayed due to site/local/project specific factors attributable to either Authority or Contractor/ Concessionaire or both or Force Majeure reasons. Delays in land acquisition, pre-construction activities, delay in statutory clearances, law and order issues, Contractors' / Concessionaires' cash flow problems, poor performance of Contractors / Concessionaires, disputes etc. are common reasons for project delays and time overrun.

228. The Ministry highlighted that it has taken many initiatives to avoid or reduce project delays, including streamlining land acquisition & environment clearances, online approval of GAD of ROB/RUB, frequent review meetings at various levels with State Governments, Contractors/ Concessionaires/ Project Developers, close coordination with other Ministries, revamping of dispute resolution mechanism, premium re-scheduling, one-time fund infusion, etc. The Ministry has also provided several relief measures to Contractors/ Concessionaires/Consultants under Atmanirbhar Bharat to mitigate delays and expedite the construction of National Highways during the COVID-19 pandemic period.

229. The Ministry elaborated upon the following initiatives during 2022-23 to tackle the issues of delay in Land Acquisition and Environmental Clearances, lack of response from certain State Governments, poor performance of Concessionaires, projects stuck due to arbitration / court cases:-

**Land Acquisition:**

MoRTH & NHAI have already implemented the online Bhoomi Rashi portal to expedite the Land Acquisition process. Various Land acquisition related notifications (3a, 3A, 3D Notifications) are being published through Bhoomi Rashi portal which have fast tracked the LA Notification publication process by many fold.

The payments of compensation directly to beneficiaries account as per the awards declared by CALA (Competent Authority for Land Acquisition) has also been made mandatory through Bhoomi Rashi Portal.

Deployment of Bhoomi Rashi Portal 2.0 with latest development and technological advancement is ready to be rolled out for users.

NHAI has started GIS (Geographic Information System) based Land Acquisition Plan (LAP) to reduce error/disparities in land acquisition and for expediting the land acquisition process.

The draft Umbrella State Support Agreement (SSA), which seeks support from State/UT governments for fast-tracking the development of NH projects, was approved by the



Ministry on 01.04.2022. The same has been sent to the State/UT Governments for approval before signing.

**Environment:**

In NHAI there is a dedicated unit to facilitate and coordinate with regard to environment clearances issues. Specialists in the field of environment matters have been engaged by NHAI to facilitate clearances. There is also a provision for Independent Engineers/Authority Engineers to facilitate such Clearances.

The policy and project specific matters are regularly taken up with Ministry of Environment, Forest and Climate Change (MoEF&CC) to expedite clearances and remove functional bottlenecks. In view of the efforts of NHAI, a lot of initiatives have been taken by the MoEF&CC for streamlining statutory clearances especially for grant of Stage-I and Stage-II forest clearance e.g. direction for issue of one time Essential Details Sought (EDS), not insisting for hard copy of the proposal, Fortnightly Regional Coordination Meetings (FRCM). In addition, Inter-Ministerial Coordination and Monitoring Committee meetings are held for dealing policy issues and long pending proposals.

**Legal & Arbitration:**

No project has got stuck in NHAI due to ongoing commercial disputes (Arbitration and Court cases) as resolution of disputes is undertaken as the project progresses. For this, the contracts provide for Dispute Resolution Board (DRB) and Conciliation, apart from the mechanism of Arbitration.

**Poor Performance of Concessionaires:**

MoRTH vide circular No.RW/NH-33044/76/2021-S&R(P&B) dated 06.10.2021 issued a Standard Operating Procedure to debar/ penalise/ declare as Non-Performer the Contractor/Concessionaire in National Highways and other centrally sponsored road projects.

**Inter-Ministerial Coordination:**

Inter-Ministerial coordination issues were a major impediment in the infrastructure sector generally and more particularly in the Road Sector. The M/o Railways, Civil Aviation, Ports, Shipping & Waterways, M/o Environment, Forest & Climate Change have been participating in Group of Infrastructure (GOI) Meetings which is chaired by Hon'ble Minister of Road Transport & Highways. The 10<sup>th</sup> meeting of GOI was held on 24.01.2023 and a number of issues related to Environment Clearances, Land Acquisition, Road Over Bridges (ROBs) etc. were discussed and resolved.



230. The Ministry furnished the following State-wise details of projects delayed by more than 5 years including Total Project Cost (TPC) of these projects:-

Sl. No.	State	No. of projects delayed > 5 years	TPC of such projects (Amount in Rs. Crore)
1.	Assam	1	79.22
2.	Bihar	2	4,407.71
3.	Chhattisgarh	16	1,207.65
4.	Haryana	1	183.18
5.	Karnataka	2	324.77
6.	Madhya Pradesh	2	902.34
7.	Maharashtra	2	977.39
8.	Mizoram	4	2,241.36
9.	Telangana	4	650.22
10.	West Bengal	1	1,494.70
	<b>Total</b>	<b>35</b>	<b>12,468.54</b>

231. In response to a query regarding the cost overruns in case of these delayed projects, the Ministry informed that additional cost is not incurred in all delayed projects. In BOT projects, there is no cost escalation due to delay as escalation cost is absorbed by the Concessionaire. For other projects, if delay is attributable to the Project Authority, price escalation is paid as per contract conditions. If delay is attributable to the Contractor, damages are imposed and price escalation is not paid, and there is no additional cost due to delay.

**232. The Committee understands that road infrastructure development is a complex process that involves various stages and requires the coordination of multiple stakeholders. The Committee notes that land acquisition is one of the bottlenecks that has been a primary cause of delays in road infrastructure projects. The Committee notes that the Ministry has taken several initiatives to streamline land acquisition. Still, land acquisition is repeatedly at the forefront of the issues causing delays in road projects. The Committee suggests that the Ministry may highlight the exact stages of the present land acquisition process wherein delays take place. The Committee also desires to be apprised of the**

amount of cost overrun that the Ministry has incurred on account of delayed projects in the last 5 years.

233. The Committee desires to be apprised of the reasons for which Chhattisgarh accounts for about half the number of projects delayed more than 5 years. The Ministry may highlight the specific remedial measures being taken to avoid such delays in Chhattisgarh in the coming years.

234. The Committee feels that ongoing road projects should be given a higher priority than award and construction of new projects. Especially in case of brownfield projects, delays in completion cause discomfort to the public in terms of traffic jams and pollution. Besides, completing the ongoing projects on priority will help prevent time and cost overruns in future NH projects. In light of this, the Committee recommends that the Ministry may assign high priority to these projects and all-out efforts may be made to avoid any further delays.

235. The Committee notes that land acquisition is one of the most consistent reasons behind delays in road infrastructure projects in the country. The Ministry may examine the effectiveness of the existing legislative framework and propose amendments to the same, if needed. The Ministry may establish a dedicated cell to track and tackle delays in land acquisition in all NH projects. This dedicated cell may take up delays in land acquisition at the highest level with the concerned authorities and coordinate with all stakeholders in the process. The Committee suggests that the Ministry may prescribe strict timelines for those stages of the land acquisition process where doing so is feasible.

236. The Ministry may also analyse whether the presently posted strength of officials under its various departments/ organisations is sufficient. It may be studied if the vacancies existing in the Ministry and its organisations are also contributing to delays in the completion of road projects.

237. The Committee highlighted delays in various NH projects in the country. These include Bangalore to Amravati access-controlled Highway; Belagavi to Goa road; Panjim to Goa border road; Pulgaon to Jalna NH-753; Talegaon to Pulgaon NH-347; NH projects in Rayachoti-Vempalli and Vempelli-Porumamilla; proposed Bhatinda-Ajmer Economic Corridor; upgradation of NH-52 from Haryana border to Salasar. The Committee recommends that the Ministry may take urgent action to complete such delayed projects across the country.

## MISCELLANEOUS

### Accountability of Contractors/ Concessionaires, Consultants, Engineers etc.

238. The Committee enquired about the policies/ rules of the Ministry/NHAI to fix the accountability of road contractors, consultants and approving authorities for poor quality of construction of roads, delays caused on their part, etc. In its reply, the Ministry informed the Committee that EPC contract agreement already provides for ample provision for taking punitive action against the contractor for poor quality of work and delay in execution. Similarly, for DPR consultants, the contract agreement already provides provision for primitive action by way of debarment, imposition of penalty and encashment of retention money.

239. NHIDCL has taken the services of retired officers of repute as IEM (Independent External Monitor) to proof check the DPRs before sanction and SPM (Special Project Monitor) for routine inspection of works during their execution. Based on the reports of the SPM, suitable actions are taken against the defaulting officers as per service rules. NHAI has issued several directions for action on Contractor/ Concessionaire and Consultants respectively.

**240. The Committee observes that the Ministry has not furnished any information regarding provisions for the punitive action for poor quality of work, delays etc. in road projects carried out through HAM or BOT mode. The Ministry has also not made any mention of the punitive measures in place, if any, for approving authorities, in cases of gross negligence or mala fide. The Ministry may apprise the Committee in this regard.**

**241. The Committee also desires to know whether the DPR consultants are liable for punitive action till the physical completion of the respective NH project. The Committee recommends that the DPR consultant should be made accountable for the road project till the completion of the same.**

242. The Ministry also highlighted that NHAI has developed a Vendor Performance Evaluation System. Vendors are required to conduct a self-assessment and upload the documents related to the project being executed by them on the portal. The submissions are reviewed at multiple levels by NHAI, based on which a raw rating is generated and it is shared with vendor [Consul. (AEs & IEs)]. Vendor is given an opportunity to appeal against generated rating. Mechanism for evaluation of contractors/concessionaires is under finalisation.

**243. The Committee may be apprised regarding how the vendor rating being generated by the Vendor Performance Evaluation System. The Committee recommends that NHAI may make user satisfaction one of the parameters for assessing the performance of the vendors. NH users may be asked to submit their feedback to enable the assessment of user satisfaction. The Committee feels that a robust Vendor Performance Evaluation System can help the Ministry identify under-performers and habitual litigants. NHAI may give some weightage to these vendor ratings while awarding road projects instead of awarding**

**the projects purely based on lowest bid amount. This would give further incentive to road contractors for high-quality, time-bound execution of NH projects. The Committee also suggests that the Ministry may roll out the Vendor Performance Evaluation System for vendors working on NH projects other than those of NHAI.**

### **Preparation of DPR**

244. In its meeting held on 16th February, 2023, various Members highlighted the issue of faulty Detailed Project Reports (DPRs) leading to project delays and ineffective implementation. A Member of the Committee highlighted the issue of DPR Consultants being hired from distant regions without any local knowledge.

**245. The Committee notes that many road projects run into delays and become accident-prone as local requirements are not duly factored in while preparing DPR. The Committee recommends that the Ministry should mandate consultation with the local community, local Executive Engineers, MP and MLA etc. at the stage of DPR preparation. The approving authorities may consider the feedback received from the local representatives and ensure that the suggestions are not dropped with only cost savings in mind. Giving due consideration to local factors during preparation of DPRs will permit smoother execution of road projects which would be better suited to meet long-term future needs.**

### **Bid Secrecy**

246. In the meeting of the Committee held on 16<sup>th</sup> February, 2023, a Member raised the issue of awarding of bids with very minor variations in the L1 bid amount compared to second lowest bids. The Committee expressed the fear that someone in the backend of the system may be leaking the information to unscrupulous elements to rig the bids. The Ministry informed that the Ministry receives the bids through a common procurement platform developed by NIC. The Ministry added that it will request NIC to review the cyber security measures in place to ensure bid secrecy.

**247. The Committee recommends that given the seriousness of the issue, an extensive third-party audit of the procurement platform may be conducted. The Committee further suggests that robust technical solutions may be employed to ensure bid secrecy and prevent bid-rigging. The procurement platform should not have any possibility of premature access to bid data even to the system/ database administrators.**

### **Bogus Bank Guarantees**

248. To further improve efficiency and transparency of internal processes and take forward the adoption of digital technology, NHAI has started accepting Electronic Bank Guarantees (E-BGs) and has also digitalized all its existing Bank Guarantees. NHAI is utilising the E-BG services of

National e-Governance Services Limited (NeSL), which facilitates reduction in physical paper movement, elimination of physical storage needs and easy access for Bank Guarantee life cycle events like invocation, renewal and closure. Few E-BGs have already been issued by the Banks in favour of NHAI.

249. The Committee also raised the issue of fake Bank Guarantees (BGs) being submitted to NHIDCL. MD, NHIDCL informed that 24 cases of fake BGs worth Rs. 157.54 crores have been identified after re-verification of all BGs. Punjab National Bank (PNB) wrongly certified these BGs as genuine. The matter is being investigated by the Central Bureau of Investigation. The Ministry has sought legal opinion from the Solicitor General of India and suitable action will be taken accordingly.

**250. The Committee recommends that the Ministry may request the banks to review the present mechanism for e-verification of Bank Guarantees. The Ministry may take strict legal action against the culprits and guilty concessionaires may be debarred from future projects. The Committee further recommends that NHAI and NHIDCL may also get all the Bank Guarantees of its projects re-verified to detect any more such cases. Any ongoing contracts with the guilty concessionaires should be cancelled/ terminated so as to deter such frauds in the future.**

### **Provisions for service lanes for all National Highways**

251. The Committee feels that fast-paced commercial development along National Highways creates the need for service roads on NHs for which originally there was no provision for service roads. However, land is not easily available at such later stage and thus a solution must be devised to avoid this problem in future years.

**252. The Committee recommends that the Ministry should explore the possibility of a policy to bar construction works on land next to upcoming Greenfield National Highways till a certain length both sides. This may be done for right of way of service roads in the future. The Committee further recommends that the Ministry should have compulsory provisions for service roads since it improves safety and reduces slow traffic on NHs.**

### **Provisions for utility ducts and installation of cameras at construction stage National Highways**

253. The Ministry informed that it has awarded 2 pilot projects for development of OFC infrastructure along one brown field and one green field pilot projects, namely, Hyderabad-

Bangalore National Corridor and Delhi-Mumbai Expressway, having a total length of ~1900 kms.

**254. The Committee recommends that the Ministry should install CCTV cameras at frequent distances during the construction of road projects. This will allow NHAI officers, engineers, and other stakeholders, including public representatives, to closely monitor the progress of ongoing road projects. By doing this, ground-level monitoring can occur 24x7 while also keeping a check on encroachments on NH land. After construction, these cameras can be used for the purpose of monitoring traffic and road accidents.**

**255. The Ministry may explore the feasibility of creation of utility ducts at the construction stage itself. The utility ducts can then be utilised not just for OFC infrastructure but installation of CCTV cameras on highways, gas pipes, electric cables etc. This would enable the safe and efficient delivery of essential services to customers with ease of maintenance and repair. The Ministry may monetise the utility ducts over time to recover the infrastructure cost associated with the same.**

### **Road Asset Management System**

256. The Ministry informed the Committee that the following steps have been taken for implementation of Road Asset Management System (RAMS) : -

- Presently collection of Network Survey Vehicle (NSV) data either being done through NSV empanelled agency or through Independent Engineer (IE)/Authority Engineer (AE). The AE/IE payment has also been linked to submission and approval of data.
- A RAMS Cell has been operationalised since Oct 2021 through NHAI for vetting and uploading the NSV data into RAMS as received from site. Till now 50,600 Km Lane length have been uploaded by RAMS Cell.
- NHAI has been assigned the work of collection of Road inventory and Pavement condition data of all National Highways for uploading on RAMS Portal. A RFP for pan India data collection of NHs has been called, for which Bids have already been received and under evaluation stage.

To ensure the condition survey carried out regularly at fixed interval by all executive Agencies such as State PWD, NHIDCL and NHAI for collecting the requisite data with least manual intervention. For which the selection of independent agencies for all the States is being done by NHAI as mandated by the Ministry.

The costs of manning of RAMS cell at NHAI through a consultant is Rs. 5.60 Cr for a period of three years out of which payment of Rs 1.90 Cr has been utilised till 31<sup>st</sup> January 2023.

**257. The Committee recommends that the Ministry should ensure the timely completion of the RFP evaluation process for the collection of Road Inventory and Pavement condition data of all National Highways. This data would be crucial in helping the Ministry assess and prioritise the road maintenance requirements across the entire NH network. The Committee feels that this would lead to better maintenance of India's NH network.**

### **Greening of Highway Corridors**

258. NHAI is undertaking plantation on NHs according to Green Highways (Plantation, Transplantation, Beautification & Maintenance) Policy, 2015 and relevant IRC guidelines. Accordingly, the plantations are carried out every year by preparing Annual Plantation Action Plan. 343 lakhs plants have been planted on NHs post Green Highways Policy years i.e. from 2016-17 onwards.

259. As per Annual Plantation Action Plan 2022-23, a target of 75.51 lakhs plants was approved by NHAI out of which 68.38 lakhs plants (91%) have been planted till January, 2023. The process is continuous along with the development of NHs.

260. NHAI has notified Standard Operating Procedure (SOP) for implementation of Green Highways Policy-2015 to carry out plantations along with help of all stakeholders including Government agencies, private plantation agencies, concessionaires, NGOs etc. with local best performing plant species in that agro-climatic zone.

261. To monitor the survival and growth of plants, NHAI launched a mobile app "Harit Path" in August 2020 using which 229 lakhs plants have been geo-tagged till January, 2023.

262. As a second line of monitoring, the plantations are being monitored through monthly drone videography of highways construction development progress including plantations. In addition, there are regular inspections by NHAI officers and professionals engaged in Regional Offices.

263. The plantation activities are carried out in available land after the completion of the highway construction works. Major challenge is the survival as the plantation is linear and not confined within any specific boundary.

264. The plantation is an integral part of highways road development project and the plantation activities are undertaken after road construction works in the available land on avenue and median portion of Right of Way (RoW).



265. Accordingly, all available land on roadsides, median land, land parcels and clover leaf junction of all highways are being covered with plantations along with the program of highways development work from funds of ongoing project.

266. No such specific fund is separately allocated for Green Highways as these are part of the main project work. However, expenditure made on Green Highways since FY 2018-19 onwards are as follows:-

FY	Amount (Rs. In Cr.)
2018-19	6.69
2019-20	52.34
2020-21	95.70
2021-22	101.33
2022-23 (upto Jan 23)	59.85

**267. The Committee appreciates that the Ministry has planted 91% of its targeted number of plants in 2022-23, till January, 2023. The Committee recommends that the Ministry may put in place a suitable monitoring mechanism to ensure that the plants are duly watered and maintained. Visibility of signages may be ensured from time to time to ensure that plants do not grow to the extent of covering the signages. NHAI can involve local communities and NGOs to ensure better implementation of the plantation program. The plantation activities must focus on planting local best performing plant species in that agro-climatic zone. The Committee feels that local communities can be trained and employed to maintain the plantations, which will provide them with additional income opportunities. The Green Highways Policy is a great initiative by NHAI, and the program can be further strengthened by implementing these recommendations. The plantation program not only enhances the beauty of highways but also contributes to environmental sustainability and provides numerous benefits to local communities.**

### **Sustainability Initiatives**

268. Noting the need to ensure that road development does not come at the cost of the environment, the Committee sought to know about the sustainability initiatives of the Ministry. The information furnished by the Ministry with regard to the sustainability initiatives it is implementing, is placed at **Annexure-IX**.

**269. The Committee notes the sustainability initiatives undertaken by NHAI. The Committee recommends that it may continue to focus on sustainable development and environment protection in its road infrastructure projects. NHAI's involvement of Self-**



**Help Groups (SHGs), Non-Governmental Organizations (NGOs), and women in undertaking various sustainable development initiatives is a positive step. The Committee recommends that NHAI may ensure that sustainable practices form a core part of the NHAI's entire process, instead of just being a compliance formality. Enhanced focus may be laid on sustainable principles for projects that are located in or around protected areas. The Committee suggests that NHAI may work on further increasing the involvement of various stakeholders such as SHGs, NGOs, private sector, Forest Department etc. for sustainable development and expansion of NH network.**

### **Need for strict measures to deter overloading**

270. The Committee sought to know about the steps that the Ministry has taken to deter overloaded vehicles on National Highways. The Ministry informed that 467 fee plazas out of 692 fee plazas on National Highways are equipped with MSWIM (Medium Speed Weigh-in-Motion)/ SWB (Static Weigh Bridge). For new projects/toll plaza, MSWIM infrastructure are implemented in execution stage only. Installation of WIM at remaining fee plaza is likely to be done by March, 2023.

271. **The Committee desires to be apprised as to how the Ministry plans to penalise overloaded vehicles at the toll plazas with MSWIM infrastructure. The Ministry may examine the feasibility of charging toll/penalty according to the tonnage of the vehicle. The Committee feels that this would help deter overloading besides generating revenue. This would also help in keeping the NHs in a better condition as overloaded vehicles cause a lot of damage.**

272. **The Committee recommends that the Ministry may explore the possibility of equipping commercial vehicles with a device that can automatically immobilise the vehicle if it is carrying weight beyond the specified limit.**

### **Adoption of Electric Vehicles in the country**

273. The steps taken by the Ministry of Road Transport & Highways to adopt electric mobility in the country are as under:-

(i) For promotion of electric vehicles, Ministry issued notification (GSR 167(E) dated 1st March 2019) for conversion through retro-fitment to pure electric and hybrid electric vehicles and their compliance shall be as per Automotive Industry Standard (AIS) 123.

(ii) The Ministry, (S.O. 5333(E) dated 18<sup>th</sup> October, 2018), has also granted exemption to the Battery Operated Transport Vehicles and Transport Vehicles running on Ethanol and Methanol fuels from the requirements of permit.

(iii) For easy identification of Battery Operated Vehicles Ministry (G.S.R 749(E) dated 7th August, 2018), has notified the registration mark for Battery Operated Transport Vehicles to be in Yellow colour on Green background and for all other cases, in White colour on Green background.

(iv) Battery Operated Vehicles have been exempted from the payment of fees for the purpose of issue or renewal of registration certificate and assignment of new registration mark. (GSR 525(E) dated 2nd August, 2021)

(v) The Ministry has issued an advisory dated 12th August, 2020 to all States and UTs regarding sale and registration of Electric Vehicles without batteries.

(vi) The Ministry has issued an advisory dated 16th June, 2021 to all States and UTs regarding promotion of battery operated vehicles.

274. Following three schemes are being implemented by Ministry of Heavy Industries:

- i. Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME India): The Government notified Phase-II of FAME India Scheme initially for a period of five years commencing from 1st April, 2019 with a total budgetary support of Rs. 10,000 crore. The phase-II of FAME India Scheme focuses on supporting electrification of public & shared transportation and aims to support, through subsidies, 7090 e-Buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e- 2 Wheelers. In addition, creation of charging infrastructure is also supported to address range anxiety among users of electric vehicles
- ii. Production Linked Incentive (PLI) Scheme for Automotive Sector: The Government on 15th Sep 2021 approved the PLI Scheme for Automotive Sector with a budgetary outlay of Rs. 25,938 crores .The scheme provides incentives up to 18% for electric vehicles.
- iii. PLI Scheme for Advanced Chemistry Cell (ACC): The Government on 12th May, 2021 approved PLI Scheme for manufacturing of ACC in the country with a budgetary outlay of Rs. 18,100 crore. The scheme envisages to establish a competitive ACC battery manufacturing set up in the country for 30 GWh. additionally, 5GWh of niche ACC technologies is also covered under the Scheme.

**275. Electric vehicles have numerous benefits, including reduced air pollution and reduced dependence on imported petroleum products. The Committee acknowledges the efforts made by the Ministry of Road Transport & Highways and the Ministry of Heavy Industries to promote electric vehicles in India. The Committee suggests that more steps need to be taken to accelerate the shift towards electric vehicles. The Committee observes that several countries, such as Norway, have reached high levels of adoption of EVs by incentivising vehicle owners to make the shift. The Ministry should consider exempting electric vehicles from road tax and offering discounts at toll plazas to incentivize their**

**adoption. The Ministry may carry out the cost-benefit analysis of providing such incentives and proceed accordingly.**

### **Tendering of Road Projects**

276. Regarding upper/lower limits for submission of bids for road projects, the Ministry mentioned that no policy has been issued by MoRTH/NHAI as on date. However, to address the issue of projects awarded at substantially lower costs, directions have been issued by NHAI that quality inspection teams constituted by NHAI would visit such projects regularly and submit report for taking required action against defaults, if any. Further, for under bidding projects, MoRTH has issued amended provision in Standard RFP for EPC projects which stipulates that in case bid price offered by bidder is less than 20% of the estimated project cost/ cost put to tender then the bidder shall give irrevocable and unconditional guarantee from a bank towards an Additional Performance Security.

**277. The Committee notes that NHAI has issued directions for regular quality inspection of projects awarded to substantially lower bids. The Committee recommends that NHAI may analyse the shortcomings in its project cost estimation methodology in cases where projects awarded to substantially lower bids are completed with high quality standards. The Committee further desires that the Ministry may formulate guidelines for more frequent quality checks in cases where a contractor sublets the project. The Ministry may inform about the mechanism in place, if any, to ensure that projects are not sublet except as per the rules and guidelines in this regard.**

### **Vehicle Fitness Certificate**

278. A Member of the Committee highlighted that one needs to drive to their district headquarters to get a fitness certificate for their vehicle.

**279. The Committee desires to be apprised of the present procedure for issuance of a vehicle fitness certificate. The Committee recommends that the Ministry may work upon the ease of obtaining vehicle fitness certificate. The Ministry may permit issuance of vehicle fitness certificates at the town level as well, besides district headquarters. The requirement, if any, for the vehicle to be in the home district/State may be done away with.**

### **Way Side Amenities**

280. In order to improve the comfort and convenience of the highway users, the Ministry has planned development of state-of-the-art Way Side Amenities (WSA) at approximately every 40 kms along the National Highways. These facilities shall provide multiple options of rest and refreshment for the highway commuters during their journey. Some of the mandatory facilities being developed at each WSA are fuel stations, food court/restaurants, dhabas, convenience stores, clean and hygienic toilet facilities, drinking water, first aid/medical room including child-

care room, dedicated area for promoting local artisans, car/bus/truck parking, drone landing facilities/helipad etc.

**281. The Committee is pleased to note the planned development of state-of-the-art Way Side Amenities along National Highways. This would permit NH users to be well-rested and should lead to safer driving. The Committee recommends that the Ministry should establish a strong mechanism to ensure that Way Side Amenities are well-maintained for years to come.**

### **Status of NH-744 from Kadampattukonam-Aryankavu**

282. The Ministry informed the Committee that NH-744 lying in the State of Kerala & Tamil Nadu starts from Kollam in Kerala and ends at Thirumangalam in Tamilnadu (near Madurai). This stretch is a part of Madurai- Kollam Inter Corridor Roads under Bharatmala Pariyojana. NH-744 in Kerala starts from Kollam passing through Edamon and ends at TN/KL border near Aryankavu. Existing road is Intermediate/2 Lane with traffic varying from 12,000 to 20,000 PCU.

283. NHAI has proposed to develop Kollam to TN/KL section of NH-744 in 2 packages, *i.e.*

- 4 lane Greenfield alignment from Edamon to Kadampattukonam as Package-2. Greenfield alignment is having a length of 38.617 Km and parallel to Kollam - Edamon existing road. Greenfield alignment is proposed since existing alignment mostly passes through urban development areas. 45 m ROW (Right of Way) is proposed to be acquired. 3 (A) notification is already published. Bid for Greenfield Alignment is already invited on HAM Mode. The Project comprises construction of 3 nos. of major bridges, 10 nos. of minor bridges, 1 no. of flyover, 4 nos. of Viaduct, 5 nos. of VUP's (Vehicular Under Pass), 8 nos. of LVUP's (Light Vehicular Under Pass), 9 nos. of SVUP's (Small Vehicular Under Pass), 22 nos. of VOP's (Vehicular Over Pass), 106 nos. of box culverts, 28 nos. of Bus Shelters, 2 nos. of Truck lay bye, service roads aggregating to a length of 35.064 km (both sides). Total Capital Cost of Package-2 is Rs 2,618 Cr, including land cost of Rs 1,362 Cr. MORTH, *vide* letter dated 06.02.23, has requested NHAI to review the features and cost of the project by revising the DPR. NHAI, *vide* letter dated 10.02.23, has accordingly revised the SFC proposal by optimizing cost. SFC is yet to be done.
- 4 lane brownfield alignment from Edamon to TN/KL Border (near Aryankavu) as Package-1. Brownfield alignment is having a length of 20.73 Km. This alignment is passing through Shendurney Wild Life Sanctuary and requires Wild Life & Forest Clearance. Acquisition of additional land in the project will be initiated only after both forest and Wild Life Clearance are received. Forest and Wild Life Clearance is targeted to be received by October, 2023. Thereafter, Land acquisition process and Bidding

process will be initiated. Tentative Capital Cost of Package-1 is Rs 1,616 Cr, including land cost.

284. The Ministry added that it is too early to indicate projected completion date since project is under bidding.

**285. The Committee notes the details furnished by the Ministry pertaining to NH-744. The Ministry may inform the Committee regarding the targeted date for revision of DPR of the package-2 of the NH-744. The Ministry may ensure that villages are not divided in the middle and the villagers are put into inconvenience due to the difficulty in crossing the National Highway to access their agricultural field and other civic amenities. NHAI should ensure that adequate number of Vehicular Under Passes (VUPs), Foot Over-Bridge etc. are built alongside the greenfield stretch for the safety of local citizens as well as NH users. It has been brought to the notice of the Committee that Vilakkupara Town will be completely wiped out due to the present alignment of the Highway and the people there are opposing the alignment vehemently. It is also learned that the people have given two different alignments to save the town and the livelihood of a large number of people. The Committee observes that the Greenfield Highways are for the people and for their well-being. It should not lead to large-scale eviction and destruction of their economic assets, factories and a large number of buildings and shops. The Committee, therefore, recommends that the alignment of Highway No. NH 744 may be appropriately changed to save the thickly populated Vilakkupara Town and its people. The Ministry may also ensure that adequate entry and exit points are provided at regular intervals to the local population through the service roads. The Committee desires that the Ministry may work out a targeted timeline for the completion of the project since it is already under bidding.**

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## RECOMMENDATIONS/OBSERVATIONS – AT A GLANCE

### **ANALYSIS OF DEMANDS FOR GRANTS (2023-24) and PAST PERFORMANCE OF THE MINISTRY**

#### Analysis of Demands for Grants (2023-24)

The Committee notes that about 99 percent of the projected demand of the Ministry has been met in BE 2023-24. Enhanced focus on transportation infrastructure, as evinced by the increase in the allocation to the Ministry, will have a multiplier effect on the economy. The Ministry should chalk out a detailed month-by-month plan to ensure optimal utilisation of the allocated funds. It may make efforts to identify and bridge gaps in connectivity to hinterland regions as well as economic and tourist hubs.

(Para 10)

The Ministry has received more than 90 percent of its projected requirement for most heads in BE 2023-24. However, several heads critical to the good health of the National Highways network in the country have received much less than the projected demand. These *inter alia* include 'Road Transport' (73%) and 'Maintenance of NHs including Swachhta Action Plan' (74%). The Committee desires to know the reasons for the shortfall in allocations under these heads, vis-a-vis demands. The Ministry may inform how it plans to tackle the shortfall under these important heads. The Committee recommends that the Ministry may devise an effective quarterly plan to ensure that the allocated amounts under these heads are optimally utilised. This would permit the Ministry to seek additional funds under these heads in Revised Estimates and in the next financial year.

(Para 11)

#### Focus Areas of the Ministry for the year 2023-24

The Committee notes the various focus areas of the Ministry for the year 2023-24. The Ministry has awarded 383 km of Expressway and Access-Controlled Corridors in the ongoing year. It will award 1667 km in the next 2 months and the remaining 1958 km in the next financial year. The Committee desires to be apprised of the slow pace of award in the ongoing financial year. The Ministry may inform how it plans to ensure that the remaining length is awarded by the next financial year.

(Para 13)

The Committee observes that the MMLPs offer a significant boost to the regional and overall economy through enhanced connectivity and improved efficiency. The Ministry

has prioritised 15 out of the 35 locations identified for development of MMLPs. The Committee recommends that the Ministry may come up with a clear targeted timeline for awarding the remaining 20 MMLPs.

(Para 14)

The Committee feels that it is the responsibility of the Ministry to enable transportation access to the remotest areas of the country. The Ministry should work out a balance between the transportation needs of both remote areas and tourist spots while planning projects under the Parvatmala programme. The Committee recommends that the Ministry may lay due focus on enhancing connectivity through ropeways as last mile connectivity to remote areas and hamlets in hilly regions. This would help the local residents to contribute more to the local economy, besides improving their quality of life.

(Para 15)

### **Expenditure under various heads in the ongoing Financial Year 2022-23**

The Committee is pleased to note that the Ministry has spent 87 percent of its overall RE 2022-23 allocation. The Ministry received an increase of 9% in RE 2022-23, compared to BE 2022-23. This reflects good overall fund utilisation throughout the ongoing financial year. The Committee, however, notes that the utilisation rate for several important heads is slow. These heads are ‘R&D and Training’, ‘Capital Outlay for development of road connectivity in LWE affected areas and other tribal areas’, ‘Bharatmala Pariyojana – work under State PWDs/ NHIDCL/ BRO etc’, ‘Maintenance of NHs’ and ‘Road Transport’. Since only two months remain in the ongoing financial year, it is likely that there will be savings under these heads. The Committee desires to know the reasons behind underutilisation under these heads. The Ministry may also highlight its plans to tackle the reasons behind this underutilisation in FY 2023-24.

(Para 18)

The Committee observes that over the last few years, the Ministry has consistently made satisfactory utilisation of the available funds. This is including the period wherein Coronavirus restrictions were in place. The Committee hopes that the Ministry may continue to make optimal use of the funds available to it in the coming years.

(Para 20)

### **Targets and Achievements of the Ministry**

The Committee notes that the Ministry has made 57% progress in the targeted length of 12,000 km for both award and construction till January, 2023. However, the Ministry has already spent 87% of its RE 2022-23 allocation. It seems likely that given the



time as well as budgetary constraints, the Ministry would fall short of its award and completion targets. The Committee suggests that the Ministry may look into possible cost overruns in the projects given the physical progress of 57% compared to 87% expenditure.

(Para 25)

The Committee recommends that the Ministry may make sincere efforts to reach as close as possible to its targets for 2022-23. The Ministry should also factor in rainfall forecasts while setting monthly/ quarterly targets for 2023-24. The Ministry may also analyse the reasons behind the slow awarding of road projects till January 2023, since awarding of projects is not impeded by monsoon.

(Para 26)

The Committee would like to know the reasons for the decrease in targeted and actual construction of roads since FY 2018-19. Further, the Committee notes that the Ministry has not set any quantifiable target for reduction of road accident deaths under the Output Outcome Monitoring Framework for 2023-24. The Ministry may furnish specific reasons for this omission of quantifiable targets pertaining to road safety.

(Para 27)

The Committee takes note of the progress made till Q3, 2022-23 under the Output Outcome Monitoring Framework. The Ministry has performed well under the major indicators such as development of NH road network in all schemes. However, progress under various crucial output and outcome indicators leaves much to desire. These indicators include length of roads having Incident Management System (providing Ambulances, Cranes, etc.), constructed length of coastal and port connectivity roads, number of NGO partnerships to create road safety awareness, etc. The Committee recommends that the Ministry may analyse the hurdles impeding the progress under these indicators. Further, the Ministry should implement suitable remedial measures to ensure achievement of targets under these indicators in the next financial year.

(Para 29)

### **PM Gati Shakti National Master Plan**

The Committee welcomes the Ministry's efforts in examining 62 NHs/ road projects/ Corridors for a total tentative cost of Rs. 6,78,505/- crore leveraging the PM Gati Shakti National Master Plan (GSNMP) Portal. The Committee feels that the GSNMP would help tackle long-standing issues in the infrastructure sector in India, such as disjointed planning and lack of standardisation and synergy among the various Ministries and Departments. The Committee would like to know the present status of these 62 NHs in terms of progress percentage and expected date of completion. The Committee recommends that the



remaining NHs out of the total 1,510 NHs projects may also be considered for examining through the PM GSNMP Portal. This will ensure smoother execution of the ongoing and upcoming road projects, in coordination with other Ministries/ Departments/ State Governments under the GSNMP.

(Para 37)

The Committee observes that the Ministry has not presented a clear roadmap regarding the completion of the projects it has taken up under GSNMP. The Committee desires to be apprised in this regard. The Committee may be apprised regarding the provisions, if any, under PM GSNMP to ease the process of land acquisition, environmental clearances etc.

(Para 38)

The Committee notes that the Ministry is planning to develop 35 MMLPs on PPP mode, under the GSNMP. Out of these 35 MMLPs, 15 MMLPs are prioritised for award by F.Y. 2024-25. The Committee desires to know the details regarding the MMLPs identified, road length and project cost involved. The Committee opines that the DPRs for these MMLPs should be formulated in consultation with all other participating Ministries including Railways and Ports, Shipping & Waterways and suitable amendments may be carried out in the proposals based on the feedback. The Committee further recommends that a robust monitoring framework may be put in place to ensure the timely completion of the development of MMLPs.

(Para 39)

### **National Monetisation Pipeline (NMP)**

The Committee opines that the National Monetisation Pipeline will play a pivotal role in fulfilling India's infrastructural aspirations in the near future. The Committee agrees with the various key benefits listed by the Ministry. The monetization of existing NH assets is crucial to fund the desired pace of improvement of the road network in the country. In this light, the Committee desires to know the year-wise targets of the Ministry under the NMP for FY 22-25.

(Para 49)

The Committee recommends that the Ministry may seek feedback from the various stakeholders involved in the monetisation process. This will help the Ministry understand their concerns so that the same can be adequately addressed through suitable regulatory modifications. In the long term, this would help boost the participation of bidders and the increased competition would help the Ministry to realise adequate value from its assets.

(Para 50)

The Committee notes that the Ministry has managed to achieve 41 percent of its desired monetisation target for the ongoing FY till January, 2023. The Ministry has to ramp up its efforts in this direction to try and raise targeted amounts. The Ministry may inform the Committee how it would address the shortfall, if any, that might be caused if the monetisation targets for 2022-23 are not met.

(Para 51)

### **Bharatmala Pariyojana Phase-I**

Bharatmala Pariyojana Phase-I was initiated with an ambitious target of completion by 2022. The Committee appreciates that the Ministry has made record progress in pace of highway construction in recent years. However, only about 35 percent of the BMP Phase-I has been completed till January, 2023. About 27 percent of the Phase-I is yet to be awarded. The Committee notes that the Ministry has stated that it would award most of the remaining length by FY 23-24. The Ministry may inform the Committee regarding the targeted timeline for physical completion of the BMP Phase-I. The Committee recommends that the Ministry may proactively tackle possible hurdles and avoid any further delays.

(Para 53)

The Committee hopes that the Ministry would benefit from its experience of BMP Phase-I implementation in the planning and execution of the Phase-II. The Ministry may analyse the shortcomings in the estimations made in the targeted date of completion of BMP Phase-I and come up with a realistic timeline for award & construction of BMP Phase-II. The Committee desires to know about the planned initiation date for Bharatmala Pariyojana Phase-II.

(Para 54)

The Committee is glad to note that the 52% share of HAM projects in terms of the cost of projects awarded under BMP Phase-I is close to the target of 60%. The Committee recommends that the Ministry may look into the reasons why the share of BOT (Toll) projects is much behind the 10% target. The Ministry may review the Model Concession Agreement for BOT (Toll) Projects and revise the same, if needed, after due consultation with the stakeholders.

(Para 58)

The Committee notes that the Kerala Government had requested for the inclusion of the Thrissur bypass under the Bharatmala Project. The Ministry may apprise the Committee regarding the present status of the same.

(Para 59)

### **Critical Transport Infrastructure Projects for first-mile and last-mile connectivity for ports, steel, fertilizers, etc.**

The timely completion of the 16 road projects requested by the Ministries of Steel; Fertilizers; and Ports, Shipping & Waterways would have a strong multiplier effect on the overall economy. The Committee suggests that the Ministry may chalk out a detailed roadmap for the various stages of completion of these projects. The Ministry should ensure that the delays faced at any stage are tackled at the earliest, in close coordination with the concerned Ministries/ Departments.

(Para 61)

### **Connectivity to Tourist Destinations**

Stellar road connectivity can significantly boost the tourism prospects of any given region. The Committee desires to be apprised of the roadmap for improving highway connectivity to the 50 iconic tourist destinations mentioned in the Budget Speech. The Ministry may inform regarding the budgetary allocation made in this regard.

(Para 63)

The Committee notes that the Ministry has not made any mention of its plans to improve NH connectivity to the 13 tourist destinations which are not within 10 km of any NHs. The Committee desires that all the 100 tourist destination may be connected with the National Highways. The Ministry may inform regarding its plans in this regard.

(Para 65)

### **Assessment of Quality of NH works**

The Committee desires to be apprised of the outcome of the pilot project of engaging the services of Mobile Quality Control Vans for conducting quality checks on a regular basis. The Committee would also like to know from the Ministry regarding the existing mechanism for conducting quality checks on NH projects.

(Para 69)

### **Increasing Land Acquisition Costs**

The Committee feels that tapping the increase in the value of land adjacent to highways can help bear the increasing land acquisition costs of NH projects across the country. In light of this, the Committee desires to be apprised of the status of implementation of NHAI's Value Capture Finance policy.

(Para 70)

## **NATIONAL HIGHWAYS AUTHORITY OF INDIA**

### **Physical and financial performance in the last 5 years**

The Committee notes that NHAI has benefitted from the trend of increase in the budgetary allocation of the Ministry over the last few years. NHAI has consistently managed to increase the length of NHs it constructs each year. The physical progress in the ongoing FY 2022-23 till January, 2023 is lagging behind when compared to the previous years. The Committee recommends that NHAI may put in maximum efforts to increase the pace of construction of NHs in the remaining two months of FY 2022-23.

(Para 73)

### **Funding the Increasing Land Acquisition Costs**

The Committee notes that the share of expenditure on land acquisition has gradually come down from 35.3% in 2016-17 to 28.6% in 2020-21. This would partly be because certain State Governments have agreed to share some percentage of land acquisition cost for NH projects. The Committee feels that innovative mechanisms such as Value Capture Financing are much needed to fund the increasing land acquisition prices in the country. NHAI needs the support of State Governments as well as the Value Capture Financing mechanism to ensure an increasing pace of expansion of the NH network in the country. The Committee recommends that NHAI may pursue more innovative ways of monetization to offset the increasing input costs. The Ministry may look into the feasibility of non-invasive advertising/ sponsoring of signages, way side amenities etc. The Ministry may also consider permitting retail investors to invest through InvITs in road sector projects.

(Para 76)

### **Rising Debt of NHAI**

The Committee appreciates the step taken by the Government to not mandate NHAI to raise funds through market borrowings under IEBR since FY 2022-23. The projected debt servicing cost and its share in the projected allocation for NHAI in the coming years paint a viable future wherein NHAI would use around 20% of its total allocation for debt servicing. The Committee hopes that NHAI will be able to raise higher amounts through its asset monetisation programme as part of the National Monetisation Pipeline. This would help NHAI keep a check on its debt servicing costs.

(Para 83)

The Committee recommends that the Ministry/NHAI may undertake effective measures to ensure that its stuck projects are completed at the earliest without further

delays. This would permit NHAI to free up a part of its capital for new road projects and also to monetise the completed assets for further revenue generation.

(Para 84)

### **Vacancies in NHAI**

NHAI shoulders a heavy responsibility of developing and maintaining the NH network of the country. The increasing allocation made to NHAI each year reflects the importance of its mandate. The Committee recommends that NHAI may ensure that it is adequately staffed at all times to ensure optimal utilisation of its budgetary allocation.

(Para 89)

### **Sukhad Yatra app**

The Committee applauds the digital initiative of NHAI to bring all information about NHs for highway users. The Committee is at a loss to understand why only a few hundred users are using the App. The Ministry may give wider publicity to the App and encourage people to use it. Promotional billboards etc. may be put in place at toll plazas to make NH users aware of the app and its features. The Committee, however, notes that the public reception of the application has not been up to the mark. The application has been rated 2.1 star and 2.5 star out of a maximum 5 star, on Google Play Store and Apple App Store respectively. This implies that the application is not functioning as per the expectations and requirements of the users. The Committee recommends that NHAI may work on the feedback received from the app users.

(Para 97)

The Committee notes from the trend of year-wise complaints that the adoption of the Sukhad Yatra app has not picked up the much desired pace. The app can help NHAI gather valuable real-world data about its highways and the maintenance/safety requirements thereon. The Committee recommends that a mechanism may be devised to ensure that the complaints filed through the Sukhad Yatra app are actually resolved on ground. The App may seek confirmation from the complainant before marking the complaint as resolved. The Committee further recommends that NHAI may make budgetary provisions for promoting the App after its revamped version is launched this year.

(Para 98)

The Committee recommends that NHAI may take immediate steps to ensure that the Sukhad Yatra app is available in Hindi as well as regional languages so as to enable more people to utilise its services. Various services like emergency services, police assistance, roadside assistance, road side amenities, restaurants/ hotels which are available along the specific stretch of the National Highway may be provided on the app. The

**Committee further recommends that the Ministry should give wider publicity to the app through media – both print and electronic – advertisements.**

(Para 99)

**The Committee recommends that the Ministry may ensure that the progress made regarding updation of the Sukhad Yatra app and the resolution of complaints received on the application may be taken up with the local MPs in the District DISHA meetings.**

(Para 100)

## **ROADS AND BRIDGES**

### **Works under Roads Wing**

**The Committee notes that the BE 2023-24 allocation for National Highways (Original) has increased by 47% compared to BE 2022-23. The Committee may be apprised of the length of construction targeted to be undertaken in 2023-24 as compared to 2022-23. The Ministry may furnish the reasons behind the reduction under ‘Tribal Sub-Plan - NH works in NE States, Rajasthan, MP, Chhattisgarh, Jharkhand, etc.’ in RE 2022-23 and further in BE 2023-24.**

(Para 107)

**The Committee notes that 2,372 km of NH has been constructed under NH(O) till December, 2022 as against a target of 7,000 km. The Committee is unable to understand why there is such low achievement in NH (O). The Ministry may inform the Committee about the reasons behind this slow progress and the way forward.**

(Para 108)

### **Schemes of States and UTs financed from CRIF**

**The Committee notes that the Ministry has spent about 72 percent of the RE 2022-23 allocation of Rs. 7,974 crores under CRIF for State Roads for States and UTs. The Committee recommends that the Ministry may proactively reach out to the State/UT Departments concerned to ensure that the available budgetary allocations are optimally utilised.**

(Para 114)

### **Development, Planning, Quality Assurance, Research and Training – Financed from CRIF**

**The Committee notes a consistent pattern of underutilisation of funds allocated for Research and Development. High quality research and development in the road**

infrastructure sector will go a long way in improving the efficacy and health of India's NH network. The Committee desires to be apprised of the reasons behind this underutilisation. The Committee recommends that the Ministry may award more R&D schemes and work towards making optimal utilisation of funds under this head in FY 2023-24.

(Para 117)

The Committee takes cognizance of the Joshimath land subsidence. The Committee recommends that the Ministry may undertake detailed research into the environmental impact of the highway projects in the Himalayan region. Improving connectivity to the Himalayan region is crucial from a strategic as well as tourism point of view. However, the Ministry needs to ensure that the same is done without causing any damage to the ecologically fragile region.

(Para 120)

The Indian Roads Congress plays a significant role in developing Standards, Specifications, Codes of Practices, Guidelines, and research-based state-of-the-art reports related to roads and bridges. However, despite its crucial role in research-led development in the road sector in the country, no fund is allocated to IRC. The Committee suggests that the Ministry may review the budgetary needs of the Indian Roads Congress and take steps to meet the same.

(Para 122)

### **Maintenance of National Highways**

The Committee notes that the net allocation under the head 'Maintenance of National Highways – financed from CRIF' has decreased from Rs. 2,701.47 crores in BE 2015-16 to Rs. 2,600 crores in BE 2023-24. The overall budgetary allocation of the Ministry has increased from about Rs. 45,750 crores to Rs. 2.7 lakh crores during this period. The Committee acknowledges that the actual expenditure including expenditure incurred by NHA and NHIDCL has increased from Rs. 3,888 crore in 2015-16 to Rs. 5,158 crore in 2021-22. There is also a clear pattern of under-allocation as compared to the Ministry's projected demand in the last 7 years. However, the Ministry has stated that there is no shortage in availability of funds for M&R of NHs.

(Para 127)

High quality, proactive maintenance of NHs is key to enhancing the safety of passengers, besides reducing travel time. The Ministry invests lakhs of crores into developing the NH network across the country. It is imperative that sufficient budgetary allocation is made to ensure that the highways serve their desired purpose of high speed, safe road connectivity. The Ministry must ensure that the highways permit the vehicles to safely travel at the speeds envisaged at the time of their conceptualization. With low allocation for maintenance, the Ministry would be forced to follow a "worst first" approach

wherein the worst roads are maintained first. This approach cannot ensure that the highways are maintained in the best possible shape. The Ministry instead needs to ensure that a proactive, preventative approach is followed.

(Para 128)

The Committee finds it likely that delayed road maintenance would lead to premature need for complete relaying of the road. The Ministry may look into the comparative analysis of the cost of performing road maintenance at early stages of wear and tear versus after deterioration. A study may also be commissioned regarding the cost borne by the road users because of poorly maintained NHs, in terms of lost fuel, time, productivity and increased safety risk. In the past, NITI Aayog and this Committee have also recommended increased allocation for the maintenance of NHs. The Committee, therefore, recommends that MoRTH may request the Ministry of Finance to enhance the allocation under this head at the R.E. stage and in the coming years.

(Para 129)

The Committee notes that 10% of the CRIF fund allocated to the State Governments/ UTs for State roads is earmarked for road safety works. The Committee feels that ensuring proactive maintenance of roads has a direct positive impact on road safety. The Committee recommends that the M/o Finance may consider earmarking a certain percentage of the CRIF fund for road maintenance as well. This will ensure that a greater focus is laid on road maintenance across the country.

(Para 130)

The Committee notes that an amount of around Rs. 4,490 crore is being spent for the maintenance of about 25,000 km of NHs i.e. about 17 percent of India's present NH network. The Committee feels that the amount is inadequate considering the vast length of NH network covered under it. The actual expenditure has exceeded the allocation every year since 2017-18. The Committee recommends that the MoRTH may communicate with the Ministry of Finance to know the reasons behind the consistent under-allocation under this head.

(Para 133)

The Committee may also be apprised of the mechanism in place to assess the requirement of maintenance on this 25,000 km of National Highways which is neither under the contractor's liability, nor under PR/IRQP. The Ministry may also inform about the present procedure to ensure maintenance of other important aspects besides road quality, such as adequate lighting, signage, barriers, lane demarcation etc.

(Para 134)



**The Committee feels that the Ministry should also focus on increasing private sector participation in the road maintenance sector. The Committee desires to know whether performance-based road maintenance contracts are being utilised in India for NH maintenance. The Committee recommends that the Ministry may come up with guidelines as to the performance-based indicators that must be delivered by the contractors to ensure high-quality maintenance of roads. The Ministry may issue clear quantifiable definitions of length of potholes, width of cracks on roads, etc. Stringent empirical checks may be enforced to verify the quality of the maintenance works. The Committee recommends that the Ministry may ensure sufficient budgetary allocation for this regard.**

(Para 136)

**The Committee notes that even though NSV survey has been mandated to capture road conditions every 6 months, NSV data has only been received for 48,000 km length of NHs so far. The Committee desires to know why the Ministry is not carrying out the mandated periodical NSV surveying across the entire NH network in the country. The Ministry may inform about the bottlenecks being faced in this regard and how the Ministry plans to address the same. The Committee would also like to know the targeted timeline by which the Ministry would ensure that the periodicity of the NSV data is being maintained for the entire NH network.**

(Para 138)

**The Committee took cognisance of the issue of rutting, lack of demarcation and cleanliness on NH-52 from Ambala to Haryana border. The Committee recommends that necessary action may be taken to ensure that the highway is properly maintained and demarcated as per the specifications in place.**

(Para 139)

### **Special Accelerated Road Development Program for North Eastern Areas**

**The Committee notes that allocation made under the head ‘SARDP for North Eastern Areas financed’ has increased from Rs. 13,505 crores at RE 2022-23 to Rs. 18,591 crores at BE 2023-24. The Committee hopes that this boost in budget allocation will aid in the completion of the various projects under SARDP for North Eastern Areas.**

(Para 144)

**The Committee observes that the Ministry had the target to complete SARDP-NE Phase-A & Arunachal Pradesh Package of SARDP-NE by March, 2014. The Committee suggests that the Ministry must ensure that road projects are not awarded to contractors with poor track records. The contractors performing poorly should be promptly replaced to avoid further delays. Finally, the Committee recommends that the Ministry may ensure**

the completion of SARDP-NE Phase A and Arunachal Pradesh within the revised targeted timeline of FY 23-24.

(Para 145)

## **ROAD TRANSPORT AND SAFETY**

### **Research, Training, Studies and Other Road Safety Schemes**

The Committee notes that Budget Head ‘Research, Training, Studies and other Road Safety Schemes’ include several schemes which are fundamental to improving the standards of driver training and road safety in the country. There has been a clear trend of underutilisation of funds under this scheme in the last 5 years. This would be one of the reasons for which the allocation under this head has remained constant or decreased, while the overall allocation has increased manifolds in the recent past.

(Para 152)

The Ministry has stated that the primary reason for underutilisation of funds under this budget head during the given period were lower demand from the Transport Commissioners and slow down due to Covid -19 induced epidemic. The Committee does not accept this justification. The overall expenditure of the Ministry over this same period has consistently been above 90 percent. Further, the expenditure under this head has been low even before the onset of the pandemic. Even in 2023, after a reduction in allocation at RE 2022-23, the Ministry has spent only 23.2% of the allocation under this head till January, 2023. The Committee recommends that the Ministry may work on the schemes under this head with a renewed zeal to ensure optimal utilisation of allocated funds. The Ministry must hold meetings with the State Government Departments concerned to understand their lack of interest in full utilisation of the funds available under this head. The feedback thus collected may be used to make the training and road safety schemes more effective.

(Para 153)

### **Road Safety**

- **Steps taken by the Ministry**

The Committee appreciates the work that MoRTH/NHAI is doing to make NHs across the country better in terms of safety. The Committee, however, notes that India contributes to about 10% of all road accident deaths worldwide, with just 1% of the world’s vehicles. A World Bank Report estimates that Road crash and serious injury cost to be 7.5% of India’s GDP. The poor households suffer a huge socio-economic burden of

accident deaths due to loss of income. The Committee is also aware that the 'Right to Safe Travel' has been recognized to be the fundamental right of every citizen in a recent Patna High Court ruling. In light of this, the Committee recommends that the Ministry needs to formulate and execute a multi-pronged road safety strategy on a war-footing. Allocation for maintenance of NHs and road safety is crucial and is not increasing commensurately with the overall allocation of the Ministry. The budgetary allocation and expenditure for road maintenance and road safety schemes needs a major boost.

(Para 160)

The Committee further suggests that the Ministry may review the progress made regarding the implementation of the National Road Safety Policy, 2010. The Ministry may make necessary modifications in the same and lay stress on technological measures that can be employed to lower road accidents in the country. The Ministry may also look into the reasons for the consistent increase in accident severity over the years.

(Para 161)

- **UN Decade of Action for Road Safety 2021-30**

The Committee recommends that the Ministry may also target a quantifiable amount of reduction of road accident deaths in the ongoing decade. The Ministry may come up with a detailed year-by-year plan with measurable targets and ensure that the plan is scrupulously implemented. The Ministry may request the State Government Departments concerned to coordinate and assist in the matter to reduce road accident deaths on all roads in the country. The State Governments may be requested to identify and rectify black spots on roads other than National Highways. The Ministry/ NHAI may provide assistance to the relevant departments regarding the strategies to be followed for temporary and permanent rectification of such black spots on State roads. The Ministry/NHAI and State Government Departments, where concerned, should come up with proposals for construction of flyovers for rectification of black spots. The Ministry may also request State Governments to work on the maintenance and adequate lighting of State roads.

(Para 163)

- **Five Year Vision Plan (2019-24) for Infrastructure Sector**

The Committee appreciates that the Ministry has overall made good progress with regard to the goals laid out in the Five Year Vision Plan (2019-24) for Infrastructure Sector. The Committee, however, observes that the Ministry is lagging behind in the achievement of targets against some crucial recommendations pertaining to road safety. The Committee may be apprised regarding the action that the Ministry plans to take to make up for the slow progress in the operationalization of ATMS and the development of 60,000 km of safe and efficient NH network.

(Para 165)

The Committee notes that the Ministry has developed 38,787 km of 'safe and efficient' NH network in the country as against the 2019-24 target of 60,000 km. The Ministry may inform the Committee regarding the average number of accidents and road deaths happening on these safer NHs, as compared to the rest of the NH network.

(Para 166)

The Committee notes that the Expenditure Finance Committee has recommended the implementation of the State Support Programme for Road Safety at a cost of USD 1 billion, with 50% contribution from Government of India and remaining 50% financed equally by the World Bank and the Asian Development Bank. From the World Bank's latest Implementation Status & Results Report of this programme, the Committee observes that the project targets to reduce 30% annual accident deaths in the participating States by 2028. The Committee feels that the Ministry should target a more ambitious 50% reduction till 2030, in tune with the UN resolution on road safety. The Committee recommends that the Ministry may provide similar support to all the remaining States with clearly defined targets of reduction.

(Para 167)

- **Road Accident Statistics**

The Committee notes that 1,481 people lost their lives in 2021 in accidents on roads with potholes. This underscores the urgent need to maintain the roads in the country in a better shape. The Ministry may ensure an extensive audit of NH stretches wherein accidents have taken place to record the state of maintenance at the time of the accident. Suitable action may be taken against the contractor/ organisation responsible for NH maintenance in cases of negligence and poor maintenance.

(Para 169)

As per 'Road Accidents in India 2021', a majority of road accidents fatalities are due to over-speeding, drunken driving and wrong-side driving. Such dangerous driving behaviour can be curtailed through better training of drivers, awareness campaigns and enforcement. The Committee recommends that the Ministry may strengthen its efforts in this direction.

(Para 170)

The Committee feels that the Ministry needs to undertake more efforts towards improving the prospects of pedestrian safety on National Highways. The vulnerable points may be properly barricaded to prevent the entry of pedestrians. The Committee recommends that the Ministry/NHAI may ensure that adequate provisions are made for vehicular underpasses/ flyovers/ foot over-bridges etc. to permit pedestrians and villagers living on either side of the highways to cross the road in a safe manner. Special focus may be laid on ensuring provisions for foot over-bridges near educational institutions such as

**schools and colleges. Such unsafe crossings pose a safety risk to both the pedestrian as well as the drivers and passengers. A detailed survey may be carried out to assess the requirements for underpasses/ over-bridge especially in the case of greenfield projects.**

**(Para 178)**

**The Committee notes that two-wheelers make up for about 41% of all road accident fatalities in the year 2021. The Committee feels that road safety awareness campaigns promoting the usage of helmets would go a long way in saving the lives of two-wheeler drivers. The Ministry may consider levying penalties for two-wheelers plying on expressways using automated systems to improve effective enforcement. The Committee further recommends that the Ministry must ensure proper signage, safety grills on dividers/ boundaries and lighting of highways in coordination with the departments concerned. The Ministry may ensure that high mast lights are installed at all junctions on NHs across the country. A robust audit mechanism may be put in place to ensure that these road safety provisions are well-maintained across the NH network in the country.**

**(Para 182)**

**The Committee notes that unlike the other countries listed in the table above, the total number of deaths estimated by WHO is significantly higher than the total deaths reported by India. The Committee feels that this could point to a significant underreporting of road accident deaths in the country. Accurate statistics are required to enable decisive policy prescriptions for road safety. The Committee desires that the Ministry may look into the methodology used by WHO to arrive on their estimated figures. Urgent remedial actions may be taken to plug the gaps that seem to exist in the collection of accident-related statistics.**

**(Para 184)**

- **Role of citizens**

**The Committee feels that road safety awareness is a key component to reducing road accident deaths in India. The Ministry should launch extensive public awareness campaigns to educate the public about the importance of safe driving and road safety regulations. This will help create a culture of safe driving in India. NH users may also be made aware of the various available options to submit feedback regarding safety provisions, or lack thereof, on National Highways. Crowdsourcing of data regarding road safety lapses will help the Ministry to proactively prevent road accidents.**

**(Para 186)**

- **Role of State Governments**

**The Committee notes that about 64 percent of road accident fatalities take place on roads other than National Highways. This highlights the need for the Ministry to guide the**

**State Government Departments concerned with improving the safety prospects of State Highways and other local roads.**

(Para 187)

- **Other road safety related issues**

**The Committee desires to know whether the reduced CRIF allocation to MoRTH at BE 2023-24 will impact the amount of funds earmarked for road safety works, as compared to FY 2022-23.**

(Para 189)

**The Committee feels that the existing traffic offence penalties are not enough of a deterrent for people who drive/ ride in premium luxury vehicles. To curb incidents of overspeeding and other violations in such cases, the Committee recommends that the Ministry should implement a vehicle-cost/income based traffic penalty system. Such a system is already in place in countries such as Finland. The fines should be a factor of the vehicle cost or the income of the vehicle owner. Repeat offences should also be charged in a similar manner. The present penalty charges may be kept as minimum charges.**

(Para 190)

**The Committee desires to know the reasons why no dedicated entry and exit lanes are provided on most National Highways in India. The Ministry may inform whether it has conducted any cost-benefit analysis of mandating entry and exit lanes for NHs across the country. The Ministry may also study the positive impact of the same in terms of road safety.**

(Para 191)

**The Committee recommends that the Ministry may work in coordination with concerned local authorities to tackle the problem of stray animals trespassing National Highways, to mitigate accident risk. Authorities should erect barriers in stretches where this problem is faced frequently to prevent stray cattle and other animals from coming onto NHs. The Ministry should also explore other possible solutions to minimise such incidents across the entire NH network in the country. The Ministry may also tie up with local veterinary hospitals and animal rescue centers every hundred kilometers or so, to treat injured animals and to minimise the incidents of accidents involve stray animals and cattles.**

(Para 192)

**The Committee took up the issue of frequent accidents at a flyover on NH-58 on the Gogasar bypass connecting Sujangarh city. The Committee recommends that suitable rectification measures may be taken to prevent accidents on the stretch in the future.**

(Para 193)

**The Committee recommends that the Ministry may look into the areas in which India lags behind the highway networks of developed countries. The Committee suggests that the Ministry may conduct a detailed study regarding the lessons that can be learned from the road construction techniques and safety provisions implemented in the safest highway networks in the world.**

(Para 195)

**The Committee recommends that the Ministry should ensure that regional officers, especially road safety officers and State Public Works Department (PWD) representatives, participate in district DISHA meetings. The DISHA meetings should cover the status of rectification of black spots and construction & maintenance of NHs in the district. This would enable coordination among the executive and the elected representatives to work in tandem toward improving the regional NH network.**

(Para 196)

**The Committee notes that Indian Roads Congress develops Standards, Specifications, Codes of Practices, Guidelines, and research-based state-of-the-art reports related to roads and bridges. Such guidelines play a vital role in deciding the quality of road safety provisions being implemented on Indian highways from an engineering standpoint. The Committee therefore recommends that the Ministry may ensure that sufficient budgetary allocation is made to IRC in order to ensure that the guidelines are developed after thorough research.**

(Para 197)

### **Driving Training Centres**

**The Committee desires to know the number of districts that have driver training facilities, be it DTCs, RDTCs or IDTRs. The Ministry may also furnish the number of districts in the country where no such facility is presently available. The Committee recommends that the Ministry may target opening driving training centres in all districts of the country since this basic facility must be accessible to all in order to improve their driving standards. The Ministry should come up with a timeline for this purpose and inform this Committee regarding the same.**

(Para 201)

**The Committee is of the view that improving driver training standards in India will have a major role in reducing accidents and fatalities on the roads. The Committee recommends that the Ministry should develop a standardised driver training curriculum that covers all aspects of safe driving, including lane discipline. This curriculum should be updated regularly to reflect changes in road safety regulations and best practices.**

(Para 202)



The Ministry may also assess the length of driver training programs in terms of adequacy to prepare drivers for the challenges they will face on the road. The length of these programs may be increased to ensure that drivers receive comprehensive training. The Ministry may put in strict checks to ensure that all driving training centres meet the specified standards before they are allowed to operate. This can include requirements for the qualifications of driving instructors and the quality of training facilities. The Committee recommends that the Ministry may mandate all drivers to undergo a comprehensive driver training program and pass a standardised driving test before they are allowed to obtain a driver's licence.

(Para 203)

The Committee notes that the Government is planning to pilot a program to offer ratings for drivers, similar to credit ratings, wherein safe driving would be rewarded by a high score. The ratings can be used by insurers to offer lower premiums and by logistics companies while hiring drivers for commercial vehicles as well. The Committee appreciates this innovative program and recommends that the Ministry may introduce comprehensive driving training programmes wherein those who complete it get a high default rating. The incentive of lower insurance premium, increased job opportunities etc. could act as an impetus for drivers to get well-trained. Those with lower scores should be offered refresher courses.

(Para 204)

The Committee further recommends that the Ministry may consider sponsoring the stay arrangements of underprivileged drivers, who must travel long distances from their homes to get trained at a driving training centre.

(Para 205)

The Committee desires to know about the reasons why the Regional Driving Training Centers at Vidarbha and Amravati have not been operationalised despite completion. The Ministry may take urgent action to ensure their operationalisation at the earliest.

(Para 206)

### **Speed limit on National Highways**

The Committee notes the observation of the United States Federal Highway Administration (FHWA) that variable speed limits reduce up to 34% of crashes on freeways. The Committee recommends that the Ministry/NHAI may analyse the feasibility of variable speed limits on NHs in India on a pilot basis since speed limits should also factor in constantly varying factors such as traffic congestion and visibility.

(Para 208)



The Committee notes that overspeeding accounts for a large number of deaths in road accidents. The Committee recommends that the Ministry may look into the size and specifications of speed limit signages. It is sometimes seen that the speed limit signs are easy to miss, or are partially covered by foliage and hoardings. It should be ensured that drivers do not have to actively look for speed limit signs in order to keep a track of the permitted speed limit. The Ministry may analyse the possible benefits of overhead signages for speed limits since this would offer better visibility to NH users in all lanes.

(Para 209)

### **Improvement in Signages**

The Committee is of the view that proper installation/ maintenance of signages is a low-cost exercise that can pay huge dividends in terms of enhancing road safety. The Committee recommends that the Ministry may introduce mandatory provisions to conduct regular inspections of signages on highways to identify any damage or maintenance needs. These inspections should be done by trained professionals who can assess the condition of the signages and recommend repairs or replacements. High-quality materials should be used for signages on highways to ensure their durability and longevity. The materials used should be able to withstand weather conditions such as wind, rain, and extreme temperatures. NHAI may provide an option in its Sukhad Yatra app to permit NH users to report a damaged or missing sign.

(Para 212)

The current practice of carrying out third-party road safety audits at the construction, operation, and maintenance stages is a positive step. The Committee recommends that NHAI should ensure that these audits are conducted periodically on all NHs and due focus is given to the inspection of road signages and other road safety provisions. Faded signages may be replaced at the earliest. The Committee desires to know what length of the NH network is inspected using a retro-reflectometer twice a year.

(Para 213)

NHAI should launch public awareness campaigns to educate road users on the importance and interpretation of road signages. This will help improve compliance and reduce accidents due to improper usage of road signages. NHAI could explore the possibility of using large displays at toll plazas to educate users about the meaning of various signages. The Ministry may approach the Ministry of Education to make basic knowledge of road signs a part of school curriculum.

(Para 214)

## **NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (NHIDCL)**

**The Committee appreciates that NHIDCL has shown a consistent increase in its expenditure since the last three years. The Committee notes that the share of funds being spent on land acquisition has decreased since 2020. The Ministry may inform the Committee regarding the factors that have permitted NHIDCL to bring down land acquisition costs in 2021 and 2022.**

(Para 217)

**The Committee further desires to know whether NHIDCL makes use of NHAI's technological solutions and pilot projects, in its road projects. The Committee recommends that the Ministry may ensure that NHIDCL also makes use of NHAI's Data Lake platform, Vendor Performance Evaluation System, Sukhad Yatra app etc. to enhance its output. The Committee further recommends that NHIDCL may also come up with rating of NH stretches under its purview. The ratings may be used to identify contractors with poor performance history.**

(Para 218)

## **SCHEME ON WOMEN'S SAFETY ON PUBLIC ROAD TRANSPORT**

**The Committee notes that for the last five years barring the year 2020-21, there has been a consistent pattern of under-utilisation of funds under the Scheme on Women Safety on Public Road Transport. The Ministry must take concrete steps to encourage better participation of State Governments under this scheme. The Ministry may invite feedback from States which show lack of interest in the scheme, regarding the reasons for the same.**

(Para 222)

**The Committee desires to know whether the Ministry has put in place any mechanism under the scheme to check the efficacy of the vehicle tracking platform and the emergency button. The Committee recommends that the Ministry may allocate funds for creating awareness about the safety provisions in place for women on public transport. The Ministry may explore the possible usage of artificial intelligence to identify instances of mishaps on public transport based on route, vehicle speed etc.**

(Para 223)

**The Committee feels that more needs to be done in order to improve the level of safety of women on public road transport. The Committee, therefore, recommends that the Ministry may consult relevant experts, stakeholders and Departments in order to come up with innovative schemes to improve women safety on public transport. This would enable the Ministry to make optimal use of the funds available under this head.**

(Para 225)

## **DELAYS IN ROAD PROJECTS**

**The Committee understands that road infrastructure development is a complex process that involves various stages and requires the coordination of multiple stakeholders. The Committee notes that land acquisition is one of the bottlenecks that has been a primary cause of delays in road infrastructure projects. The Committee notes that the Ministry has taken several initiatives to streamline land acquisition. Still, land acquisition is repeatedly at the forefront of the issues causing delays in road projects. The Committee suggests that the Ministry may highlight the exact stages of the present land acquisition process wherein delays take place. The Committee also desires to be apprised of the amount of cost overrun that the Ministry has incurred on account of delayed projects in the last 5 years.**

**(Para 232)**

**The Committee desires to be apprised of the reasons for which Chhattisgarh accounts for about half the number of projects delayed more than 5 years. The Ministry may highlight the specific remedial measures being taken to avoid such delays in Chhattisgarh in the coming years.**

**(Para 233)**

**The Committee feels that ongoing road projects should be given a higher priority than award and construction of new projects. Especially in case of brownfield projects, delays in completion cause discomfort to the public in terms of traffic jams and pollution. Besides, completing the ongoing projects on priority will help prevent time and cost overruns in future NH projects. In light of this, the Committee recommends that the Ministry may assign high priority to these projects and all-out efforts may be made to avoid any further delays.**

**(Para 234)**

**The Committee notes that land acquisition is one of the most consistent reasons behind delays in road infrastructure projects in the country. The Ministry may examine the effectiveness of the existing legislative framework and propose amendments to the same, if needed. The Ministry may establish a dedicated cell to track and tackle delays in land acquisition in all NH projects. This dedicated cell may take up delays in land acquisition at the highest level with the concerned authorities and coordinate with all stakeholders in the process. The Committee suggests that the Ministry may prescribe strict timelines for those stages of the land acquisition process where doing so is feasible.**

**(Para 235)**

**The Ministry may also analyse whether the presently posted strength of officials under its various departments/ organisations is sufficient. It may be studied if the vacancies**

existing in the Ministry and its organisations are also contributing to delays in the completion of road projects.

(Para 236)

The Committee highlighted delays in various NH projects in the country. These include Bangalore to Amravati access-controlled Highway; Belagavi to Goa road; Panjim to Goa border road; Pulgaon to Jalna NH-753; Talegaon to Pulgaon NH-347; NH projects in Rayachoti-Vempalli and Vempelli-Porumamilla; proposed Bhatinda-Ajmer Economic Corridor; upgradation of NH-52 from Haryana border to Salasar. The Committee recommends that the Ministry may take urgent action to complete such delayed projects across the country.

(Para 237)

## MISCELLANEOUS

### Accountability of Contractors/ Concessionaires, Consultants, Engineers etc.

The Committee observes that the Ministry has not furnished any information regarding provisions for the punitive action for poor quality of work, delays etc. in road projects carried out through HAM or BOT mode. The Ministry has also not made any mention of the punitive measures in place, if any, for approving authorities, in cases of gross negligence or mala fide. The Ministry may apprise the Committee in this regard.

(Para 240)

The Committee also desires to know whether the DPR consultants are liable for punitive action till the physical completion of the respective NH project. The Committee recommends that the DPR consultant should be made accountable for the road project till the completion of the same.

(Para 241)

The Committee may be apprised regarding how the vendor rating being generated by the Vendor Performance Evaluation System. The Committee recommends that NHAI may make user satisfaction one of the parameters for assessing the performance of the vendors. NH users may be asked to submit their feedback to enable the assessment of user satisfaction. The Committee feels that a robust Vendor Performance Evaluation System can help the Ministry identify under-performers and habitual litigants. NHAI may give some weightage to these vendor ratings while awarding road projects instead of awarding the projects purely based on lowest bid amount. This would give further incentive to road contractors for high-quality, time-bound execution of NH projects. The Committee also

suggests that the Ministry may roll out the Vendor Performance Evaluation System for vendors working on NH projects other than those of NHAI.

(Para 243)

### **Preparation of DPR**

The Committee notes that many road projects run into delays and become accident-prone as local requirements are not duly factored in while preparing DPR. The Committee recommends that the Ministry should mandate consultation with the local community, local Executive Engineers, MP and MLA etc. at the stage of DPR preparation. The approving authorities may consider the feedback received from the local representatives and ensure that the suggestions are not dropped with only cost savings in mind. Giving due consideration to local factors during preparation of DPRs will permit smoother execution of road projects which would be better suited to meet long-term future needs.

(Para 245)

### **Bid Secrecy**

The Committee recommends that given the seriousness of the issue, an extensive third-party audit of the procurement platform may be conducted. The Committee further suggests that robust technical solutions may be employed to ensure bid secrecy and prevent bid-rigging. The procurement platform should not have any possibility of premature access to bid data even to the system/ database administrators.

(Para 247)

### **Bogus Bank Guarantees**

The Committee recommends that the Ministry may request the banks to review the present mechanism for e-verification of Bank Guarantees. The Ministry may take strict legal action against the culprits and guilty concessionaires may be debarred from future projects. The Committee further recommends that NHAI and NHIDCL may also get all the Bank Guarantees of its projects re-verified to detect any more such cases. Any ongoing contracts with the guilty concessionaires should be cancelled/ terminated so as to deter such frauds in the future.

(Para 250)

### **Provisions for service lanes for all National Highways**

The Committee recommends that the Ministry should explore the possibility of a policy to bar construction works on land next to upcoming Greenfield National Highways till a certain length both sides. This may be done for right of way of service roads in the future. The Committee further recommends that the Ministry should have compulsory provisions for service roads since it improves safety and reduces slow traffic on NHs.

(Para 252)

### **Provisions for utility ducts and installation of cameras at construction stage National Highways**

The Committee recommends that the Ministry should install CCTV cameras at frequent distances during the construction of road projects. This will allow NHAI officers, engineers, and other stakeholders, including public representatives, to closely monitor the progress of ongoing road projects. By doing this, ground-level monitoring can occur 24x7 while also keeping a check on encroachments on NH land. After construction, these cameras can be used for the purpose of monitoring traffic and road accidents.

(Para 254)

The Ministry may explore the feasibility of creation of utility ducts at the construction stage itself. The utility ducts can then be utilised not just for OFC infrastructure but installation of CCTV cameras on highways, gas pipes, electric cables etc. This would enable the safe and efficient delivery of essential services to customers with ease of maintenance and repair. The Ministry may monetise the utility ducts over time to recover the infrastructure cost associated with the same.

(Para 255)

### **Road Asset Management System**

The Committee recommends that the Ministry should ensure the timely completion of the RFP evaluation process for the collection of Road Inventory and Pavement condition data of all National Highways. This data would be crucial in helping the Ministry assess and prioritise the road maintenance requirements across the entire NH network. The Committee feels that this would lead to better maintenance of India's NH network.

(Para 257)

### **Greening of Highway Corridors**

The Committee appreciates that the Ministry has planted 91% of its targeted number of plants in 2022-23, till January, 2023. The Committee recommends that the Ministry may put in place a suitable monitoring mechanism to ensure that the plants are duly watered and maintained. Visibility of signages may be ensured from time to time to ensure that plants do not grow to the extent of covering the signages. NHAI can involve local communities and NGOs to ensure better implementation of the plantation program. The plantation activities must focus on planting local best performing plant species in that agro-climatic zone. The Committee feels that local communities can be trained and employed to maintain the plantations, which will provide them with additional income opportunities. The Green Highways Policy is a great initiative by NHAI, and the program

can be further strengthened by implementing these recommendations. The plantation program not only enhances the beauty of highways but also contributes to environmental sustainability and provides numerous benefits to local communities.

(Para 267)

### **Sustainability Initiatives**

The Committee notes the sustainability initiatives undertaken by NHAI. The Committee recommends that it may continue to focus on sustainable development and environment protection in its road infrastructure projects. NHAI's involvement of Self Help Groups (SHGs), Non-governmental Organizations (NGOs), and women in undertaking various sustainable development initiatives is a positive step. The Committee recommends that NHAI may ensure that sustainable practices form a core part of the NHAI's entire process, instead of just being a compliance formality. Enhanced focus may be laid on sustainable principles for projects that are located in or around protected areas. The Committee suggests that NHAI may work on further increasing the involvement of various stakeholders such as SHGs, NGOs, private sector, Forest Department etc. for sustainable development and expansion of NH network.

(Para 269)

### **Need for strict measures to deter overloading**

The Committee desires to be apprised as to how the Ministry plans to penalise overloaded vehicles at the toll plazas with MSWIM infrastructure. The Ministry may examine the feasibility of charging toll/penalty according to the tonnage of the vehicle. The Committee feels that this would help deter overloading besides generating revenue. This would also help in keeping the NHs in a better condition as overloaded vehicles cause a lot of damage.

(Para 271)

The Committee recommends that the Ministry may explore the possibility of equipping commercial vehicles with a device that can automatically immobilise the vehicle if it is carrying weight beyond the specified limit.

(Para 272)

### **Adoption of Electric Vehicles in the country**

Electric vehicles have numerous benefits, including reduced air pollution and reduced dependence on imported petroleum products. The Committee acknowledges the efforts made by the Ministry of Road Transport & Highways and the Ministry of Heavy Industries to promote electric vehicles in India. The Committee suggests that more steps need to be taken to accelerate the shift towards electric vehicles. The Committee observes that several countries, such as Norway, have reached high levels of adoption of EVs by



incentivising vehicle owners to make the shift. The Ministry should consider exempting electric vehicles from road tax and offering discounts at toll plazas to incentivize their adoption. The Ministry may carry out the cost-benefit analysis of providing such incentives and proceed accordingly.

(Para 275)

### Tendering of Road Projects

The Committee notes that NHAI has issued directions for regular quality inspection of projects awarded to substantially lower bids. The Committee recommends that NHAI may analyse the shortcomings in its project cost estimation methodology in cases where projects awarded to substantially lower bids are completed with high quality standards. The Committee further desires that the Ministry may formulate guidelines for more frequent quality checks in cases where a contractor sublets the project. The Ministry may inform about the mechanism in place, if any, to ensure that projects are not sublet except as per the rules and guidelines in this regard.

(Para 277)

### Vehicle Fitness Certificate

The Committee desires to be apprised of the present procedure for issuance of a vehicle fitness certificate. The Committee recommends that the Ministry may work upon the ease of obtaining vehicle fitness certificate. The Ministry may permit issuance of vehicle fitness certificates at the town level as well, besides district headquarters. The requirement, if any, for the vehicle to be in the home district/State may be done away with.

(Para 279)

### Way Side Amenities

The Committee is pleased to note the planned development of state-of-the-art Way Side Amenities along National Highways. This would permit NH users to be well-rested and should lead to safer driving. The Committee recommends that the Ministry should establish a strong mechanism to ensure that Way Side Amenities are well-maintained for years to come.

(Para 281)

### Status of NH-744 from Kadampattukonam-Aryankavu

The Committee notes the details furnished by the Ministry pertaining to NH-744. The Ministry may inform the Committee regarding the targeted date for revision of DPR of the package-2 of the NH-744. The Ministry may ensure that villages are not divided in the middle and the villagers are put into inconvenience due to the difficulty in crossing the National Highway to access their agricultural field and other civic amenities. NHAI should



ensure that adequate number of Vehicular Under Passes (VUPs), Foot Over-Bridge etc. are built alongside the greenfield stretch for the safety of local citizens as well as NH users. It has been brought to the notice of the Committee that Vilakkupara Town will be completely wiped out due to the present alignment of the Highway and the people there are opposing the alignment vehemently. It is also learned that the people have given two different alignments to save the town and the livelihood of a large number of people. The Committee observes that the Greenfield Highways are for the people and for their well-being. It should not lead to large-scale eviction and destruction of their economic assets, factories and a large number of buildings and shops. The Committee, therefore, recommends that the alignment of Highway No. NH 744 may be appropriately changed to save the thickly populated Vilakkupara Town and its people. The Ministry may also ensure that adequate entry and exit points are provided at regular intervals to the local population through the service roads. The Committee desires that the Ministry may work out a targeted timeline for the completion of the project since it is already under bidding.

(Para 285)

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# Annexures

**Output and Outcome Monitoring Framework – MoRTH – 2023-24**

Financial Outlay (Rs in Crore)	OUTPUTS 2023-24			OUTCOMES 2023-24		
	2023-24	Output	Indicators	Targets 2023-24	Outcome	Indicators
<b>Roads Wing</b>						
2,69,928.57	1. Development of the NH road network across the country in all schemes	1.1 Total Road length (NHs) constructed in all schemes during the year (in Km)	12,500 km	1. Ease of mobility	1.1 % increase in 4 Lanes highways of total NH network	10%
		1.2 NH length constructed in North Eastern States during the year (in Km)	1,000 km		1.2 % Reduction in Single Lane / Intermediate Lane NHs	3%
		1.3 NH length constructed in Tribal Area during the year (in Km)	1,000 km			
	2. Private investment	2.1 Amount invested by Pvt. Sector Concessionaires in NH development under all PPP projects (in Rs Crore)	Rs. 30,000 cr	2. Increase in PPP contracts	2.1 PPP contracts awarded as % of total awarded length	30%
	3. Asset Monetisation of NHs	3.1 Amount of funds raised from monetization of developed NH stretches (in Rs Crore)	Rs. 35,000 cr	3. Additional Resource Mobilization	3.1 % of Budgetary outlay	15 %
	4. Road Safety	4.1 Removal of black spots on NHs (No.)	425 no.	4. Reduction in accidents	4.1 % reduction in Accidents on Y-O-Y basis on NHs	--%
		4.2 Road Safety Audit of NHs conducted during the year (in Km)	16,000 km			

**Output and Outcome Monitoring Framework – 2023-24**

Outlay Rs in Crore	OUTPUTS 2023-24			OUTCOMES 2023-24		
	Output	Indicators	Targets 2023-24	Outcome	Indicators	Targets 2023-24
	<b>Transport &amp; Road Safety Wing</b>					
Rs.330 crore	5. Setting up of Registered Vehicle Scrapping Facility (RVSF) and Inspection & Certification (I&C) Centres	5.1 No. of Automated Testing Stations (ATSS) setup in the States/UTs		5.1 Coverage of ATSS/ I&C Centres attained in States/UTs	5.1 % coverage (out of 36 States/UTs) of ATSS/ I&C Centres in the Country	6%
		5.1.1 No. of ATS Set up	25			
		5.1.2 No. of Inspection & Certification (I&C) Centres Set up	2			
		5.2 No. of Registered Vehicle Scrapping Facility (RVSF) established	20	5.2 Usage of the RVSF facilities in States/UTs	5.2 No. of Vehicles Scrapped in RVSF	20000
	6. Training of Road Safety Auditors	6.1 Number of Road Safety Audit Training programmes	5	6. Improved road safety	6. No. of Trained Road Safety Auditors	100
	7 Setting up and Operation of Institute of Driving Training and Research and Driving Training Centres	7.1 Number of Institutes of driving training and research (IDTR) setup in current FY	3	7. To provide quality training to private/commercial Vehicle drivers to improve road and environment safety in Driving Training Centres	7. No. of Driving Training Instructors trained/ Trainees trained for HML/LMV driving in current FY	75000
		7.2 Number of Regional driving training centre (RDTC) setup in current FY	10			
7.3 No. of small driving Training centre setup in current FY		20				

**Annexure-II (Ref. Para 28)**

<b>Output Outcome Monitoring Framework (FY 2022-23)</b>				
	<b>Indicator Matrix</b>	<b>Target Q3 2022-23</b>	<b>Achievement Q3 2022-23</b>	<b>Achievement %</b>
	<b>Road wing</b>			
	<b>Output indicators</b>			
	<b>1. Development of the NH road network across the country in all schemes including Bharatmala Pariyojana</b>			
Output	1.1 Total road length (NHs) constructed during the year (in km)	7500	5774	76.99
Output	1.2 Total Construction of new roads during the year (in Lane-km)	22500	19420	86.31
Output	1.3 Total road length (NHs) awarded during the year (in km)	8200	7123	86.87
Output	1.4 New Expressways constructed during the year (in km)	470	163	34.68
Output	1.5 New Economic Corridors constructed during the year (in km)	1220	1101	90.25
Output	1.6 New Inter and feeder corridors constructed during the year (in km)	640	457	71.41
Output	1.7 New Border and international connectivity roads during the year (in km)	105	78	74.29
Output	1.8 New Coastal and port connectivity roads during the year (in km)	70	25	35.71
Output	1.9 National Corridors efficiency during the year (in km)	510	130	25.49
	<b>2. SARDP-NE including Arunachal Pradesh package</b>			
Output	2.1 Total road length (NHs) constructed during the year (in km)	270	261	96.67

Output	2.2 Total road length (NHs) awarded during the year (in km)	210	0	0
	<b>3. NH Development in Aspirational Districts</b>			
Output	3.2 Road Length Constructed during the year (km)	490	1306	266.53
Output	3.3 Road Length Awarded during the year (km)	480	766	159.58
	<b>4. Improved quality and maintenance of road network</b>			
Output	4.1 Improved quality and maintenance of road network- Technology usage (Network survey vehicle) for completed road network (km)	25,000	38,326	153.3
Output	4.2 Road network undergoing maintenance (Periodical Renewal/IRQP) (in km.)	2500	4896	195.84
	<b>5. Enabling electronic toll collection</b>			
Output	5.1 RFID Tags issued (in Lakh) (cumulative so far)	545	636.87	116.86
	<b>6. Road safety</b>			
Output	6.1 Total number of black spots rectified during the year (No.)	750	264	35.2
Output	6.2 Road Safety Audit (km)	8500	20221	237.89
	<b>7. Construction of Bridge and ROBs</b>			
Output	7.1 No. of bridges built/upgraded (No.)	700	893	127.57
Output	7.2 No. of ROBs constructed (No.)	75	69	92
	<b>8. Public Private Partnership (PPP) Amount of money invested by Concessionaires in NH development under PPP projects</b>			
Output	8.1 PPP: Amount of money invested by	14000	16347	116.7

ut	Concessionaires in NH development under all PPP projects (in Rs crore)			6
Output	8.2 PPP: Amount of money invested by Concessionaires in NH development under PPP projects BOT(Toll) Projects (in Rs crore)	4500	1597	35.49
Output	8.3 PPP: Amount of money invested by Concessionaires in NH development under PPP projects HAM projects (in Rs crore)	9500	14750	155.26
	<b>9. Monetization of developed NH stretches</b>			
Output	9.1 Amount of money raised from monetization of developed NH stretches through TOT mode (in Rs crore)	2500	7518	300.72
Output	9.2 Amount of money raised from monetization of developed NH stretches by InvIT (in Rs crore)	3000	2850	95
	<b>10. Internal and Extra Budgetary resources</b>			
Output	10.1 Amount of money raised through IEBR (in Rs crore)	30000	798	2.66
Output	10.2 Amount of money raised through SPV (in Rs crore)	4500	3900	86.67
	<b>11. Incident management System (IMS) - i.e. providing Ambulances, Cranes, etc., for Bharatmala &amp; NHDP Stretches - Length of 4 or more lane roads having IMS (km)</b>			
Output	11.1 IMS operation during the year (km)	2000	1198	59.9
	<b>Outcome indicators</b>			
	<b>1. Road Density</b>			
Outcome	1.1 Road length (Lane km / 1,000 sq.km.)	98	81.20	82.86
Outcome	1.2 Road Per capita (Lane km/1,00,000 population)	26	22.06	84.85

Outcome	1.3 % Reduction in SL / IL NHs (%)	4%	0%	0
Outcome	1.4 % increase in 4 lanes highways	10%	4.52%	45.2
	<b>2. Road density in Aspirational district</b>			
Outcome	2.1 Developed Road length density (km / 1,000 sq.km.)	4.6	7.17	155.87
Outcome	2.2 Developed Road length density (km/1,00,000 population)	1.5	2.27	151.33
	<b>3. Improved connectivity and mobility</b>			
Outcome	3.1 Cumulative length of developed / completed stretches of NHs maintained during last 3 years and current year including PR/ IRQP length done during the same period on other NHs	66500	61402	92.33
Outcome	3.2 Percentage length of 3.1 w.r.t total NHs network length	45%	42%	93.33
	<b>4. ETC Penetration</b>			
Outcome	4.1 Percentage of toll collected through ETC	100%	97.6%	97.6
Outcome	4.2 Percentage of commercial vehicles using ETC at toll	52%	-	
	<b>5. Improved road safety through reduction in black spots</b>			
Outcome	5.1 Percentage decrease in accident on NHs compared to previous year	targets not amenable		
	<b>6. % of projects awarded under PPP</b>			
Outcome	6.1 BOT contracts awarded (% of total km awarded)	1.50%	0%	0
Outcome	6.2 HAM contracts awarded (% of total km awarded)	28.50%	15%	52.63
	<b>7. Debt- service coverage ratio (DSCR)</b>			
Outcome	7.1 Debt- service coverage ratio (DSCR)	targets not amenable	-	
	<b>Transport wing</b>			
	<b>Output indicators</b>			
	<b>1. Create road safety awareness among the general public through various publicity measures.</b>			



Output	1.1 Number of events/seminars/ exhibitions etc. relating to Road Safety organized at public places including School, colleges etc	105	112	106.66
Output	1.2 Number of NGOs to be partnered with to create awareness on road safety	105	62	59.04
	<b>2. Setting up and operation of vehicle inspection centre and Authorised vehicle scrapping facility</b>			
Output	2.1 No. of I&C Centres to be operationalized	3	0	0
Output	2.2 No. of Authorised vehicle scrapping facility to be operationalized	targets not amenable		
Output	2.3 No. of Vehicles scrapped (HMT)			
Output	2.4 No. of Vehicles scrapped (LMV)			
	<b>3.Physical and financial performance of STRU's</b>			
Output	3.1 Fleet strength (No.)	targets not amenable		
Output	3.2 Fleet operated (No.)			
Output	3.3 Fleet utilisation (%)			
Output	3.4 Occupancy ratio (%)			
Output	3.5 Profit/Loss percentage (%)			
Output	3.6 Percentage of public service vehicles where Panic Button has been installed in regards with women safety concern (from 1st Jan 2019.)			
	<b>4. Setting up of Driving Training Institutes</b>			
Output	4.1 Number of Institute of driving training and research (IDTR) setup	4	6	150
Output	4.2 Number of Regional driving training centre (RDTC) setup	2	5	250
Output	4.3 No. of small driving centre setup	1	9	900
	<b>Outcome indicators</b>			
	<b>1. Publicity on road safety among the citizen and to create behavioural changes towards road safety</b>			
Outcome	1.1 Percentage of reduced road accidents per lakh population	targets not amenable		
Outcome	1.2 Percentage of reduced road accidents per 10,000			

me	vehicles			
Outco me	1.3 Percentage of Total road deaths per lakh population			
Outco me	1.4 Percentage of total road deaths per 10,000 vehicles			
	<b>2. Creation of eco system for environmentally friendly vehicles and economic benefits for the country</b>			
Outco me	2.1 Percentage of vehicles passed the inspection test	targets not amenable		
	<b>3. Improved performance of the fleet by deployment of IT services and Intelligent transport system</b>			
Outco me	3.1 No of CNG Vehicles increased	targets not amenable		
Outco me	3.2 No of electric vehicles increased			
Outco me	3.3 Percentage increase in Number of vehicles with GPS tracking			
	<b>4. To provide quality training to commercial vehicle drivers to improve road and environment safety.</b>			
Outco me	4.1 No. of Trainees trained for LMV driving for public.	135000		
Outco me	4.2 No. of trainees trained for HMTV driving for public.			
Outco me	4.3 No of trainees for refresher driving course			

**Annexure-III (Ref. Para 60)**

<b>Sl. No.</b>	<b>User Ministry</b>	<b>Project Name</b>	<b>Length (in km)</b>	<b>Stage</b>	<b>Tentative Award Plan (For projects under DPR)</b>	<b>Completion Date (Project)</b>	<b>Tentative Cost (in Rs. Cr.)</b>
1	<b>M/o Steel</b>	Keonjhar-Dubri	92.0	DPR in progress	Jun-23	Dec-25	2,759.1
2	<b>M/o Steel</b>	Widening to 4L from Jagdalpur to Chandili	4.0	DPR in progress	Jun-23	Dec-25	189.1
3	<b>M/o Fertilizers and MoPSW</b>	M/o Fertilizers - Construction of road over bridge on NH-66 b/w Mangalore Chemicals and Fertilizers plant and new Mangalore port, Mangalore, Karnataka  MoPSW - Construction of 4 lane flyover bridge from KIOCL junction to Balkampady along NH-66	4.0	DPR in progress	Mar-24	Sep-26	110.3
4	<b>MoPSW</b>	4-Lane Road connectivity to NH 16 from Bhavanapadu Port	17.8	DPR in progress	Mar-24	Sep-26	671.8
5	<b>MoPSW</b>	Four laning of NH 966 B connecting	10.0	DPR in	Mar-24	Sep-26	503.9

		W/Island to Kundanoor (8 KMs) to be implemented by NHAI		progress			
6	<b>MoPSW</b>	Alternate alignment to connect NH 216A to NH-65 bypassing Machilipatnam town	3.5	DPR in progress	Mar-24	Sep-26	44.0
7	<b>MoPSW</b>	Separate alignment is proposed for connectivity road from Mandwa to Alibaug	20.0	DPR in progress	Mar-24	Sep-26	340.4
8	<b>MoPSW</b>	Port boundary to Chevuru  Road Jn. Connecting to NH-16.  4 lane road in initial phase of 5.5 km length. (Ramayapatnam Port)	6.5	DPR in progress	Mar-24	Sep-26	245.3
9	<b>MoPSW</b>	Road Connectivity to Bhavnagar Port	35.0	DPR in progress	Mar-24	Sep-26	743.5
10	<b>MoPSW</b>	New Road over bridge from the proposed Goods shed to NH 179A	1.5	DPR in progress	Mar-24	Sep-26	110.1
11	<b>MoPSW</b>	Upgradation of existing road connectivity's	101.0	DPR in progress	Mar-24	Sep-26	1,831.4

		(NH548A & NH753F) from 2 lane to 6 lane till NH66 to both sides (Agardanda side & Dighi side)					
12	<b>MoPSW</b>	3 Grade Separators at Kolad, Indapore&Mangaon	3.0	DPR in progress	Mar-24	Sep-26	153.2
13	<b>MoPSW</b>	Upgradation/ expansion of 42 kms. SH-164 from Jaigad to Nivali to 4 lane road.	46.1	DPR in progress	Mar-24	Sep-26	835.9
14	<b>MoPSW</b>	Upgradation of Tuna Road from Two lane to four lane	37.0	DPR in progress	Mar-24	Sep-26	786.0
15	<b>MoPSW</b>	New alignment proposed - 12 kms. Karanja jetty to JNPT road (SH-348)	15.0	DPR in progress	Mar-24	Sep-26	255.3
16	<b>MoPSW</b>	Construction of Road Over Bridge(ROB) at LC-233	1.0	DPR in progress	Mar-24	Sep-26	63.7
<b>Total</b>			<b>397.4</b>				<b>9,643.2</b>

**Annexure-IV (Ref. Para 88)**

S. No.	Cadre	2018-2019			2019-2020			2020-2021			2021-2022			2022-2023		
		Sanctioned	In position	Vacancy	Sanctioned	In position	Vacancy	Sanctioned	In position	Vacancy	Sanctioned	In position	Vacancy	Sanctioned	In position	Vacancy
<b>Technical &amp; Non-Technical</b>																
1	Chief General Manager (except Finance)	42	26	16	35	26	9	36	28	8	37	35	2	37	33	3
2	General Manager (except Finance)	169	159	10	169	138	31	168	136	23	168	129	40	168	132	36
3	DGMs [Technical & Non-Technical]	323	138	185	322	132	190	322	173	149	322	203	119	322	212	210

4	Managers [Technical & Non- Technical]	418	215	203	418	200	218	418	184	234	326	184	142	326	185	141
5	Dy. Managers (Tech)	250	70	180	205	154	51	297	190	107	297	183	114	297	183	114
	<b>Total</b>	<b>1202</b>	<b>608</b>	<b>594</b>	<b>1149</b>	<b>650</b>	<b>499</b>	<b>1241</b>	<b>711</b>	<b>521</b>	<b>1150</b>	<b>734</b>	<b>417</b>	<b>1150</b>	<b>745</b>	<b>504</b>
	<b>Finance</b>	<b>2018-2019</b>			<b>2019-2020</b>			<b>2020-2021</b>			<b>2021-2022</b>			<b>2022-2023 (as on 31.01.2023)</b>		
6	CGM(Fina nce)	2	2	0	2	1	1	2	2	0	2	1	1	2	2	0
7	CGM/Fina ncial Analyst	1	1	0	1	1	0	0	0	0						
8	GM(F&A)	5	5	0	5	5	0	5	3	2	5	3	2	5	5	0
9	DGM(F& A)	17	13	4	17	11	6	16	10	6	16	9	7	16	8	8
10	Manager( F&A)	46	5	41	46	3	43	35	4	31	35	4	31	35	1	34

11	Dy. Manager (F&A) /Accounts Officer	40	8	32	40	6	34	70	6	64	70	5	65	70	48	22
12	AM (F&A) Jr. Accounts Officer	118	101	17	118	100	18	100	100	0	100	97	3	100	52	48
13	Accountant	80	85	0	88	86	2	88	86	2	88	84	4	88	84	4
14	Cashier	1	0	1	1	1	0	1	1	0	1	0	1	1	0	1
	<b>Total</b>	<b>310</b>	<b>220</b>	<b>95</b>	<b>318</b>	<b>214</b>	<b>104</b>	<b>317</b>	<b>212</b>	<b>105</b>	<b>317</b>	<b>203</b>	<b>114</b>	<b>317</b>	<b>200</b>	<b>117</b>



**Awarded R&D Projects (FY 2022-23)**

1. “Research proposed on Optimization of Coir Geotextiles based on its form for low-volume rural road Construction” for an amount of Rs. 3.4 lakh, which is to be carried out by IIT Madras.
2. “Developing implementable Passenger Car units (PCU) for field Usage and Nationwide Transferability” for an amount of Rs. 22.75 lakh, which is to be carried out by IIT BHU.
3. “Developing a Data-Driven Practice Guidebook on Mid-term and Long-term Freight Traffic Forecasting in India” for an amount of Rs. 21.625 lakh, which is to be carried out by IIT BHU.
4. “Development of Fixed Time Signal Design Standards for Heterogeneous and less disciplined traffic conditions” for an amount of Rs. 28.5 lakh, which is to be carried out by IIT Madras.
5. “Development of Codal Guidelines for Performance Based Mix Design based on Marshall Mix Design (for Plant Produced Mixes)” which is to be carried out under Ministry’s Chair Professor in IIT BHU.
6. To establish MoRTH Chair Professor, Ministry has signed a fresh MoU with JNTUA on 22nd June, 2022 for academic collaboration, research & development, teaching and training in the area of Development of Highway sector. The Chair Professor will act as a strategic advisor to Ministry in areas of Bridge and Tunnel Engineering relevant to Road Transport & Highway to conduct M.Tech. Program in Bridge and Tunnel Engineering at JNTUA with the financial support of Ministry of Road Transport and Highways.

**R&D Projects proposed to be taken up in subsequent financial year FY 2022-23 & 2023-24.**

1. “Development of Performance Grade (PG) Bituminous Binder Classification system for India”
2. “Development of Standardised Design and Drawings of a Three Radius Pipe Culverts for Small Crossings”
3. “Instrumentation & Real Time Monitoring of Stability of Hill Slopes- A Pilot Study”
4. “Use of Fiber Reinforced Polymer (FRP) Bars in Bridges & Structures”
5. “Development of Damage Prediction-based Mechanistic-Empirical Pavement Design Guidelines for India”
6. Design and development of Fiber Optic based Sensing System for Structural Health Monitoring
7. Revolutionizing the Indian Roads Through Development of Green and Sustainable Bio-Asphalt Systems
8. Impact of Speed Limit on Road Capacity and Safety
9. Fiber Reinforced Concrete Pavements a sustainable approach

## **Annexure-VI (Ref. Para 156)**

Ministry has formulated a multi-pronged strategy to address the issue of road safety based on Education, Engineering (both of roads and vehicles), Enforcement and Emergency Care. Accordingly, various initiatives have been taken by the Ministry as detailed below: -

### **(1) Education:**

- i. To create effective public awareness about road safety, Ministry undertakes various publicity measures and awareness campaigns through social media, electronic media and print media. Further, Ministry implements a scheme to provide financial assistance to various agencies for administering Road Safety Advocacy.
- ii. Observance of National Road Safety Month/Week every year for spreading awareness and strengthening road safety.
- iii. A Certification Course for Road Safety Auditor has been mandated for technical officers of all road owning agencies under the Ministry up to the level of Superintending Engineer or equivalent.
- iv. To impart driving training, Ministry has been implementing a scheme for setting up of Institute of Driving Training & Research (IDTRs), Regional Driving Training Centres (RDTCs) and Driving Training Centres (DTCs) at state/district level across the Country.

### **(2) Engineering (both of Roads and vehicles)**

#### **2.1. Road engineering:**

- i. Road safety has been made an integral part of road design at planning stage. Road Safety Audit (RSA) of all highway projects has been made mandatory at all stages.
- ii. Road Safety Audit (RSA) of all National Highways (NHs) has been made mandatory through third party auditors/ experts at all stages i.e. design, construction, operation and maintenance etc.
- iii. High priority to identification and rectification of black spots /accident spots on National Highways.
- iv. Road Safety Officer (RSO) has been designated at each Regional Office of road owning agencies under the Ministry to look after RSA, blackspot rectification and other road safety related works.
- v. Five stretches of NH having higher number of accidents/blackspots are being developed as Model Safe Roads under each regional office of all road owning agencies under the Ministry.
- vi. Five project stretches under construction are being developed as Model Safe Construction Zones under each regional office of all road owning agencies under the Ministry.

vii. The electronic Detailed Accident Report (e-DAR) Project has been initiated to establish a central repository for reporting, management and analysis of road accidents data across the Country.

viii. Ministry and IRC has issued various codes and guidelines, time to time, to implement various road safety measures so as to minimize accidents on National Highways.

## **2.2 Vehicle engineering:**

i. The Ministry has notified regarding mandatory provision of an airbag for the passenger seated on the front seat of a vehicle, next to the driver.

ii. This Ministry, vide notification dated 15th February, 2022 has prescribed norms related to safety measures for children below four years of age, riding or being carried on a motor cycle. Further, it specifies use of a safety harness, crash helmet and restricts speed to 40kmph.

iii. Ministry has notified the mandatory fitment of following listed safety technologies from 01st July 2019.

For M1 category vehicles:

a. Seat Belt Reminder (SBR) for driver and co-driver.

b. Manual Override for central locking system

c. Over speed warning system.

For all M and N category vehicles:

a. Reverse Parking Alert System

iv. The Ministry has mandated Anti-Lock Braking System (ABS) for certain classes of L [Motor vehicle with less than four wheels and includes a Quadricycle], M [Motor vehicles with at least four wheels used for carrying passengers] and N [Motor vehicles with at least four wheels used for carrying goods which may also carry persons in addition to goods, subject to conditions stipulated in BIS standards] categories.

v. This Ministry has mandated approval of vehicles for protection of occupants in the event of an Offset Frontal Collision, for requirements for behavior of steering mechanism of the vehicle in a Head-on collision, Protection of Occupants in the event of Lateral Collision and for approval of vehicles with regard to protection of pedestrians and other vulnerable road users in the event of a collision with a motor vehicle.

vi. The Ministry has mandated speed limiting function/speed limiting device in all transport vehicles, except for two wheelers, three wheelers, quadricycles, fire tenders, ambulances and police vehicles.

vii. This Ministry has mandated compliance of the fully built buses (with a seating capacity of 22 passengers or above, excluding driver), manufactured on and after 1st April 2019, with the requirements of Fire Detection, Alarm and Suppression system. Further, compliance of type III buses of category M3 and school buses with fire alarm and protection system in occupant compartment has also been mandated, on and after 26th January 2023.

- viii. The Ministry has prescribed the format in which vehicle manufacturers issue the Road Worthiness Certification for registering motor vehicles.
- ix. Scheme for setting up one model Inspection & Certification Centre in each State/UT with Central assistance for testing the fitness of vehicles through an automated system.
- x. Ministry vide Notifications dated 23<sup>rd</sup> September, 2021 and 31<sup>st</sup> October, 2022 published the rules for recognition, regulation and control of Automated Testing Stations.
- xi. Notification vide GSR 272(E) dated 05<sup>th</sup> April, 2022, provides for mandatory fitness of vehicles only through an Automated Testing Stations. It mandates the fitness check of Heavy Goods Vehicles/Heavy Passenger Motor Vehicles only through automated testing stations with effect from 01st April 2023 onwards, and for Medium Goods Vehicles/Medium Passenger Motor Vehicles and Light Motor vehicles (Transport) with effect from 01st June 2024 onwards.
- xii. Ministry has formulated the Vehicle Scrapping Policy based on incentives/dis-incentives and for creating an ecosystem to phase out older, unfit polluting vehicles

**(3) Enforcement:**

- i. The Motor Vehicles (Amendment) Act, 2019 as stands implemented provides for strict penalties for ensuring compliance and enhancing deterrence for violation of traffic rules and strict enforcement through use of technology.
- ii. Ministry has issued notification G.S.R. 575(E) dated 11th August, 2021 for Electronic Monitoring and Enforcement of Road Safety. The rules specify the detailed provisions for placement of electronic enforcement devices (speed camera, closed-circuit television camera, speed gun, body wearable camera, dashboard camera, Automatic Number Plate Recognition (ANPR), weigh in machine (WIM) and any such other technology specified by the State Government).

**(4) Emergency care:**

- i. Ministry has published rules vide GSR 594(E) dated 29.09.2020 for the protection of Good Samaritan, who in good faith, voluntarily and without expectation of any reward or compensation renders emergency medical or nonmedical care or assistance at the scene of an accident to the victim or transports such victim to the hospital.
- ii. Ministry vide notification dated 25<sup>th</sup> February, 2022 has enhanced compensation of victims of Hit and Run motor accidents (from Rs. 12,500 to Rs. 50,000 for grievous hurt and from Rs. 25,000 to Rs. 2,00,000 for death).
- iii. The National Highways Authority of India has made provisions for ambulances with paramedical staff/Emergency Medical Technician/Nurse at toll plazas on the completed corridor of National Highways.

**Annexure-VII (Ref. Para 164)**

<b>S. No.</b>	<b>RID</b>	<b>Recommendation</b>	<b>Action Taken</b>
1	1176	100% States/UTs adopting Automation of vehicle fitness (Over 2000 centres would be required across the country)	GSR Notification 652 (E) dated 23.09.21 provides for recognition, regulation and control of Automated Testing Stations. The notification has come into force with effect from 25.09.2021. The draft of the amendments to GSR 652(E) were published on 25.03.2022 vide GSR 221(E). Finalization of the amendments is under consideration by MoRTH. GSR 272(E) dt 05.04.2022 provides for mandatory testing of motor vehicles through Automated Testing Stations only.
2	1177	100% States/UTs adopting Automation of driving licence testing (Over 1500 facilities would be required across the country)	The supporting Rules under Central Motor Vehicles Rules, 1989 have been notified. Implementation comes under the purview of State Governments
3	1178	Online services by Transport departments- 100% RTOs offering online services	All states are providing online transport services
4	1179	Designating 5 nos.of Centre of Excellence on Transport/ Road safety/ Infrastructure	A Centre of Excellence on Road safety sanctioned at IIT Madras
5	1180	100% vehicle tracking system (VTS) on transport vehicles from Accident prevention	The Ministry is providing funds for supporting setting of Backend Centres for monitoring of vehicles fitted with VTS system. As on 30.11..2022, Proposals have been received from 30 states/UTs, MoUs have been signed with 30 states/UTs and funds have been released to 30 states
6	1181	Aligning auto regulations with global standards by amendment of Rules and introduction of new standards	Ministry has been working to harmonise with the technical standards with widely accepted UN-regulations. For eg: Emission, safety related standards for components, safety standard of batteries, EMI, EMC, etc. However, standards are a dynamically changing process and the process of change is ongoing.
7	1182	100% Availability of digital payment infrastructure on buses/ taxis	Central Assistance scheme for strengthening the ITS in public transport system in the country, which has been further extended till 2026. The scheme provides financial assistance to STUs and state transport corporations for the provisions for electronic ticketing and fare collection systems which includes services like UPI integration, NCMC, Electronic ticket vending machines, smart cards etc. About 6 proposals have been received in the

			Ministry and the same are under consideration
8	1183	Promote Shared Mobility – 1 crores per day rides on shared mobility platforms	Ministry has issued the Motor Vehicle Aggregator Guidelines, 2020 on 27/11/2020. These guidelines provide guiding framework for State Governments for issuance of licences of Transport aggregators and regulating the business conducted by such aggregators in a fair and transparent manner.
9	1184	Use of Geo-Synthetics, Waste plastics, Fibre reinforced concrete in construction of 2,500 km of NHs	280 Km length completed in FY 22-23 as on 30.09.2022. Length completed in FY 20 – 541 km., in FY 21 – 162 km. and in FY 22 - 2029 Km. So far - 3012 km
10	1185	Taking up 15 nos. of new Research Schemes	4 nos. of new R&D schemes taken up in FY 22-23 as on 30.09.2022. 19 nos. of new R&D schemes taken up till FY 21 and 4 Nos. of R&D schemes taken up in FY 22.. Total R&D schemes taken up so far 27 nos.
11	1186	Incident Management System (IMS) i.e. providing Ambulances, Cranes, etc. for Bharatmala and NHDP Stretches having 4L road or more- 100% coverage	Cumulative length of 27186 km covered out of total 40502 km NHs having 4 or more lanes (i.e. around 67%)
12	1187	Creation of 500 nos. of Way side amenities (Highway Village/ Nest/ Mini Nest)	Wayside Amenities on developed corridors - 13 operational before 2019, 1 WSA developed in FY 20 and 3 WSA developed in FY 22-23. Highway Mini Nests - 395 Nos. developed before 2019. 87 Nos. developed in 2019-20, 33 developed in FY 20-21. 2 Nos. developed in FY 22-23, total developed so far is 517 Nos
13	1188	Cashless collection of Toll on National Highways – 100 % penetration of ETC on National Highways	ETC penetration is 97.6% as on 30.11.2022. Govt has declared all lanes of fee plazas onNHs as FASTag Lane w.e.f. 15th/16th Feb 2021 . The Govt. vide GSR 690( E) dated 06.11.20 has mandated fitment of FASTag in M&N Categories of Motor vehicles sold before 1st Dec, 2017 w.e.f. 01.01.21. Earlier Govt. vide notification no. GSR 1361(E) dated 02.11.2017 mandated all new vehicles sold on and after 1st Dec 2017 to have FASTag therefore now all M& N category vehicles should have FASTag.
14	1189	Connectivity of aspirational Districts & development of NH connectivity- Construction on 1,200 km of NHs	446 km completed upto FY 20, 1405 km in FY 20-21. 1292 Km. in FY 21-22. 654 Km completed during FY 22-23. 3797 km of length completed so far.
15	1190	Connectivity of aspirational Districts& development of NH connectivity- awarding	547 km awarded during FY 20, 1020 km in FY 21 and 816 Km during FY 22. 631 Km awarded during FY 22-23. Total 3014 km projects awarded since FY 20.

		development works on 1,250 km of NHs	
16	1191	Monetization of NHs (TOT), & InvIT, SPV, Securitization and raising 1 lakh crore	Till date, 21 stretches (1541 Km) have already monetized through TOT mode in 5 Bundles (1, 3, 5A1, 5A2, 7). A sum of Rs. 23,221 Cr. already realized and remitted to CFI. InvIT – NHAI has so far raised Rs. 7,350 crore in FY22 through InvIT mode. Rs. 2850 Cr. raised during FY 22-23 as on 30.11.2022 The SPV for Delhi Mumbai EW - Rs.14,006 Cr. has been drawn during 21-22. and Rs.3900 Cr. has been drawn during 22-23.
17	1192	Road Safety audit of 40,000 km length of NHs	16180 Kms audited in FY 22-23 as on 30.11.2022. Audited till FY 19 - 26,811 km, Audited during FY 20 & FY 21 - 9,580 km. and 14575 Km in FY 21-22
18	1193	Geo-tagged Integrated Road Accident Data collection in all 36 States / UTs	eDAR (erstwhile iRAD) Project has been rolled out in 36 States. The live accident entries in these 36 States are in progress by the stakeholders. Around 585,145 accident entries have been made till 31st December 2022. Application is deployed in the Cloud infrastructure (Web/ Application/ DB servers) in NIC data centre.
19	1194	Provision of Intelligent Traffic Systems on National Highways to strengthen Road safety- 15,000 km length of NHs covered with ITS / ATMS	ATMS operationalized in 300 km upto FY 20. ATMS implementation in 120 km TOT Project in Andhra Pradesh – Installation completed, IE inspection completed, Synchronization testing done, and system made operational. Two (02) bids has been received for ATMS Delhi - Agra NH 19 stretch (240Km.) within scheduled Bid due date i.e. 05/01/2022. PoC (Proof of Concept) conducted twice and technical evaluation is under process.
20	1195	Speed calming measures at 4,000 nos. of intersections	4849 Improved during FY 22-23 as on 30.11.2022. Improved during FY19-20 – 424 Nos., FY 20-21 - 1701 Nos. and during FY 21-22 - 6,179 Nos. Cumulative improved so far – 13153 Nos.
21	1196	Installation of Crash barriers on vulnerable stretches of NHs in Hilly terrains- Coverage of Vulnerable stretches of 2,500 km length of NHs in Hilly terrains	642 Kms covered in FY 22-23 as on 30.11.2022. Covered in FY 20 - 463 km. and during FY 20-21 & 21-22 - 1718 km. Cumulative so far is 2813 km
22	1197	Removal of 5,150 nos. of identified Black Spots (permanent measures)	225 Nos. of black spots rectified in FY 22-23 till 30.11.2022. Rectification Completed upto FY 19 - 362 nos., in FY 20 - 872 nos., in FY 21 – 1452 Nos. and in FY 22 - 1195 Nos. Cumulative so far – 4106 nos.
23	1198	Temporary remedial measures on black spots- 100% Immediate Rectification Measures in Black spots identified on quarterly	Temporarily rectification has been completed on 5803 Nos. of identified black spots.



		basis	
24	1199	Cashless Treatment of Road Accident Victims- 80% of victims assisted (Yearly target)	Ministry has notified a new scheme as Compensation to Victims of Hit & Run Motor Accidents Scheme, 2022 which shall come into force w.e.f 01.04.2022, vide notification GSR 163 (E) dated 25.02.22. The implementation of this Scheme is pan-India. Ministry has also published rules, vide notification GSR 162 (E) dated 25.02.22, regarding creation, operation and sources of the Motor Vehicle Accident Fund, to be used for providing compensation.
25	1200	State support programme to strengthen Road safety- 25% Reduction in Road Accident fatalities	Expenditure Finance Committee (EFC) has recommended the implementation of the Scheme for Rs. 7270 Crore (USD 1 Billion) with 50% of contribution from Government of India and the remaining 50% financed equally by the World Bank and Asian Development Bank through a loan to Government of India. Scheme is in process of approval of Cabinet.
26	1201	Development of Contractor database to identify underperformers, habitual litigants	NHAI has developed Vendor Performance Evaluation System. Vendors are required to conduct a self-assessment and upload the documents related to the project being executed by them on the portal. The submissions are reviewed at multiple levels by NHAI, based on which a raw rating is generated and it is shared with vendor [Consul. (AEs & IEs)]. Vendor is given an opportunity to appeal against generated rating. Mechanism for evaluation of contractors/concessionaires is under finalization.
27	1202	Develop 50 helipads near Highways for victim evacuation and commercial purposes	Preliminary Draft of Policy for development for Helipads shared with Ministry of Civil Aviation for comments and suggestions on the technical specifications. Further, the modalities for financing of the operations of the same is under discussion in MoRTH and NHAI.
28	1203	Development of 10 nos. of Take-off / Landing facilities on NHs	Work completed - 1 No. (In FY 21-22). Work in progress - 4 Nos.. Work where relocation plan under finalisation - 4 Nos.. Inspection done, work yet to finalise - 2 Nos.
29	1205	Strengthening connectivity to top 100 tourist destinations	Out of total 100 tourist destination about 87 Nos. of tourist destinations are either on NH or located within 10 Km of NH
30	1206	Development of 2,000 km Border & international connectivity roads/ Highways of Strategic importance	69 Km completed in FY 22-23 as on 31.10.2022. 1286 km completed upto FY 22
31	1207	Development of 2,000 km Coastal and Port Connectivity roads	21 Km completed in FY 22-23 as on 30.11.2022. 108 km completed upto FY 22
32	1208	Development of 44 Economic Corridors (9,000 km)	749 Km completed in FY 22-23 as on 31.10.2022. 2463 km completed upto FY 22



33	1209	Development of 2,500 km Access controlled Highways/ Expressways	135 Km completed in FY 22-23 as on 30.11.2022. 907 km completed upto FY 22
34	1210	Development of 60000 Km of safe and efficient National Highways Network in the country into a road network of international standards	4766 Kms. Developed in FY 22-23 as on 30.11.2022. 10237 km developed in FY 20. 13,327 km developed in FY 21. 10457 Km developed in FY 22. Total 38,787 km developed since FY 19-20.

**Annexure-VIII (Ref. Para 198)**

<b>Sl. No.</b>	<b>Project Type</b>	<b>State/UT</b>	<b>Location</b>	<b>Status</b>
1	IDTR	Andhra Pradesh	Vijayawada	Operational
2	IDTR	Andhra Pradesh	Dasri	Under construction
3	IDTR	Andhra Pradesh	Kurnul	Under construction
4	IDTR	Assam	Dispur	Operational
5	IDTR	Bihar	Aurangabad	Operational
6	IDTR	Chhattisgarh	Naya Raipur	Operational
7	IDTR	Haryana	Bahadurgarh	Operational
8	IDTR	Haryana	Bhiwani	Under construction
9	IDTR	Himachal Pradesh	Mandi	Operational
10	IDTR	Himachal Pradesh	Sarkaghat	Operational
11	IDTR	Jammu and Kashmir	Jammu	Under construction
12	IDTR	Jharkhand	Jamshedpur	Under construction
13	IDTR	Karnataka	Bellary	Operational
14	IDTR	Kerala	Eddappal	Operational
15	IDTR	Madhya Pradesh	Indore	Operational
16	IDTR	Madhya Pradesh	Chhindwara	Operational
17	IDTR	Maharashtra	Pune	Operational
18	IDTR	Maharashtra	Lature	Under construction
19	IDTR	Maharashtra	Nagpur	Under construction
20	IDTR	Manipur	Imphal	Under construction
21	IDTR	Nagaland	Dimapur	Operational
22	IDTR	Odisha	Jajpur,	Operational

23	IDTR	Rajasthan	Rajsamand	Operational
24	IDTR	Sikkim	Pakyong	Under construction
25	IDTR	Telangana	Karimnagar	Operational
26	IDTR	Tripura	Agartala	Under construction
27	IDTR	Uttar Pradesh	Kanpur	Operational
28	IDTR	Uttar Pradesh	Rai Baraily	Operational
29	IDTR	Uttarakhand	Dehradun	Operational
30	IDTR	West Bengal	Kolkata	Operational
31	IDTR	Delhi	Sarai Kale Khan	Operational
32	RDTC	Madhya Pradesh	Chhattarpur	Under construction
33	RDTC	Maharashtra	Vardha	Under construction
34	RDTC	Maharashtra	Nanded	Under construction
35	RDTC	Maharashtra	Amarawati	Under construction
36	RDTC	Maharashtra	Nagpur	Under construction
37	RDTC	Rajasthan	Ajmer	Under construction
38	RDTC	Rajasthan	Jaipur	Under construction
39	RDTC	Rajasthan	Hanumangarh	Under construction
40	RDTC	West Bengal	Kolkatta	Under construction
41	DTC	Assam	Silchar	New sanction
42	DTC	Odisha	Mayurbhanj	New sanction
43	DTC	Madhya Pradesh	Singrauli	New sanction
44	DTC	Madhya Pradesh	Dhar,	New sanction
46	DTC	Madhya Pradesh	Satna	New sanction
47	DTC	Karnataka	Koppal	New sanction

48	DTC	Uttar Pradesh	Kushinagar	New sanction
49	DTC	Uttar Pradesh	Bulandhahr	New sanction
50	DTC	Uttar Pradesh	Gazipur	New sanction

## Annexure-IX (Ref. para 268)

Road transport is a critical infrastructure for the economic development of a country. India has the second largest road network in the world of about 62.16 lakh km. Evidently, the roads and highways are the life line of any country/region or an economy and the spin offs of such an activity results in all round economic development and GDP enhancement. The resolve of the Ministry and its executing agencies is to give a thrust to infrastructure development besides protecting the environment by way of undertaking inclusive sustainable development will go in a long way in preserving and protecting our diverse eco-systems, protected areas, and eco-sensitive zones, fragile Himalayan, desert and coastal eco-systems etc.

### NHAI's Sustainable Vision:

The infra development and environment protection though are generally considered to be difficult tasks on the developmental canvas. However, taking this as a challenge, the Ministry and its executing agencies (i.e. NHAI, NHIDCL, State Govts., etc.), about 8 years back decided to proactively mainstream the tenets of sustainable development in its road network development. This was quite a major task for an organization wherein the main thrust is infra development to cover and connect all the major cities and habitation. The vision of the Ministry is to develop eco-friendly NHs with participation of the community, farmers, NGOs, private sector, institutions, government agencies and the Forest Department for economic growth and development in a sustainable manner. This shows the commitment of an institution which is although infra centric yet it follows the principles of sustainable development and inter and intra-generational equity.

### Sustainable Reporting:

Sustainable development as we understand is an organizing principle for meeting human development goals while also sustaining the ability of natural systems to provide the natural resources and ecosystem services on which the economy and society depend. The desired result is a state of society where living conditions and resources are used to continue to meet human needs without undermining the integrity and sustainability of the natural system. Moving in this direction, the NHAI is in a big way involving the Self Help Groups (SHGs), Non-governmental Organizations (NGOs) and especially the women for undertaking the various sustainable development initiatives.

The NHAI is moving ahead to pursue the *E.S.G. (Environment, Social and Governance)* approach. The NHAI is also now in the process of preparing "*Sustainability Report*" through an experienced and qualified Consultant 'Deloitte'. This endeavor is going to be a periodic feature and would not only provide a much needed data base to review the qualitative and quantitative improvements in E.S.G. domain but would also be the beginning of a new chapter of environmental sustainability in NHAI .

#### Indian Road Congress (IRC) guidelines:

The Ministry has adopted IRC guidelines, Standard Operating Procedure (SOPs) Expression of Interest (EOI) and Request for Proposal (RFP) to involve SHGs, NGOs, and private plantation agencies. Memorandum of Understanding (MoUs) arrangement is there in place to involve State Government Agencies- State Forest Department, State Forest Development Corporations, State Sericulture and Horticulture Departments. Further, NHAI is also contemplating involving industrial and corporate houses of repute which has a strong Corporate Social Responsibility (CSR) track record for CSR activities. The technical specification guidelines in the IRC were issued from time to time with regards to 2-laning, 4-laning, 6-laning and express highways. These guidelines contain different provisions for raising and maintaining road side plantations, medians and landscaping etc. The recent revisions are IRC SP: 73 which deals with 2-lane highways (Year 2015 & 2018); the IRC SP: 84 which deals with 4-lane highways (Year 2014 and 2019); the IRC SP: 1987 which deals with 6-lane highways (Year 2013 and 2019) and the IRC SP: 1999 which specifically deals with the expressways, the revisions for which were affected in 2013, 2014 and 2019.

Further, the IRC SP: 108 – *Guidelines on Preparation and Implementation of Environment Management Plan (EMP)* were notified in the year 2015. This lays down comprehensive guidelines in conformity with the extant policies of the Ministry of Environment, Forests & Climate Change (MoEF&CC). It is mandatory to ensure compliance to the stipulations of the IRC Special Publication IRC: SP: 108-2015 for all National Highways, Expressway projects, etc. in the project being implemented by MoRTH through its various implementation agencies. The provisions contained therein about mitigation of environmental damages are strictly applicable at all stages of projects. To keep pace with emerging international challenges and to meet its commitment to international conventions, vide IRC SP: 122 *Guidelines on Reduction on Carbon Foot Print in Road Construction Projects* was issued in 2019 for attending climate change aspects in road construction.

#### Mitigation measures:

Further, with NHAI's own set of guidelines and adoption of IRC guidelines for environmental due diligence, all precautions are taken care of while executing a road project. The Ministry and NHAI always aims for adhering to sustainable principles for projects that are located in or around to the protected areas e.g. first by avoidance, and in case there is no viable alternative, the site and species specific mitigation measures are adopted for conservation of habitat viz.

- Nagpur-Seoni section of NH-44 (old NH-7) which passes through Pench National Park in the State of Maharashtra and Madhya Pradesh. NHAI has constructed 09 mitigation measure structures e.g. underpasses, increasing the span of minor and major bridges and viaduct of length 2,255 m. The effective length of all the structures is 6,605 m (including viaduct portion) along with retaining wall and guide wall with light and sound barrier on the structures and slopes.

- NHAI is implementing longest elevated corridor in Asia of length 12 km. including tunnel of 340 m, 2 elephant underpasses of dimension 200 m and 6 animal underpasses wherein light and sound barrier will be provided on all the structures including their slopes.
- NHAI constructed a tunnel of length of about 9.0 km in Chenani-Nasari section and Kazikund to Banihal section of NH-44 for the stretch passing through ecologically fragile areas of Jammu & Kashmir. In addition large number of tunnels are also constructed and designed for implementation to avoid forest and wildlife areas in Jammu & Kashmir, Himachal Pradesh, Kerala, Rajasthan, etc.
- In some cases NHAI has realigned the alignment to save the protected area. In addition, underpasses, eco-duct, monkey ladder, solar fencing, thorny bamboo fencing, solar water pump, water holes, camera traps for monitoring, watch tower, rescue van, vehicles, tractor trolley and other equipment's have been provided.

During the recent years, NHAI has also developed and still counting on many note-worthy environment and socially sustainable milestones. Some of them are listed below:

**EASTERN PERIPHERAL EXPRESSWAY (EPE):** Decongestion of Delhi-NCR with the following environmental and socio-economic benefits viz. reduction in vehicular pollution in NCR; eight solar power plants of capacity 4,000 kw to provide solar power in 135 km; plantation of 2,60,296 plants; drip irrigation for plants all along the entire expressway; rain-water harvesting at every 500 m interval; utilization of about 1.2 cr cum. of fly ash; 36 numbers of replica of monuments depicting Indian heritage and culture on the expressway; 32 number fountains at interchanges, major bridges and toll plazas etc.

**DELHI-VADODARA-MUMBAI EXPRESSWAY:** It is an example of environmentally sound engineering excellence viz. an elevated corridor of about 1.7 km length near Chakan dam to attenuate noise and glairing effects of traffic, as per Wildlife Institute of India (WII) and IRC guidelines; pre-cast underground box structures by “*Cut & Cover Technique*” for length about 3.940 km to maintain the natural ecosystem of the area along with suitable ventilation and safety requirements in the underground boxes; hanging bridge at National Chambal WL Sanctuary to avoid erection of piers in the mid-course of the flowing stream; tunnel for about 3.5 km of length in Mukundra Hills Tiger Reserve to obviate the needless bisection of the MHTR and to avoid disturbance in the vicinity of the tiger reserve etc.

**DELHI-KATRA EXPRESSWAY:** It is an example of principle of avoidance viz. no natural forest / Wildlife Sanctuary / National Park in almost 392 km. of Phase I and 99 km. of Amritsar connectivity; single span cable stayed bridge on Beas river to avoid any disturbance of Dolphin Breeding Ground; 8 via duct in Bahu Conservation Reserve even after following mostly existing alignment in the stretch etc.

#### Circular Economy:

##### a) Fly-ash Management:

The Ministry issued notification dated 27.08.2018 and 23.10.2020 in reference Fly Ash notification of MoEF&CC dated 25.01.2016 for use of *fly-ash in road/flyover and embankment*

**construction of NHs.** It is mandatory to use of fly ash for development of the National Highways.

b) Plastic waste Management:

NHAI is also using plastics waste for construction of service roads in the reference of the Ministry's Circular dated 27.08.2020 for reuse of plastic waste. All plastic wastes collected from on and around NHs and successfully completed 547.6 kms. of service roads in various part of the country. In this regard, further R&D is being under process with CRRI for use of plastic waste as an alternate material for bitumen for construction of main carriage way.

c) Vehicle Scrapping Policy

MoRTH has undertaken vehicle scrapping policy to phase out old and unfit vehicles. This initiative will not only add to the environment but immensely add the circular economy. The main objective of the Vehicle Scrapping Policy 2021 is to identify old, unfit and polluting vehicles and scrap them. Major objective of the vehicle scrapping Policy is as under.

- Reduce pollution by scrapping vehicles without valid fitness and registration.
- Improve passenger, road and vehicular safety.
- Generate employment in the automobile industry.
- Formalise the current informal vehicle scrapping industry.
- Improve fuel efficiency and reduce maintenance costs for vehicle owners.
- Increase availability of low-cost raw materials for automotive, steel and electronics industry

All these endeavours are the efforts of Ministry to contribute towards the vision of the government with regard to the '*Circular Economy*'.

Some other efforts of NHAI towards sustainability are under:

- Construction of Cable Stage Bridge on 1 km. of Chambal National Park for construction of 4 lane Kota bypass.
- Construction of 731 m. combined elevated corridor on Chilla-Motichur Corridor and two additional under passes at Barkot and Teen Pani of Haridwar Dehradun Section of NH-58 and NH-72.
- Construction of 5.5 km. of elevated corridor and several animal under passes in Madhav Rao National Park of Gwalior Shivpuri Section of NH-3.
- Construction of 1 km. tunnel and increasing the SPAN of major bridges (314 meter) in the stage 6-laning of Vadakkencherry Thrissur Section of NH-47 passing through Pench-Badhani Wildlife Sanctuary and Reserve Forest.
- Construction of 2.7 km. elevated corridor, 3 nos. of animal underpasses, 3.9 km of *cut and cover* (innovation of NHAI in consultation with state and Central Government) for the stretch passing through Ranthambore Tiger Reserve for development of Delhi-Mumbai Expressway. The construction of 4.9 Km tunnel and 490 meter *Cut and Cover* for the subsequent stretch towards Madhya Pradesh stretch falls in Dara National Park/Tiger Reserve.
- Construction of 2 nos. land bridge/animal overpasses, 38 nos. of dedicated animal underpasses for Vadodara-Mumbai Express Phase-2.
- Construction of 2 nos. of land bridge/animal overpasses and 53 nos. animal underpasses for SPUR of Vadodara-Mumbai Expressway.



- Construction of 7 underpasses of total length 1896.80-meter, one major bridge along with noise/light barrier on the structure and their slopes, realignment of 780-meter road falls in Ratapani Wildlife Sanctuary for 4-laning of Obaidullaganj Betul.

#### Air and Noise Pollution Mitigation:

The Government has achieved the '*electronic tolling system*' in short duration which also saves natural resources and minimises air and noise pollution in and around the toll locations.

#### Other Mitigation Measures:

Use of alternate materials, reuse of waste material and reduction of use of natural resources which control and prevents the environmental pollution at source is being practiced. In addition drip irrigation, recharge pits for increasing ground water level, solar light for operation of toll, rescue van in any emergency scenario, awareness of adjoining population along the NH network for environment and safety issues. NHAI also provides sound barriers wherever any stretch passes through sensitive area and also the stretches passing through wildlife and protected area. Further, rehabilitation of borrow areas, control of erosion and slope protection, adequate number of cross drainage structures to maintain natural water course, silt fencing, use of adequate control devices for all construction machineries and their regular maintenance for reduction in pollution levels well within their respective permissible limits etc. are being actively undertaken.

#### Water & Debris Management:

##### a) Amrit Sarovars:

Further, the vision of the government of creating 75 '*Amrit Sarovars*' in each district and around 50,000 in the country would serve as a major milestone in the conservation of water resources and improvement of micro-climate of such areas. It will augment water availability especially in water stressed areas of the country besides improving rural livelihoods and productivity. Various central and state agencies are part of this noble endeavour. The Ministry had identified 785 locations for Amrit Sarovar; 12 locations could not be taken up due to issues of LA, project mapping; MoRT&H is identifying alternate 12 locations. Presently work is completed at 343 locations and in progress at 220 locations. Earth from Amrit Sarovars is being used in 160 projects. This pro-poor and environmental friendly endeavour will go in a long way in augmenting the water regime in the country. Besides, this will ensure flow of number of '*ecosystem services*' for society in the course of development.

*'Ajadi Ka Amrit Mahotsav'* which is an initiative of the Government of India to celebrate and commemorate *75 years of India's independence* and the glorious history of its people, culture and achievements and which is dedicated to its people who hold within them the immense power and potential to enable the vision of activating India 2.0, fuelled by the spirit of '*Aatmanirbhar Bharat*' is being celebrated by the MoRTH and its affiliate NHAI by planting 75 lakh saplings.

The Ministry and various executing agencies for NHs are pursuing '*sabka saath, sabka vikas, sabka vishwas and sabka prayas*' mantra given by implementing the sustainable and inclusive developmental agenda by following the clarion call of Hon. Prime Minister '*one earth, many efforts*' given on *World Environment Day, 5<sup>th</sup> June, 2022*. The mission '*Lifestyle for the Environment (LIFE) Movement*' which borrows from the past, operates in the present and

focuses on the future, as a matter of fact truly reflects the spirit of sustainable development and inclusive growth.

NHAI is not only building the infrastructure road network of entire country but is equally concerned about social, ecology, topography etc. Special attention is given whenever planning/designing a road passing through eco-fragile area i.e. Forest, Wildlife, Conservation Reserve, Coastal, Hilly etc. to implement with bare minimum impacts through restriction ROW. Other site specific measures are also being adopted in and around the Corridor.

#### **Challenges being faced in scaling up the implementation of Sustainability initiatives:**

The sustainability initiatives have been ingrained in the functioning of NHAI as there are 25 retired senior forest officers functioning as Joint Advisors (Environment & Plantation) in the Regional Offices of the NHAI in states, supervising and guiding sustainability initiatives of NHAI. Besides these, there are 25 Young Professionals and 360 Young Horticulture Experts responsible for issues related to implementation of environment management plan, wildlife mitigation plans, soil and moisture conservation plan etc. At the Head Quarter level there is a well-established institutional set up comprising of *Environment Division* and *Green Highways Division* being supervised by a dedicated officer of the rank of Chief General Manager (Environment & GHD) duly assisted by two General Managers viz. General Manager (Environment) and General Manager (Green Highways Division). There are also two senior personnel at the level of Advisor (Environment) and Advisor (Plantations) who guide the management on sustainability issues including afforestation and plantation activities. Thus, there are no challenges being faced in scaling up the implementation of Sustainability initiatives and work is proceeding as per vision and mission of NHAI.

#### **Funds allocation for Sustainability initiatives:**

The environment management initiatives and activities are being implemented as per the statutory provision as prescribed under the Environment (Protection) Act, 1986 and Forest (Conservation) Act, 1980 and also NHAI's own initiatives by way of avenue and median plantations. Project specific budgetary provisions are made as per the approved Environment Management Plan, Wildlife Mitigation Plan, Soil and Moisture Conservation Plan etc. which are approved by the MOEF&CC and implemented by the field functionaries. There is no dearth of funds for implementation of sustainability initiatives of NHAI.

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