The World Bank

Environmental and Social System Assessment (ESSA)

India State Support Program for Road Safety (P177668)

June 17, 2022

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ABBREVIATIONS

AADT	Annual Average Daily Traffic
ALS	Advanced Life Support
ATMS	Advanced Traffic Management System
BLS	Basic Life Support
ESSA	Environmental and Social System Assessment
GDP	Gross Domestic Product
GoI	Government of India
HIH	High Income Households
iRAD	Integrated Road Accident Database
IRR	Infrastructure Risk Rating
KPIs	Key Performance Indicators
LIH	Low Income Households
MCTAP	Modified Claims Tribunal Agreed Procedure
MHA	Ministry of Home Affairs
MOHFW	Ministry of Health and Family Welfare
MOHUA	Ministry of Housing and Urban Affairs
MoRTH	Ministry of Roads Transport and Highways
MVAA	Motor Vehicles Amendment Act 2019
NH	National Highway
NHAI	National Highways Authority of India
NRSB	National Road Safety Board
NRSC	National Road Safety Council
OSD	Officer on Special Duty
PDO	Program Development Objective
PMU	Project Management Unit
PPP	Public Private Participation
PWD	Public Works Department
RSA	Road Safety Audit
RTI	Right To Information
SC	Scheduled Caste
SH	State Highways
SLA	State Lead Agency

SOP	Standard Operating Procedure
ST	Scheduled Tribe
STU	State Transport Undertaking
ToR	Terms of Reference
VRU	Vulnerable Road Users
VRUs	Vulnerable Road Users
WB	World Bank
PMC	Project Management Consultant
PforR	Program for Result
FR	First Responder
PUC	Pollution Under Check
MHRD	Ministry of Human Resource Development
PMC	Project Management Consultant
R&B	Roads and Bridges Department
VCR	Vehicle Checking Report
OSDMA	Odisha State Disaster Management Authority
IEE	Initial Environmental Examination
TSU	Technical Support Unit
CPGRMS	Centralized Public Grievance Redress and Monitoring System
DPG	Directorate of Public Grievances
DARPG	Department of Administrative Reforms and Public Grievances
AADT	Annual Average Daily Traffic
ALS	Advanced Life Support
ATMS	Advanced Traffic Management System
BLS	Basic Life Support
ESSA	Environmental and Social System Assessment
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EXECUTIVE SUMMARY

Environmental and Social Systems Assessment (ESSA) was carried out in line with the World Bank Guidance for conducting ESSAs for Program for Results (PforR) financing operations. The ESSA assesses the gaps in the existing institutional, operational and regulatory systems and capacities to manage Environmental and Social (E&S) risks and recommends measures for strengthening them. The ESSA process involved a desk review of relevant documents, technical studies/reports, and information related to the working of the MoRTH and key departments involved in the participating states on road safety. This was complemented with virtual and face-to-face consultations with relevant experts and officials from the Department of Transport, Public Works Department (PWD)/ Roads and Buildings (R&B), Department of Health and Family Welfare, and State Police Department in the seven participating states. In addition, a consultation workshop was also conducted with national and state governments as well as non-governmental organizations (NGOs) involved in road safety programs in the participating states and at the national level. The ESSA identified key gaps and opportunities for further strengthening the existing institutional, operational, and regulatory systems and capacities pertaining to E&S issues under State Road Safety Program. The draft ESSA report has been shared by World Bank with MoRTH and key departments in the participating states for their comments and suggestions and will be presented to a wide range of stakeholders for their feedback and suggestions through a multi-stakeholder consultation prior to Appraisal. The key findings of ESSA are summarized below.

Environment and Social Benefits and Risks. The proposed Program will have positive health and safety impacts by reducing road accident-related deaths and injury through incentive-based support to the state governments to improve - institutional mechanism and capacity, road engineering, vehicle safety, traffic rules enforcement mechanism, driver behavior, and post-crash care. Activities such as building awareness towards road safety among road users, children, and the community will have long-term benefits in road safety behavior among them. While activities such as black spot-fixing, appropriate signages, speed-reducing measures, instituting measures for reducing driver fatigue, etc. along with enhanced enforcement and filling the gap of available of BLS and ALS ambulances, their response time will benefit by reducing fatalities and in turn will benefit by saving human lives and assets. Nonetheless, the following areas have been identified where potential environmental and social risks and impacts are expected. The key environmental risks emerge from (i) Construction-related EHS risks and impacts as the result of corrective measures taken at identified black spots/accident risk spots based on risk mapping including installation of safety features such as signages, markings, lane separations, pedestrian crossings, etc. and construction/rehabilitation of driver training and automated testing/fitness centers; (ii) Disposal of e-devices/tools for road safety and traffic rule compliance monitoring and accident reporting including disposal of used batteries after its installation and use; (iii) Scrapping old or severely damaged vehicles including ambulances when procurement of new vehicles/ambulances takes place, and (iv) Potential environmental risks/impacts due to accidents involving vehicles carrying hazardous chemicals. The key social risk emanates from (i) possible minor temporary disturbances to hawkers, and vendors while fixing blackspots, which will be addressed as per country's Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act ; and (ii) Weak community engagement process by the participating departments and the varying degree to which they engage with road users while planning and implementing the rectification measures while fixing black spots.

Environmental and Social System Assessment. The legal framework for environmental and social systems is adequate and backed by a set of comprehensive laws, regulations, technical guidelines, and standards, that apply nationwide and to participating states as well. The Environmental legislation at the national and state level for the conservation and management of the environment and on pollution management are well defined and in place, and so is the institutional structure for the management of the environment. Therefore, procedures and clearances required for environmental protection are well defined. Existing legislation also helps minimize or mitigate possible adverse impacts on the natural habitats, archaeological sites, and cultural resources. Similarly, the existing legislative framework is adequate to ensure social sustainability and the interest of marginalized and vulnerable populations

including the scheduled castes and scheduled tribes. No land acquisition is allowed under the program. The country has comprehensive land acquisition and R&R legislation. The Motor Vehicle Act has been the primary legislation governing road safety scenarios in India, and the 2019 Amendment further strengthens the road safety measures.

The majority of the road safety activities as identified under the program do not involve any major civil works, except certain types of activities like rectification of accident black spots,setting up Driver Training and Automated Testing Centers etc. The black spot-rectification is undertaken by the road-owning department which could be NHAI, State's Road and Bridges, PWD, Urban Development department etc. However, any construction activities by the Transport Department or Police Department, or Health department are generally done by PWD on their behalf. PWD in each of the participating states have its own well-defined guidelines and procedures for undertaking any civil/ construction activities including those through contractors; and has a built-in mechanism to follow national and state regulations as applicable. Small scale civil works for road safety anticipated under the program, are exempt from EIA as per EIA Notification, 2006 and large-scale civil works are excluded for financing under this PforR.

The institutional mechanism is well defined both at the national and state level under the State Support Program for Strengthening Road Safety. At present, all the states have three levels of institutions - policy level, operational level, and district level. In all states, at the policy level, the State Road Safety Council or Road Safety Authority is the senior-most institution on Road Safety in the State and is generally headed by the Chief Minister in some states, while headed by Chief Secretary or Transport Secretary in other states and often include members from Transport, PWD, Highway/ R&B, Home/ Police, Urban Development, Health and Education as its members. The Road Safety Council/ Road Safety Authority periodically reviews the progress and provides policy guidance while Road Safety Cell housed in Transport Department and headed by the Transport Commissioner works as an executive arm that operationalizes and undertakes road safety activities on a day-to-day basis. In the Road Safety Cell, there is representation from PWD, Police, Health, and Education in the form of Officer on Special Duty (OSD) to help coordinate road safety activities with their respective department. At the district level, there is District Road Safety Committee headed by the District Collector/ District Magistrate to review and guide the district-level road safety activities. However, the environment and social specific capacity are presently insufficient because of the lack of dedicated E&S staff. Once this staffing gap is addressed and relevant training imparted in the implementing departments and nodal agencies, these staff need to play a more proactive role to identify and address the potential E&S risks.

The program interventions are unlikely to disturb natural habitats or environmentally sensitive zones or require any associated rehabilitation. In case any physical cultural structures come in the way for black spot-fixing, the current practice in many of the states involves consultation with local community representatives, community leaders along with stakeholder departments and District Administration to identify a culturally appropriate way forward. Anticipated physical activities are small in scale and no large construction activities are foreseen as a part of the program, and hence, environmental health and safety (EHS) measures are limited to small-scale constructions. The civil construction works by the PWD and/or by the road owning departments follow the relevant labor laws as applicable in the state, and also mention necessary clauses in the bid and contract document. However, its compliance varies across states and departments due to a lack of proper monitoring.

While most of the road safety measures including many of the accident black spot-fixing may not require any major civil works. While the system and capacity for land acquisition and resettlement exists within the State Governments, no land acquisition and/or resettlement is allowed under the proposed road safety program, and it is part of the list of excluded activities. The states follows the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act 2014 in case of any disturbances to these people while executing works for blackspot corrections.

All the participating states and especially the Transport and Police department reported on conducting regular road safety awareness programs through mass media, mix-media, also on social media. In most

states, messages on TV, FM radio, distribution of pamphlets, screening of audio-visual materials, street plays for commercial vehicle drivers and truckers, and public consultation workshops are conducted, and public awareness campaigns undertaken towards road safety are being undertaken in the local language. Also, education programs are undertaken for students on road safety. Information Education Communication (IEC) materials are put up for display in public places and appropriate signboards are put up as per norms to inculcate positive road safety behavior. In most of the states, NGO/CSO is also engaged in to undertake awareness campaigns on road safety in an active manner. However, there is a need to have comprehensive Social and Behavior Change Communication (SBCC) to elicit enhanced social benefits by reducing road accident fatalities. Also, the process of community engagement beyond awareness creation is relatively weak and requires strengthening.

The current Road Safety program in participating states leverage the existing country system to receive, resolve and manage grievances, and includes (a) Chief Minister's (CMs) grievances portals; (b) State and Department-specific grievance redress mechanism; (c) Centralized Public Grievance Redress and Monitoring System (CPGRAMS) at national level; and (d) using of Right to Information (RTI) Act. The current grievance redress mechanism in the participating states have multiple options to register grievances and get redressal and includes both online and manual systems. However, the current system lacks systematic recording, monitoring, and reporting on grievances related to road safety and requires strengthening.

Key Environmental and Social Gaps. The key gaps identified include (a) absence of dedicated environment and social safeguards specialists at state departments; (b) lack of comprehensive E&S risk screening for small scale civil works; (c) inconsistent disposal of e-waste through the authorized recyclers; (d) insufficient review of vendors' compliance with applicable environmental legislation in the bidding process; (e) segregation of accident data involving vehicles carrying hazardous substances; (f) staff capacity in the departments to identify, assess and manage potential environmental risks and focus on training on E&S aspects; (g) varying degree of compliance with labor laws by the civil contractors in absence of limited monitoring on this aspect; and (h) lack of systematic recording, monitoring and reporting on grievances related to road safety.

Excluded Activities: The State Support for Road Safety Program of the government has eligibility criteria that excludes any new major construction or civil works involving land acquisition and/or resettlement such as for the construction of flyover, foot over bridge, building infrastructure, testing sites, etc. Along with those, the following activities that have the potential to cause high or substantial E&S risks and impacts will not be financed under this PforR:

- Any land acquisition, physical relocation, and/or involuntary resettlement impacts.
- Program activities that involve large-scale civil works or works that may have an adverse and irreversible impact on the environment.
- Program activities in the forest or ecologically sensitive areas.
- Activities that are not in compliance with Central and State environmental legislations.
- Activities that involve the use of child or bonded or forced labor or labor involved in any hazardous activities.
- Activities that involve the destruction or damage to any physical and cultural resources.

Recommendations: ESSA recommends that the following key actions are undertaken:

1. Only authorized electronic waste recyclers are invited to the auctioning process.
2. Vendors have mandatory compliance with applicable environmental legislations.
3. Strengthening the staffing and institutional mechanism for E&S aspects with clear roles and responsibilities at different administrative levels within the Lead agency and also preferably in department undertaking civil works i.e., PWD/ R&B/ Highway, etc.

4. E&S Screening and preparing site-specific mitigation measures for Black spots where civil works are planned, and other building construction sites e.g., Driver training institute or Vehicle fitness center, etc.
5. Providing E&S Training and Capacity Building program for frontline program staff.
6. Strengthening civil works monitoring mechanism to ensure compliance with labor laws and labor welfare measures to be instituted by the contractors.
7. The mechanism for systematic stakeholder consultation to identify community concerns and feedback, and garner community support especially where civil works are planned.
8. GRM shall establish a framework to consolidate grievances related to road safety activities under the Program which were received through the Stakeholders Departments' grievance redress mechanisms.

While most of the recommendations will be incorporated in the program operations manual, based on the assessment and in order to strengthen the existing system and processes, the World Bank team suggests the following recommendations to be part of Program Action Plans along with key responsibilities, timelines, and indicators for its measurement.

Action Description	Source	DLI#	Responsibility	Timing	Completion Measurement
Report segregated data on crashes involving vehicles carrying hazardous substances	ESSA		State Road Safety Lead Agency	Yearly, starting 24 months after the Effective Date	Report on crash data involving vehicle carrying hazardous substance is notified by the State Road Safety Lead Agency to MoRTH
Conduct environmental and social screening and prepare site specific mitigation measures where civil works are being planned such as for Black spots fixing and other building construction sites.	ESSA		Public Works Department or equivalent of each Participating State	Continuous	State Road Safety Lead agency to share half-yearly reports of E&S screening conducted and mitigation planned with MoRTH
Establish a framework to consolidate grievances related to road safety activities under the Program which were received through the Stakeholders Departments' grievance redress mechanisms	ESSA		State Road Safety Lead Agency	Within 24 months of the Effective Date	Participating States to share a summary report with MoRTH

Disclosure: The draft ESSA will be disclosed in country at the MoRTH's website and on the World Bank's external website, prior to appraisal of the program, to serve as the basis for discussion and receipt of feedback and comments. The draft ESSA is revised based on feedback and comments, including from the multi-stakeholder workshop, and by the participating states. The final ESSA will be re-disclosed at the MoRTH's website and at the World Bank's external website.

1 PROGRAM DESCRIPTION

1.1 Background and Context

1. Road crash deaths in India, which are the highest in the world, are a burden to its demographic dividend and have a tangible impact on poverty and hard-won economic gains. Official data from the GoI suggest that crashes on India's roads claim the lives of about 150,000 people and injure another 450,000 people each year. A World Bank study postulates that halving the mortality and morbidity from road traffic injuries (RTIs) over a period of 24 years, could generate an additional flow of income equivalent to about 14 percent of the GDP per capita in India. More than half of the crash victims are pedestrians, cyclists, or motorcyclists, the so-called Vulnerable Road Users (VRUs), often the poorer members of society. Road crashes also affect poor rural families disproportionately, with a greater percentage falling into economic distress after road crashes than other parts of the population. Road users of working age (18-60 years) comprise 84 percent of all fatalities, with loss of income and medical expenses often bringing financial distress to victims and their families, especially as social safety nets are limited. Larger investments in effective road crash prevention will contribute to the accumulation of human capital in India, sustainable and inclusive economic growth, and improve transport productivity, universal accessibility, and opportunities for climate change mitigation and adaptation..

2. India is committed to improving road safety outcomes. Through the adoption of the landmark Motor Vehicles Amendment Act (MVAA), 2019, and commitment to the Stockholm Declaration on road safety (2020), the country aims for enhanced governance and accountability of all stakeholders involved in the road safety system and supports the National Road Safety Strategy 2018-2030. Towards this goal, key constraints need to be addressed: insufficient national and state budget allocations; lack of systematic support to states in establishing and implementing road safety interventions and policies; weak capacity of national and state-level stakeholder institutions to systematically address the issues; and limited use of data-driven systems for crash data collection, analysis, and benchmarking of road safety performance.

3. GoI's State Support Program for Road Safety is a crucial first step toward its national road safety vision and aspirations. Recognizing that road safety is a inter-departmental subject, which necessitates a coordinated effort by states for mobilizing stakeholders, targeted investment and actions to improve the road safety ecosystem, the GoI has conceptualized the Road Safety State Support Program (RSSSP). This is a grant-based state support program to bolster state institutional capability for road safety management and to help states implement MVAA provisions through a performance and evidence-based results framework. It will ensure that the 14 states that contribute to ~85% of average annual road fatalities are funded (in proportion to their road safety burden), monitored, and evaluated under a common harmonized framework, with results aligned with national targets. The envisaged outcome is to reduce road fatalities by 30% by 2027, in line with GoI's vision.

1.2 Program Scope and Boundaries

1.2.1 Program Development Objective (PDO)

4. The Program Development Objective is *to strengthen the capacity for results-based management and improve road safety outcomes in the Participating States*.

5. The PDO level results indicators include the following:

- Development of coordinated data-informed, and results-oriented financing and budget plan for road safety
- Annual road traffic crash fatalities in the Participating States

1.2.2 Key Result Areas

6. Descriptions of the Program Result Areas (RAs): The Program will support the five RAs that contribute to the overall outcomes of the Government Program. The detailed descriptions of the

results areas (RAs) and the associated activities are provided below:

7. RA 1: Building Participating States' institutional capacity and systems to reduce road crash fatalities and injuries. Strengthening Participating States' institutional capacity and systems to roll out and implement the policy and institutional reform agenda engendered through the Program, through: (a) operationalizing the State Road Safety Lead Agencies, including with representatives from the relevant Stakeholder Departments in the Participating States; (b) implementing the IRAD crash database management in all Participating States and use it for identifying high-risk areas; (c) promoting women's representation in management roles in the road safety sector; (d) carrying out of training to Program management staff and road safety stakeholders for better road safety results; (e) improving efficiency and enhanced utilization of state budget for road safety programs in all Participating States; and (f) developing a capacity building and training program administered by MoRTH.

8. RA 2: Improving road engineering to enhance the safety performance of state highways and urban roads. Improving road engineering by conducting risk mapping of existing State Highways and urban roads in Participating States to systematically identify road safety issues, by: (a) risk mapping through a reactive approach utilizing crash data to identify high-risk sections and spots, and/or proactive risk mapping through road safety audits or equivalent; (b) supporting innovative pilots of women's safety plans to integrate urban design, spatial planning, and infrastructure elements of women's safety, including, inter alia: (i) infrastructure-based interventions such as improvements in street lighting, upgrading sidewalks for greater pedestrian safety and installing emergency alarms; (ii) gender-disaggregated planning, monitoring, and reporting systems; (iii) engaging women-led civil society and community groups in road safety stakeholder consultations; and (iv) including gender sensitization in training for staff of Participating States.

9. RA 3: Improving Participating States' vehicles and driver safety systems. (a) Improving vehicle and driver safety through: (i) the issuance of new driver licenses through automated testing centers; and (ii) the improvement of vehicle fitness and reduction of emissions by setting up Automated Vehicle Fitness Centers including through private sector engagement. (b) Facilitating support to the Participating States to create a medium-term human resources roadmap for improving women's recruitment in job roles in the Driver Training and Automated Testing Centers and Automated Vehicle Fitness Centers.

10. RA 4: Strengthening Participating States' road policing effectiveness and efficiency: Strengthening Participating States' capacity for automated enforcement of applicable traffic laws related to vehicle speed including through the deployment of Speed Cameras.

11. RA 5: Improving post-crash care by strengthening state emergency medical and rehabilitation services. Improving pre-hospital emergency care for road crash victims in the Participating States, through: (a) setting up a single accident reporting number in the Participating States for crash victims to access emergency services; (b) reduction in the response time for ambulances to reach the crash spot by increasing the network of basic and advanced life support ambulances in the Participating States; (c) carrying out of training for personnel from Stakeholder Departments to provide first responder care to road crash victims on the spot; and (d) ensuring an increase of the number of women employed as staff in the Command and Control Centers.

1.3 Government Program and Bank Financed Program (P Vs. p)

12. Through SSPSRS India is prioritizing road safety outcomes through a first-of-its-kind stand-alone national scheme to support states realizing the country's vision for road safety. SSPSRS is a US$1 billion program for the 14 states that together contribute 85 percent of the national road crash deaths, to be implemented over the next 6 years (2023-2028). The eligible grant quantum for each of the states under the program has been proportionately determined based on: (i) the number of fatalities in the state; (ii) the number of registered vehicles in the state; and (iii) total road network length. The program encompasses a programmatic approach to support states through a center-to-state performance-linked grant transfer program that aims to enhance their institutional capacity, policy, and fiscal framework. It has been designed to drive key reforms under institutional mechanisms, road safety engineering,

education, enforcement, and emergency care, recognize state-level performance, support trailing states with capacity-building measures, and reward groups and individuals for road safety performance.

The scheme specifies the outputs and outcomes to be achieved under each of the thematic areas on a semi-annual basis. The scheme will provide a mobilization grant to all states every year accounting for up to 50 percent of the allocated scheme fund for the first year and scaling down to 30 percent in the subsequent years. The scheme includes key performance indicators (KPIs), of which 12 are mandatory and eight out of twelve can be chosen as electives, which are to be met by the states to receive from 50 percent to 70 percent of the total allocation in subsequent years of the program. Both mandatory and elective KPIs aim at targeted interventions across 4 themes i.e., road engineering, vehicle safety and driver training, enforcement, and post-crash care which will encourage states to adopt best practices at the ground level and to prioritize investments on critical issues to achieve scheme targets. The outcome linked performance indicator with up to 20 percent scheme fund allocation, is aimed at achieving year-wise targets for reduction in fatalities with an end goal of a 30 percent reduction by 2028. Any balance from the program will contribute towards a "Challenge Fund" to be accessed by any of the states under the program in implementing additional innovative investments for road safety performance

In addition to the allocation to the 14 states under the program, the SSPSRS has allocated US$35,000,000 of the program budget to support capacity building, training, monitoring and evaluation and administrative support to the program including two key consultancies – the Independent Verification Agency (IVA) and Project Management Consultants (PMC). The capacity building and training component will be administered by MoRTH to strengthen the institutional capacity and governance at the center and the state level. To complement the SSPSRS, MoRTH is supporting, through WB-financed Green National Highways Corridor Project, the nationwide launch of a unified and harmonized crash database management system (Integrated Road Accident Database, IRAD) by early 2023.

13. The Government program is the cornerstone underpinning the WB's PforR Program, the India State-Support Program for Road Safety (ISSPRS or 'PforR Program'). The Government program includes 14 states and has been split into two parts, covering seven states each to be financed through parallel loan programs administered by the WB and the ADB, respectively. The division of states under the two loan programs (WB and ADB) is based on the strategic prior engagement with the states, ensuring an even mix of low and high-capacity states in terms of road safety management and geographical distribution. This PforR Program will focus on the following Participating States: Andhra Pradesh (AP), Gujarat, Odisha, Tamil Nadu, Telangana, Uttar Pradesh (UP), and West Bengal. Bank's PforR loan will finance US$250 million of the ISSPRS (US$500 million) the remaining portion will be funded by India. ISSPRS will support all areas of the Government's program except for high-value contracts and civil works that pose significant social and environmental challenges and risks. The design of ISSPRS will provide the opportunity to catalyze and champion various thematic reforms, priority areas, institutional development, and innovations for sustaining the efforts and goals toward India's national and international road safety commitments.

ISSPRS will focus on strengthening the institutional framework to mainstream best management practices on road safety. The Participating States are to establish a lead road safety agency with requisite financial and administrative autonomy that will coordinate and collaborate with various state and local government departments and other non-state stakeholders. This would help prepare the ground for integrated and results-focused strategic planning and budgeting for road safety in states, the desired outcome of the ISSPRS. Another critical focus of the interventions is to create an enabling environment for sustainable financing of road safety through mobilization of private capital and investment in the areas of resilient infrastructure development, enforcement, and post-crash care. As a subset of the SSPSRS, the boundaries of the ISSPRS have been defined as per table below:

Title	The Government program (p) *State Support Program for Strengthening Road Safety (SSPSRS)*	The PforR Program (P) *India State Support Program for Road Safety (ISSPRS)*	Comments on alignment
Objective	State Support Programme for strengthening Road Safety incentivizing states for performance with grant disbursement based on efforts and outcomes with annual targets for reduction in fatalities.	Strengthen the capacity for results-based management and improve road safety outcomes in Participating States	The objective of the PforR program is aligned with the government program and additionally emphasizes on strengthened institutional framework including state and center management functions on road safety
Duration	6 Years (2023-2028)	June 2022 – June 2028	Fully aligned
Geographic Coverage	14 States	7 states: Andhra Pradesh, Gujarat, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, and West Bengal	The PforR program focuses on results of seven states out of the fourteen states. The other seven states will be covered through a parallel ADB financed loan.
Results Areas	Program KPIs for grant disbursement to the states are based on four themes: 1. Road Engineering 2. Vehicle Safety & Driver Training 3. Enforcement 4. Post-Crash Care	Supports all four themes of the government program and includes an additional results area focused on institutional management and governance	Aligned to strengthen state road safety institutions and their management capacity
Overall Financing	The overall budget of the government program is US$1 billion.	The total cost of PforR Program (a subset of the government program focusing on seven out of fourteen states and capacity building component) is US$500 million. ISSPRS excludes high-value contracts, and activities posing a significant environmental and social risk. The Bank loan will finance US$250 million of the ISSPRS.	The government program will be supported through parallel financing of US$250 million by the ADB. The remainder of the SSPSRS, US$500 million, will be funded by India.

1.4 Geographic Scope of the Program

Out of the 14 States that is focused under the Government State Support program for the Road Safety, the proposed PforR program focuses on 7 States i.e., Uttar Pradesh, Tamil Nadu, Gujarat, Andhra Pradesh, Telangana, West Bengal, and Odisha.

1.5 Key Program Implementing Agencies and Partners

14. MoRTH will be the apex implementing body for the program at the national level with a Central Steering Committee (CSC) chaired by the Secretary, MoRTH comprising representatives from stakeholder ministries and departments such as the MHA, Ministry of Housing and Urban Affairs (MoHUA) and MoHFW). The NRSB, once constituted, will be providing strategic and technical support to the CSC. A Central Project Management Unit PMU (CPMU), headed by an Additional or Joint Secretary, MoRTH, with the executive management led by a designated Project Director (Director/Deputy Secretary-MORTH), and supported by a core team comprising Under Secretary and 2 Assistant Executive Engineer level Officers from MORTH, will provide secretariat support to the CSC. This core CPMU team will further be supported by functional experts comprising technical, procurement, fiduciary, and safeguard staff. The CPMU will be responsible for project management and coordination, monitoring the progress of the states and tracking interim outcomes of the scheme as outlined under the Program Operations Manual (POM). Central PMU will be supported by a Project Management Consultant (PMC) for project coordination and handholding with the States and an Independent Verification Agencies (IVA) to verify the achievements made by States.

15. At the State-level, program implementation and oversight shall be led by a State Road Safety Lead Agency (SRSLA) chaired by the Secretary of either Transport or Home Department of the State and a member Secretary at the level of Joint Secretary appointed by the State Government. The SRSLA will also have representatives from the respective departments of Transport, Home, Public Works or Roads and Building, Health, Urban Development, and Education. Under the SSPSRS a state may nominate an existing agency or authority or Department as the SRSLA for the program if the broad institutional structure and management functions can be met as proposed under the government program. The SRSLA will coordinate with the existing District Road Safety Committees as needed for the implementation of the program. The broad management functions of the SRSLA, expected to meet at least quarterly, include: (i) providing policy advice and guidance for the effective implementation of the SSPSRS; (ii) ensuring and promoting coordination and collaboration across involved government stakeholders and levels; (iii) approve work programs, budgets, and program implementation reports; (iii) monitor program implementation and results and address any issue related to project implementation and achieving its results; (iv) ensure adequate transparency of program implementation i.e. publishing work program and budget, project implementation reports, program results and (v) ensure private sector and civil society stakeholders engagement.

16. The management of SSPSRS and coordination between the Steering Committee at MoRTH, Central PMU, and State Lead agencies will be further supported by a PMC hired under the government program. The PMC will have dedicated State Management Units in all participating states which will support the States in program coordination, actions, results, and Monitoring and Evaluation (M&E). A comprehensive Grant Management System (GMS) will be developed by a CPMU support consultant, which will be central to monitoring the program.

1.6 Borrower's Previous Experience

17. The Ministry of Road Transport and Highway (MoRTH), Government of India has had a long experience with World Bank projects with development of roads and highways, Many of the States and the participating departments also have had good experience with World Bank projects over the past three decades. In recent past, the MoRTH engagement with World Bank includes the National Highways Interconnectivity Improvement Project (P121185) 2013-2020; NHAI Technical Assistance Project (P121515) 2011-2018; Green National Highways Corridor Project (P167350) 2020-2025; and further engagements on Road Safety. In addition, over the last three decades there have been many road, and health sector projects in most of the participating states. In fact, most of the road sector projects in the past at national and state level, involved high risks activities including land acquisition and resettlements, which has been completed successfully, and demonstrates borrower's familiarity and ability in managing them properly in line with Bank safeguard policies.

2 ENVIRONMENT AND SOCIAL SYSTEM ASSESSMENT (ESSA) – METHODOLOGY ADOPTED

2.1 Overview on ESSA

18. For each proposed PforR operation, the World Bank assesses at the Program level, the potential environmental and Social (E&S) effects, including direct, indirect, induced, and cumulative effects as relevant; the applicable legal /regulatory framework and the borrower's organizational capacity and performance to manage those effects.

19. This Environmental and Social Systems Assessment (ESSA) has been prepared by a World Bank ESSA Team for the proposed India State Support Program for Road Safety, which will be supported by the World Bank's Program for Results (PforR) financing instrument. In accordance with the requirements of the World Bank Policy Program-for-Results Financing (PforR Policy), PforRs rely on country-level systems for the management of environmental and social effects.

20. The PforR Policy requires that the Bank conducts a comprehensive ESSA to assess the degree to which the relevant PforR Program's systems promote environmental and social sustainability and to ensure that effective measures are in place to identify, avoid, minimize, or mitigate environmental, health, safety, and social impacts. Through the ESSA process, recommendations to enhance environmental and social management outcomes within the program are developed, which subsequently become a part of the overall Program Action Plan.

2.2 Purpose and Objectives of ESSA

21. The main purposes of this ESSA is to: (i) identify the Program's environmental, health, safety, and social effects; (ii) assess the legal and policy framework for environmental and social management, including a review of relevant legislation, rules, procedures, and institutional responsibilities that are being used by the Program; (iii) assess the implementing institutional capacity and performance to date, to manage potential adverse environmental and social issues and (iv) recommend specific actions to address gaps in the Program's environmental and social management system, including with regard to the policy and legal framework and implementation capacity.

22. The ESSA describes the extent to which the applicable government environmental and social policies, legislations, program procedures and institutional systems are consistent with the six 'core principles' of OP/BP 9.00 and recommends actions to address the gaps and to enhance performance during Program implementation. These six core principles are listed below and further defined through corresponding Key Planning Elements in this report:

(a) Core Principle 1: Environmental and Social Management: Environmental and social management procedures and processes are designed to: (a) promote environmental and social sustainability in Program design; (b) avoid, minimize, or mitigate against adverse impacts; and (c) promote informed decision making related to a Program's environmental and social effects

(b) Core Principle 2: Natural Habitats and Physical Cultural Resources: Environmental and social management procedures and processes are designed to avoid, minimize, and mitigate any adverse effects (on natural habitats and physical and cultural resources) resulting from the Program.

(c) Core Principle 3: Public and Worker Safety: Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with: (a) construction and/or operations of facilities or other operational practices developed or promoted under the Program; and (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials.

(d) Core Principle 4: Land Acquisition: Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.

(e) Core Principle 5: Indigenous Peoples and Vulnerable Groups: Due consideration is given to cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of indigenous peoples and to the needs or concerns of vulnerable groups.

(f) Core Principle 6: Social Conflict: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

23. An additional purpose of this ESSA is to account for the decisions made by the relevant authorities in the borrower country and to aid the Bank's internal review and decision process associated with the proposed India State Support Program for Road Safety. The findings, conclusions and opinions expressed in this document are those of the World Bank and the recommended actions that flow from this analysis will be discussed and agreed with Ministry of Road Transport and Highway (MoRTH), Government of India (GoI) counterparts.

24. Environmental and Social Systems Assessment (ESSA) for India State Support Program for Road Safety has been carried out following the Bank's Guidance Document on "Environmental and Social Systems Assessment for Program-for-Results Financing". In the context of ESSA requirements mentioned in the said document, the specific objectives of this exercise for India State Support Program for Road Safety (this operation) included:

a. to identify the potential environmental and social impacts/ risks applicable to the Program interventions,
b. to review the policy and legal framework related to management of environmental and social impacts of the Program interventions,
c. to assess the institutional capacity for environmental and social impact management within the Program system,
d. to assess the Program system performance with respect to the core principles of the PforR instrument and identify gaps in the Program's performance,
e. to include assessment of M&E systems for environment and social issues, and
f. to describe actions to fill the gaps that will input into the Program Action Plan in order to strengthen the Program's performance with respect to the core principles of the PforR instrument.

2.3 Methodology Adopted for ESSA

25. ESSA refers both to the process for evaluating the acceptability of a borrower's system for managing the Program's E&S risks in the operational context, and to the final report that is an output of that process. The ESSA process is a multistep methodology in which the World Bank team analyses the E&S effects, including indirect and cumulative effects, of activities associated with the defined Program; analyses the borrower's systems for managing the identified E&S effects, including reviewing practices and the performance track record; compares the borrower's systems - laws, regulations, standards, procedures, and implementation performance against the core principles and key planning elements to identify any significant differences between them that could affect Program performance; and recommends measures to address capacity and performance on policy issues and specific operational aspects relevant to managing the Program risks such as staff training, implementing institutional capacity building programs, developing and adopting internal operational guidelines.

26. The ESSA primarily relied on desk review of existing information and data sources, complemented by consultations, interviews/ discussions with key stakeholders in the seven participating states to capture opinions, anecdotal evidence, functional knowledge, and concerns. It involved (a) a comprehensive review of government policies, legal frameworks, Program documents, national guidelines for Road safety program and other relevant information and assessments of Government of India and Government of the seven participating state's environmental and social management systems (b) interviews and consultations were conducted with relevant experts and officials from Department of Transport, Public Works Department (PWD)/ Roads and Buildings (R&B), Department of Health

and Family Welfare, and State Police Department in the participating states. In addition, consultations were also conducted with non-governmental organizations (NGOs) involved in road safety program in the participating states and at national level.

27. The World Bank ESSA team[1] and the borrower (MoRTH and participating states) worked closely to identify and consider the range of E&S effects that may be relevant to the Program. The PforR approach distinguishes specific roles and responsibilities regarding major steps and tasks at the various phases of the program cycle. The World Bank team prepared this ESSA report that provides an overview and analysis of the GOI's as well as state government's policies and regulatory frameworks for the environmental and social aspects for the India State Support Program for Road Safety operation. The ESSA discusses relevant environmental and social national and state legislations for the road safety. Findings of the assessment have been used in the formulation of an overall Program Action Plan (PAP) with key measures to improve environmental and social management outcomes of the Program. The findings, conclusions, and opinions expressed in the ESSA document are those of the World Bank. Recommendations contained in the analysis will be discussed and agreed with MoRTH, GoI.

28. The World Bank ESSA team extensively consulted the designated personnel from the Department of Transport, Public Works Department (PWD) /Roads and Buildings (R&B), Department of Health and Family Welfare, and State Police Department in the participating states. Interviews and consultations were done both in person and virtually with relevant experts and officials. The ESSA team also consulted with NGOs working with road safety program in the participation states and at national level.

29. The draft ESSA was shared with MoRTH, GoI and states and also discussed in a multi stakeholder national consultation workshop for comments and feedback. The draft is updated/ revised based on the feedback from stakeholders. This updated/revised ESSA will be made publicly available in accordance with the Bank's policy on Access to Information. The final ESSA will be re-disclosed prior to World Bank Board consideration of the Program.

2.4 Structure of the ESSA Report

30. The ESSA report for India State Support Program for Road Safety has been structured as follows:

Section 1: Program Description

Section 2: Environment and Social Systems Assessment – Methodology Adopted

Section 3: Environment and Social Overview

Section 4: Potential Environmental and Social Effects, Risks and Benefits

Section 5: Assessment of Environmental and Social Management Systems relevant to the Program (including description of the applicable systems against core principles and planning elements/practices; performance and track record)

Section 6: Consultations with Key Stakeholders and Disclosure

Section 7: Recommendations

Annexures

[1] Takeaki Sato, Senior Environmental Specialist; Venkata Rao Bayana, Senior Social Development Specialist; Ranjan B. Verma, Consultant – Social and Bodhisatya Datta, Consultant – Environment.

3 ENVIRONMENTAL AND SOCIAL CONTEXT

3.1 Environmental Context

31. The growth of speedy transportation is one of mankind's greatest achievement in minimizing distances but at the same time it has also become a cause of environmental degradation. Concern over the environmental consequences of transport development is long-standing. The environmental implications of transport development have become very widely recognized with a plethora of local, national and international, governmental and non-governmental organizations contributing to the debate by producing their own policy prescriptions and agendas for action.

32. While considering the relationship between transport and the environment we are immediately confronted with a potential paradox: on the one hand, modern industrial societies pursue economic growth through the open exchange of people, raw materials, energy, goods and services in an increasingly global marketplace, yet, on the other, the transport systems required to allow such exchange may be exerting pressures on the environment that degrade the functional integrity and quality of natural ecosystems to the extent that the prospect of maintaining or achieving a high quality of life in many human societies is threatened. In short, we cannot live without transport development, but neither may we be able to cope with its side-effects over the long term.

33. The European Union's Fifth Environmental Action Programme states that transport is "vital to the distribution of goods and services, and to trade and to regional development", but argues that current trends towards increasing transport demand are likely to result in "greater inefficiency, congestion, pollution, wastage of time and value, danger to life and general economic loss".

34. The transportation sector contributes to the degradation of the environment due to a variety of factors. The energy consumption in transport sector is the main cause of pollution. There are significant differences in fuel efficiencies between various modes of transport, for example, consumption of energy in cars is more among urban transport modes, although there has been a significant improvement in the fuel efficiency in cars and other automobiles. Transport is a major source of air pollution not only in developed but also in developing countries. The rapid increase in the number of vehicles on Indian roads, is fast developing issues of environmental concern. Exhaust fumes are the major source of atmospheric pollution by the motor vehicles. The main pollutants include Carbon Monoxide (CO), Un-burnt Hydrocarbons (HC), other gases such as Nitrogen oxides, Tetraethyl lead and deposits such as Carbon and dust particles which are further exacerbated when vehicles are not maintained appropriately.

35. Noise pollution is another important factor associated with road transport. It is estimated that some 135 million people in OECD countries suffer transport noise levels in excess of 65 db. Vehicular traffic contributes to about 55% of the total urban noise in India[2]. Most cities in India have been facing serious noise pollution problems in the last few decades due to substantial growth in the number of vehicles, expansion of road network, industrialization and urbanization. This is further enhanced due to poor vehicle maintenance which generates excessive noise. Estimation of traffic noise is more difficult in Indian cities considering the heterogeneity in traffic conditions including mixed vehicle types, congestion, road conditions, frequent honking and general lack of traffic sense. Honking is a common occurrence in India, irrespective of road types and condition, traffic etc.

36. Development of road networks involves direct utilization of land. Long strips of land are consumed, and large areas effectively divided into smaller ones. The use of road tunnels or viaducts can reduce division of land parcels, especially in urban areas, though the latter introduces significant visual impact, and both solutions are costly. Land consumption is not just a direct consequence of transport development; it may also occur indirectly as land is utilized for the extraction of the raw materials

[2] https://link.springer.com/article/10.1186/s40201-015-0164-4#:~:text=Vehicular%20traffic%20contributes%20to%20about,noise%20%5B7%2D9%5D.&text=Most%20cities%20in%20India%20have,urbanization%20%5B13%2D15%5D.

(principally aggregates) required for construction. The most notable environmental impacts due to road development is the loss of soil permeability which reduces groundwater recharge potential. Road transport may also have significant impact on ecological degradation. The degradation of terrestrial and aquatic ecosystems, as measured by indicators such as reduced habitat/species diversity, primary productivity or the areal extent of ecologically valuable plant and animal communities, provides one of the most emotive aspects of the tension between transport development and environmental quality.

37. The table below briefly outlines the main environmental effects of road transport.

Parameters	Impact
Air	Local (CO, CxHy, NOx, fuel additives (Lead & particulates), CO_2 & CFC
Water Resources	Pollution of surface & ground water & by surface runoff; modification of water systems due to road construction
Land resources	Land acquired for infrastructure; extraction of road building materials
Solid waste	Disposal of construction debris from road works; vehicles withdrawn from operations and disposed; waste oils
Noise	Noise and vibration from all types of vehicles
Accident risk	Death, injury, property damage due to accidents, risk of transportation of hazardous substances, risk of structural failure of roads or road facilities
Other impacts	Partition or destruction of neighborhoods, farmland or wildlife habitats.

38. Although Carbon emissions are the largest environmental issue facing the transportation department, it is not the only one. Traffic accidents can also have a negative effect on the world around them. Vehicular accidents affect the environment as they often result in fuel and fluid leaks, emitting harmful chemicals into the environment that can poison grass, neighboring plants and harm wildlife. Major oil spills from wrecked vehicles are one of the biggest problems with transportation accidents, particularly those that happen near water bodies, and in some cases even run the risk of starting a fire. In this context, it is pertinent to mention that if the accident involves a transport vehicle carrying hazardous substances, the potential environmental and even social risks may be magnified many-fold. These hazardous chemicals may be in the form of gases, liquids or even solids.

39. There are also the issues related to landfills. When a car is severely damaged due to an accident, most insurance companies determine it is more economical to replace the vehicle than to repair it. Though many vehicle parts can be recycled, most of the vehicle ends up in a landfill (dumpsite/disposed indiscriminately along the road) where it takes several years to decompose. The effects on soil, water, and air pollution influence the entire ecosystem.

40. Accidents can also sometimes be so massive and traumatic that they can even leave behind damage to the roads and associated infrastructure. These would then need large-scale repairs to fix the damage and also ensure that in future, no accidents of the same nature and for the same reason occurs in the same place again. These large-scale repairs will have a damaging impact on the environment, as considerable civil works may be involved. Moreover, roads are lined with tarmac/(asphalt/bitumen), and the use of which for repair can be damaging for the environment in a number of ways[3].

41. Road Traffic Accidents (RTAs) are among the major life-threatening issues facing rural as well as sub-/urban communities. The environmental context of road safety is however a two-way street. On one side road crashes can have a multitude of adverse environmental impacts in the immediate crash site and depending on the type of accident and the vehicles involved and the materials being carried

[3] https://www.newscientist.com/article/2253470-asphalt-on-roads-may-soon-be-greater-source-of-air-pollution-than-cars/

these impacts can also have an impact on larger surroundings of the crash site. On the other hand, sometimes the environmental conditions along the roads can also play a contributing role leading to road crashes. There have been various studies to assess the relevancy of different weather conditions like rainfall, water logging, extreme temperature, fog, landslides, and storms with the incidences of RTAs. These studies showed that rainfall, severe cold, fog, and heat conditions were directly related with the occurrence of RTAs.

42. The World Bank has a central role to support the United Nations' (UN) Decade of Action for Road Safety[4] and the related achievement of Sustainable Development Goals (SDG) 3.6 and 11.2[5]. SDG 3.6 sets a target of halving deaths and injuries from road crashes. The World Bank supported 'Sustainable Mobility for All Initiative' (www.sum4all.org) highlights safety as one of the pillars of sustainable mobility.

[4] United Nations General Assembly (2010), 'Resolution 64/255, Improving Global Road Safety', United Nations: New York.

[5] United Nations (2015), 'Sustainable Development Goals', New York.

3.2 Social Context

43. India, one of the biggest democracies in the world and home to a population of more than 1.3 billion. The Country is a topographically, culturally, linguistically and ethnically diverse federal republic governed under a parliamentary system with 28 states and 8 union territories.

44. India has the second-largest road network in the world, spanning a total of 6.39 million kilometers[6] (kms). This road network transports 64.5% of all goods in the country and 90% of India's total passenger traffic uses road network to commute. Road transportation has gradually increased over the years with improvement in connectivity between cities, towns and villages in the country. India has the world's highest reported number of annual road crash fatalities. According to the World Health Organization, road crash fatalities in India account for approximately 11 percent of the estimated 1.35 million global toll each year[7]. This has hindered the country's economic growth and caused significant social welfare losses among the poor.

45. Road Traffic Injuries in India are closely interlinked with on-ground socioeconomic realities like class, gender and geographical location that often intersect and affect various sections of the population differently. More than half of the crash victims are pedestrians, cyclists, or motorcyclists, the so-called Vulnerable Road Users (VRUs), often the poorer members of society. Road users of working age comprise 69 percent of all fatalities, with loss of income and medical expenses due to a crash can often bring financial disaster to victims and their families, especially as social safety nets are limited.

46. The study conducted by the World Bank in collaboration with Save life Foundation based on the survey data collected from four states i.e., Uttar Pradesh, Bihar (representing low capacity and poor states), and Tamil Nadu and Maharashtra (representing high capacity and rich states) tries to quantify the inter-linkages between poverty, socioeconomic realities, and road crashes in India. The study suggested that the socio-economic impact of road crashes on vulnerable individuals and poor households in India affects low-income households differently, often pushing them into further debt and poverty[8]. The socio-economic burden of road crashes is disproportionately borne by poor households. Also, the incidence of fatality post-crash is higher among victims from low-income households (LIH) compared to high income households (HIH). The study suggested that the decline in total household income was sharper among LIH (75%) than HIH (54%). The severe impact of decline in income was highest among LIH in rural areas (56%) compared to LIH in urban areas (29.5%) and HIH rural (39.5%), and cases where victims died as well as where victims were males. This impact is further accentuated with limited ability of the LIH to cope with the financial distress in post-crash period. In addition to financial distress, poor households experience a deterioration in their quality of life accompanied by psychological suffering and emotional distress. Also, within households, women bear the brunt of caregiving activities post-crash, leading to a double burden of labor and mental load and exacerbated inequality of opportunities in returning to livelihoods and income generating tasks.

47. The study also revealed that the insurance coverage was significantly higher among HIH and households in urban areas vis-à-vis LIH and in rural areas. Information asymmetry and poor awareness of legal compensation among LIH compounds their distress. Only less than a quarter of the LIH victims were aware of the compensation process and insurance clauses. Also, the low rates of insurance coverage and poor awareness related to legal compensation processes among truck drivers. Only a fifth and two-fifths of truck drivers surveyed were covered under medical insurance and life insurance

[6] https://morth.nic.in/sites/default/files/RTYB-2017-18-2018-19.pdf

[7] World Bank 2020. Delivering Road Safety in India : Leadership Priorities and Initiatives to 2030. Available at https://openknowledge.worldbank.org/handle/10986/33339

[8] World Bank, 2021. Traffic Crash Injuries and Disabilities: The Burden on Indian Society, World Bank Group Publication. Available at https://www.worldbank.org/en/country/india/publication/traffic-crash-injuries-and-disabilities-the-burden-on-indian-society

respectively at the time of the crash. Overall, two-thirds of truck drivers were not aware of third-party liability insurance. None of the drivers had applied/ benefited from cashless treatment at the hospitals, Solatium Fund for hit and run case or ex-gratia schemes.

48. The study report provides related recommendations for policy reform under six key areas as follows:

a. **Need for effective institutional mechanisms and awareness building**. There is a need to improve vulnerable road users (VRU) safety especially for LIH in rural areas, who are most at risk in road crashes. There is also a need for the State Governments to ensure greater sensitization and awareness among stakeholders, especially the police.

b. **Institutionalize post-crash emergency care and make health infrastructure & coverage more accessible & inclusive**. MoRTH has recently notified a new scheme for compensation to Hit and Run Victims of motor accident victims via G.S.R. 163(E) dated 25th February 2022 to enhance compensation.

c. **Provide a Social Security Net for crash victims from LIH through State Support**. The Central and State Governments should introduce vocational and educational support for victims and their families through community programs and special schemes for jobs, skilling and education. Comprehensive rehabilitation support also needs to be extended to crash victims especially those with post-crash disabilities.

d. **Create an accessible legal framework for availing insurance and compensation for road crash victims.** The Government should create schemes to increase insurance coverage and penetration for LIH. Insurance agencies should broaden the scope of insurance policies by including rehabilitation and recovery of crash victims. The comprehensive coverage of Modified Claims Tribunal Agreed Procedure (MCTAP) needs to be ensured through better mechanisms for effective coordination.

e. **Recognize the gendered impact of road crashes and address it through participative governance & special schemes for women**. Governments should incentivize employment opportunities for women affected by road crashes. Steps could include: encouraging small businesses in work from home set up, providing low-interest loans and emergency cash transfers to post-crash turned female-headed households. Women from households who have lost the breadwinners in road crashes should also be automatically enrolled in the State Government's employment database.

f. **Strengthen post-crash support for children and young adults through state support**. Governments should implement progressive provisions on child road safety under Sections 194B and 199A of the Motor Vehicles (Amendment) Act, 2019, framing a rigorous policy on child road safety and provide support for children and adolescents affected by road crashes. The Section 129 related to safety measures for children below four years of age, riding or being carried on a motorcycle has already been implemented via G.S.R.126(E) dated 15th February 2022. The State Government should ensure a minimum of three-month moratorium on school fees for children impacted by road crashes from LIH.

49. The study report provides detailed recommendations for strengthening institutional agencies to respond to the needs of vulnerable road users (VRUs) and associated households. It lays out suggestions for States to strengthen their institutional capacities, to respond better to the challenges presented by road crashes and improve their performance, and to create efficient mechanisms for LIH to get access to legal and insurance-based compensation after a crash to mitigate their financial burden. These recommendations, if implemented, have the potential to significantly improve the lives of vulnerable road users and to create far-reaching positive road safety outcomes.

4 POTENTIAL ENVIRONMENTAL AND SOCIAL BENEFITS, ADVERSE EFFECTS AND RISKS

4.1 Environmental and Social Benefits of the Program

4.1.1 Environmental Benefits of the Proposed Program

50. There are several environmental benefits of the proposed program which includes enhanced awareness among all stakeholders regarding road safety and capacity built in the Program Management Team/Cell/Unit (PMU/PMC) where staff are trained in all participating states for the effective management of E&S aspects during program implementation. Screening of proposed activities for black spot rectification (particularly for large scale interventions) and to assess the associated potential environmental risk would be beneficial for the monitoring and reporting on such activities so that timely actions are taken to address the identified risks.

51. One of the biggest environmental as well as social risks are from the potential accidents of vehicles carrying hazardous substances. The program anticipates that accident data will be segregated to track the number of accidents involving vehicles carrying hazardous substances, their types, and the reasons for the accidents so that it supports the efforts to enhance the required awareness about the potential environmental and social risks associated with the transport of hazardous substances and the necessary measures are undertaken to reduce the risk through strict enforcement; this will be of immense benefit for all stakeholders. This may be achieved by strict and frequent assessment of driver competency, assessment of driver awareness of the materials being carried and the *"do's and don'ts"* they need to follow strictly in case of accidental leakages, spillages of such materials along the way so that they can take immediate action to reduce the potential impacts and inform the appropriate authorities.

52. Stricter enforcement of vehicle fitness, appropriate labeling of vehicles carrying hazardous substances and requirements for drivers to carry Material Safety Data Sheet (MSDS) will add to the potential benefits due to the increased awareness and reduced environmental risks from transportation of such materials.

53. Measures taken to decongest bottlenecks and black spot rectification will have environmental benefits as traffic flow will be smoother leading to reduced emissions and noise. The increased digitization to support enforcement of driving offences using handheld or installed devices will reduce the number of vehicles being stopped for physical issuances of driving offence tickets which will avoid driving lanes being blocked temporarily which often leads to disruption of traffic flow that leads to increased emissions and noise.

54. The proper disposal of bio-medical wastes generated from ambulances and hospitals will also have immense environmental benefits. Disposal of electronic devices at their end of life/malfunction when disposed through authorized e-waste recyclers which will ensure that these are disposed as per norms and the environmental impacts are minimized, therefore beneficial for the environment. Similarly, the provision of facilities to facilitate proper disposal of scrapped vehicles at their end-of-life/post severe crash, will have significant environmental benefits.

55. The involvement of the private sector led initiatives for increased awareness drives among the general public will have significant benefits and will also bring in additional funding for road safety initiatives. Companies can demonstrate and take leadership to showcase inhouse awareness, systems and processes associated with improved behavior for road safety which will also encourage other private sector companies to emulate.

56. The program component and activity wise environmental benefits have been outlined in the Environmental and Social Benefits and Risk Matrix table. Overall, under the proposed program, the reduction of road accidents and stricter enforcement of licensing, driver competency, vehicle fitness

and increased awareness of all departments regarding the potential environmental risks will have significant immediate and long-term environmental benefits.

4.1.2 Social Benefits of the Proposed Program

57. Road traffic injuries in India are closely interlinked with on-ground socioeconomic realities like class, gender, and geographical location that often intersect and affect various sections of the population differently. Given that more than half of the crash victims are pedestrians, cyclists, or motorcyclists, the so-called Vulnerable Road Users (VRUs), often belong to the poorer section of society. About 84% of the road users' fatalities are those belonging to working age group of 18-60, which results in loss of income, and medical expenses due to a crash often bring financial disaster to victims and their families, especially as social safety nets are limited. Any road safety measures will have significant positive impacts on saving precious lives, properties and improving the socio-economic status of the road users and their families who directly or indirectly gets impacted.

58. While the proposed program has a positive social impact with most of the activities directly or indirectly contributing towards enhancing the social benefit and/or positive social change. Activities such as building awareness towards road safety among road users, children, and the community will have long-term benefits. While activities such as black spot-fixing, appropriate signage, speed-reducing measures, instituting measures for reducing driver fatigue, etc. along with enhanced enforcement will benefit in reducing accidents and fatalities and in turn will benefit in saving human life and assets. Similarly, filling the gap of BLS and ALS ambulances, and their response time in reaching accident sites will benefit in saving precious lives of the accident victims. In addition, First Responder training will help awareness and appropriate skills in responding to any accidents and in reducing accident fatalities. Also, placing an increased number of female staff for operating ambulance control rooms will help address the emerging need to understand and respond to women accident victims especially involving pregnant women or an old age woman, and their immediate medical requirements. Similarly, promoting and implementing Good Samaritan guidelines and further training will help identify and encourage champions in save precious lives during road accidents leading to larger social benefits.

4.2 Environmental and Social Risks and Adverse Effects

4.2.1 Environmental Risks and Adverse Effects of the Proposed Program

59. One of the important activities under the proposed program is the risk mapping of SHs and urban road network and identification of high-risk crash corridors through crash data analysis and road safety audit. It is felt that there may be potential environmental risk and associated adverse effects if the 'Risk mapping exercise' is only done for road engineering without considering factors such as driver competency, consignor urgency to deliver consignments (driver being incentivized to drive faster than usual to deliver on time), vehicle condition, driver fatigue etc. Often these factors play a critical role causing road accidents particularly for the transport vehicles as drivers are required to deliver the consignment by a 'calculated/target time' by the consignor and drivers tend to drive above the recommended speeds to meet those timelines even under conditions of fatigue which increases the risk probability for accidents which can involve environmental risks.

60. Measures to rectify black spots may include lane separations, development of pedestrian footpaths and decongestion of bottlenecks. The potential rating of environmental risks will vary on the specific activity and the scale of work. Even relatively small civil works will involve impediment of traffic flow leading to increased emissions and noise and also generate construction debris wastes which need to be disposed as per the applicable rules. Similarly, initiatives to develop facilities to relieve driver fatigue (resting centres) are likely to require construction which will trigger environmental risks associated with construction activities.

61. Setting up/construction of driver training and automated testing facilities or vehicle fitness facilities are most likely to involve construction which will trigger environmental risks associated with

construction activities, even if the proposed facility is relatively small. Construction of driver training facilities are likely to involve significant use of concrete for the tracks which will lead to soil compaction. Some of these activities may also require cutting of trees which has an adverse environmental effect.

62. The scrapping of vehicles due to end of life or post severe crash will lead to adverse environmental effects. The risks may be minimized if these are disposed at designated disposal facilities and as per the rules outlined by MoRTH that will ensure adequate measures are taken to minimize potential impacts.

63. Civil works for repair and maintenance of roads, road widening, or lane separation are all likely to involve use of tarmac which has its own set of environmental impacts particularly since the methods used in India involve significant emissions during the heating of the asphalt/bitumen (Bitumen 60/70 is presently used mainly in construction of National Highways and State Highways) and make it fluid for the preparation of road repair/laying.

64. The procurement of electronic devices for enforcement will generate e-waste at the end of life or when these devices malfunction and need to be disposed. The disposal of such devices and batteries may pose environmental risks if e-waste and battery wastes are not disposed through authorized recyclers and as per the applicable rules.

65. Overall, the environmental risk rating from proposed civil works will be determined by the scale of work undertaken. However, since the project interventions are not likely to be of large scale as these are excluded from financing under this PforR, the potential environmental risks are likely to be low to moderate. In addition, if the disposal guidelines for solid waste, construction debris, e-waste and battery waste are strictly enforced, and compliance is achieved the associated risks may be significantly reduced.

4.2.2 Social Risks and Adverse Effects of the Proposed Program

66. The overall social effect of the program is positive with measures contributing to proposed reduction in accident fatalities. Majority of the activities towards the road safety under the proposed project, and the KPIs that the participating states need to achieve are softer in nature. Apart from accident black spots, there are many reasons for accidents such as driver competency, consignor urgency to deliver consignment (driver incentivized to drive faster than usual to deliver on time), vehicle condition, driver fatigue, low visibility, improper road surfaces such as potholes etc. they require measures that are small scale, site specific, and can easily be mitigated by existing systems and process in place. However, this may vary across departments and states based on their institutional capacity which may require strengthening. Also, the social risks relate to weak community engagement process by the participating departments and varying degree to which they engage with road users while planning and implementing the rectification measures while fixing black spots.

67. While many of the measures for accident black spot fixing may not require any major civil works and will have minimal or low social risks. The Program clearly excludes any major civil works, that involves land acquisition and resettlement. The type of works envisaged for fixing black spot include clearing and/or widening of footpath small road improvements. These may have low to moderate social risks as they require minimal civil works and at few places may disturb the hawkers, and vendors temporarily, that is expected to be taken care of as per country's vendors and hawkers act. Establishment of driver training centres, and vehicle fitness centres are all planned to be set up on encumbrance free Government owned land as the program has no support for land acquisition and resettlement.

68. With any major civil works, including land acquisition, and/or resettlement being ineligible under the proposed project, the social risks remain are of small scale, site specific, reversible impacts, and are amenable to risk mitigation measures, and hence is rated as 'Moderate'.

4.2.3 Environmental and Social Benefits and Risk Matrix

69. The component-wise environmental and social effects of the program, including the potential benefits, risks and impacts are presented in the table below.

Table (4.1): Environmental and Social Risks and Impacts of Proposed Activities under the Program

Component and Activity	Potential Activities by the States	Potential E&S Benefits and Risks/Impacts
Results Area 1: Building Participating States' institutional capacity and systems to reduce road crash fatalities and injuries		
Program management and leadership delivered by the participating states	• Lead Agency designated in the participating states • Members from participating departments such as Home (Police), PWD/P&B, Health, and Transport Department are part of Lead Agency/ Road Safety Society • Lead Agency/ Road Safety Society fully housed with necessary staffs and lead by a senior official(s). • Inter-departmental coordination mechanism developed and implemented.	• While there are no major environmental or social risks, there is need for designating a nodal officer in each agency and mechanism for implementing, monitoring and reporting E&S aspects. • Having a good coordination mechanism with participating departments and the Lead agency will help implement and monitor E&S activities across departments in the state.
Program implementation delivered by the participating states	• Planning, administrative, financial, procurement, approval, and reporting system are defined and brought under the practice for both Lead agency as well as participating departments on road safety activities. • Periodic reports being generated and shared.	• No specific E&S risks. • Screening, monitoring and reporting on activities involving any E&S risks will be highly beneficial for any timely support and actions.
Program Management Team/Cell/Unit (PMU/PMC) staff trained in all participating states	• Conducting training need assessment • Training institutions/ agencies identified and contracted • Training modules developed • Training schedule designed for each type of training and identified target audiences/ staffs for the same • Conducting training as per schedule	• No specific E&S risks. • Benefits include increased awareness and management of E&S issues during program implementation as the result of training of PMU/PMC and other relevant full-time staff in departments on E&S aspects. • Training of other department staff across levels will provide an opportunity for institutionalizing overall basic E&S capacity in the department beyond project duration.
Private sector led road safety initiatives operational	• Identifying and engaging with private sector players on specific set of activities	• No specific E&S risks.

Component and Activity	Potential Activities by the States	Potential E&S Benefits and Risks/Impacts
	• Institutionalizing and formalizing private sector engagement • Monitoring and reporting	• Private sector led initiatives have immense potential benefits to bring in additional funding for road safety and greater awareness, implementation and enforcement. • Engagement with civil society on community awareness among other activities will enhance overall social benefits.
State budget utilization for road safety programs in all participating states	• Budget line creation (where required) • Reporting and audits on the budget utilization	• No specific E&S risks. • E&S benefits will be enhanced with adequate resources allocated to identify and manage E&S aspects.
Results Area 2: Improving road engineering to enhance the safety performance of state highways and urban roads		
Road Safety Risk Assessments and Baseline data collection for identification and remediation of high-risk corridors and sites on State Highways (SH)	• Risk mapping for identifying key road segments/ points where frequent accidents are reported including with data on injuries and fatalities etc. • Segregated data for accidents involving vehicles carrying hazardous chemicals. • Grading/ risk rating of road segments based on risk mapping	• One of the biggest environmental and social risks from road accidents are from those that involve vehicles hazardous chemicals as injury/ illness/ deaths may involve communities near accident sites if gasses/liquids are leaked. • These accidents may or may not be due to black spots and might be due to a variety of other reasons such as driver competency, consignor urgency to deliver consignment (driver incentivized to drive faster than usual to deliver on time), vehicle condition, driver fatigue etc. • Segregated data on accidents involving vehicles carrying hazardous substances will allow for accident trend assessment including causes of accidents. Such analysis will reduce the potential accidents involving such vehicles, which will have tremendous environmental benefits. • Mapping of risk factor and identifying the key road segments/ blackspots is the first stage of moving towards addressing/ rectifying them in reducing the road accidents.

Component and Activity	Potential Activities by the States	Potential E&S Benefits and Risks/Impacts
High-risk sections eliminated by engineering intervention as identified in the assessments	• Identify priority corridor and sites on SH based on risk mapping • Remedial/ corrective measures planned for the identified blackspots/crash risk spots based on risk mapping and identified priority road segments. • Remedial measures undertaken in the identified priority road segments for elimination of risks. A typical measure required for remedial measures include a combination of measures as below depending on assessment of the type of black spots • Improve signage • Improve lighting/ visibility • Speed limiting measures • Improve road markings • Remove roadside obstacles • Improve road surface e.g., rectifying potholes, road edges, drainage etc. • Remove roadside obstacles, installing crash barriers • Installing warning signs (e.g., for bends, junctions, narrow roads) • Removing on road parking etc. • Mechanism for reducing driver fatigue • Avoid contra traffic flow • Active and strict police enforcement • Improve road geometry e.g., Eliminating sharp changes in alignment – curve/ slope etc. • Improve facilities for pedestrians walking along the road (including clearing and widening where required) • Widening the lanes and / or shoulders	While many of the measures for black spot rectification may not require any major civil works and will have minimal environmental or social risks. However certain type of activities e.g., improving road, clearing and/or widening of footpath, and widening of road etc. may have low to moderate environment and social risks based on: • Temporary disturbances to hawkers and vendors on the existing Government land that is required for black spot fixing. • Clearing and cutting of trees etc. • Necessary environmental and social permissions required based on type of activities planned in eco-sensitive area or proximity to any designated physical cultural resources. • Any need to realign any drainage, water, electricity, gas pipeline etc. Hence, depending upon type of black spots rectifying measures and the involved the scale of work required, the E&S risk may change accordingly for the specific sites and activities.

Component and Activity	Potential Activities by the States	Potential E&S Benefits and Risks/Impacts
Pedestrian footpaths and dedicated bicycle and 2-wheeler lanes installed along high-risk sections of SH and Urban Roads identified in the risk assessment in all participating states	• Identify priority corridor on high-risk sections of SH and Urban roads based on risk mapping and available blackspot or any other available data. • Based on available blackspot/ risk assessment or any other available data, identify priority corridor on SH and Urban roads for development of dedicated lane for two wheelers. • Design and construction of pedestrian footpath on the identified corridor. • Design and construction of dedicated lane for two wheelers in the identified priority stretches of SH and urban roads.	Environmental and Social risks may emerge from • Environmental risks/impacts may include requirement to cut trees and construction related impacts including generation of construction debris waste, air emission, noise, wastewater and occupational and community health and safety. • Alternative options need to be explored in case additional land required for building footpaths. Land acquisition and resettlement are not allowed under the program. • Temporary disturbances to hawkers and vendors, which will be addressed as per vendors and hawkers act. • Some works may require obtaining the necessary permissions required based on type of eco-sensitive area or proximity to eco-sensitive area or any designated physical cultural resources. • Potential environmental impacts for any activities that need realignment of drainage, water, electricity, gas pipeline etc. • Anticipated E&S benefits include reduced accidents, reduced emissions and noise.
Result Area 3: Improving Participating States' vehicles and driver safety systems		
District Coverage of Driver training & automated testing centers in each participating state	• Undertaking study to identify district wise coverage of Driver training and automated testing centers • Conducting feasibility study to identify center configuration along with PPP structure for the Driver training and automated testing center in line with central government scheme. • Setting up Accredited Driver Training and Automated Testing Centers at district level including through PPP mechanism	Environmental and Social risks may emerge from • Construction of driver testing facilities will involve construction and associated environmental risks/impacts even if facility is constructed on government land • To be built only on government land as land acquisition and resettlement are not allowed under the program. • Construction may require clearing and cutting of trees etc. • Necessary permission required based type of eco-sensitive area or proximity to any eco-sensitive area or designated physical cultural resources.

Component and Activity	Potential Activities by the States	Potential E&S Benefits and Risks/Impacts
		• Any need to realign any drainage, water, electricity, gas pipeline etc.
New driver licenses issued from automated testing centers in each participating state	• Developing policy and/or guidelines for issuing driving licenses using automated testing centers • Migrating existing driver license information and data to the automated system • Training staffs on the new systems and process to be followed for issuing driving licenses from automated testing centers	• No specific E&S risks. • Potential E&S risks if driver competency is not assessed rigorously to drive vehicles carrying hazardous chemicals. There will be additional benefits if such drivers receive more frequent testing for renewal of licenses as compared to normal/standard commercial vehicle drivers.
Automated vehicle fitness (Inspection & Certification) centers set up and operational in each participating state	• Undertaking study to identify district wise coverage of Automated vehicle fitness (Inspection & Certification) centers • Conducting feasibility study to identify center configuration along with PPP structure for the Automated vehicle fitness (Inspection & Certification) centers. • Setting up Accredited Automated vehicle fitness (Inspection & Certification) centers at district level including through PPP mechanism	Environmental and Social risks may emerge from: • Construction of vehicle fitness facilities will involve construction and the associated environmental risks/impacts even if facility is constructed on government land • To be built only on government land as land acquisition and resettlement are not allowed under the program. • Clearing and cutting of trees etc. • Obtain necessary permissions required based on type of eco-sensitive area or proximity to any eco-sensitive area or designated physical cultural resources. • Any need to realign any drainage, water, electricity, gas pipeline etc.
Registered vehicles inspected annually from the Automated Vehicle Fitness Centers	• Developing guidelines for annual vehicle inspection using Automated Vehicle Fitness Centers. • Operationalizing annual vehicle inspection	• No specific E&S risks. • Vehicles carrying hazardous chemicals need more frequent inspection than general commercial vehicles for general fitness as well as clarity of markings on vehicle body to indicate the hazardous materials being carried.
Result Area 4: Strengthening Participating States' road policing effectiveness and efficiency		
High-risk SH sections operating within the Speed Limits	• Identifying high-risk SH sections based on risk mapping. • Planning necessary speed limiting measures both physical measures and speed limit signs.	• No specific E&S risks. • E&S risks increase if police do not consider suspending/revoking driver license when over-speeding

Component and Activity	Potential Activities by the States	Potential E&S Benefits and Risks/Impacts
	• Active and strict police enforcement.	tickets are issued repeatedly (particularly for vehicles carrying hazardous chemicals).
Helmet wearing Rate for Drivers and Passengers on high-risk sections	• Awareness generation among community especially among existing and potential two-wheeler road users. • Active strict police enforcement for compliance.	• No specific E&S risks. • There will be a benefit to increase protection of drivers in the event of accidents if strict enforcement is in place.
Automation of the issuance of traffic violations	• Development and deployment of MoRTH Guidelines on ITS/ ATMS systems. • High-risk corridors identified as per the road safety audit/ infrastructure risk rating in SH network to have ITS / ATMS systems. • Procurement and implementation of e-devices (including CCTV based automated chalan system) for issuing of e-challans for violation for high-risk behavior such as speeding, drunk driving, non-usage of helmets and seatbelts etc. • Integrating e-devices with SARATHI and VAAHAN for booking traffic violations.	Increased automation will involve added procurement of electronic devices and ultimately e-waste generation. E-waste needs to be disposed only through authorized recyclers only to reduce environmental risks and result in enhanced E&S benefits.
Road network covered by automated Speed enforcement	• Procurement and operationalization of Automated speed measuring devices and linked to active speed enforcement. • Active police enforcement.	Increased automation will involve added procurement of electronic devices and ultimately e-waste generation. E-waste needs to be disposed only through authorized recyclers only to reduce environmental risks and result in enhanced E&S benefits.
Result Area 5: Improving post-crash care by strengthening state emergency medical and rehabilitation services		
Participating states having emergency care response time for ambulances is 15 minutes or less in urban areas and 30 minutes or less in rural areas	• Conducting study for assessing ambulance response time. • Developing standard operating procedures (SOP) for working of ambulances with GPS devices. • Develop mechanism for reducing the response time for ambulances to accident site. • Establish a central ambulance command & control room at State level and District Command & Control Center	• Though no specific E&S risks with reduction in response time, the associated environmental benefit will be with the adequate management and disposal of Bio-medical waste generated by ambulances. • Health and safety risk will emerge from any inadequate use of PPE and inadequate implementation of safety procedures by the health care staffs of ambulances.

Component and Activity	Potential Activities by the States	Potential E&S Benefits and Risks/Impacts
Participating state having ambulance to population ratio of 1 to 30,000	• Need assessment of BLS ambulance and ALS Ambulance including their standards and filling the gaps where required.	• Management of Bio-medical waste generated by ambulances requires proper disposal mechanism. • Health and safety risk will emerge from any inadequate use of PPE and implementation of safety procedures by the healthcare staff of ambulances. • Environmental impacts related to scrapping old ambulance if the MoRTH guidelines are not followed.
Participating states with single emergency toll-free helpline for Police, Fire and Ambulance	• Operationalizing single accident reporting toll-free number in the state • Establishing call centre for the toll-free helpline number and linking it with Central ambulance command & control room; Police; and Fire system.	• No specific E&S risks
Participating states with at least 50% of District Hospitals implementing Trauma Registry as per WHO guidelines	• Developing standard operating procedures (SOP) for trauma registry by the health facilities as per WHO guidelines. • Build staff awareness on trauma registry • Training District hospital staff and other key staffs on trauma registry as per WHO guidelines.	• Management of Bio-medical waste generated by Trauma centers requires proper disposal mechanism. • Health and safety risk will emerge from any inadequate use of PPE by the health care staff of ambulances.
Participating state that provides free, cashless emergency care for any road traffic crash victims	• Develop insurance packages for accident victims • Institutionalize insurance mechanism for cashless treatment of road traffic victims. • Develop mechanism for monitoring and reporting	• No specific E&S risks

4.2.4 Environmental and Social Risks Associated with Key Performance Indicator (KPI) and Related Activities

70. Based on key activities to be achieved, the program key performance indicators (KPI) by the states, the environmental and social benefits and risks are presented in the table below.

Table (4.2): Environmental and Social Risk Assessment with KPI Related Activities

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
I. MANDATORY PERFORMANCE INDICATORS				
A. Road Engineering				
1	Training of Road Safety Stakeholder department on road safety audit, data collection and crash investigation through E-learn training modules. District level staff with minimum graduate level qualification and at least 3 years of experience with stakeholder departments to be trained	• Developing training modules • Identifying training institutions hosting e-learning modules and providing training supports. • Training and capacity building of the stakeholder department through e-learn modules • Training modules should include E&S aspects	• No specific environmental risk • Training on environmental aspects will benefit due to enhance awareness and capacity building	• No Specific social risks. • Training is expected to benefit with improved capacity and monitoring
2	Risk mapping of SH and urban road network and identification of high-risk crash corridor and key risk factors for different road types through crash data analysis, through road safety audit or infrastructure risk rating	• Risk mapping is the process of identifying key road segments/ points where frequent accidents are reported including with injuries and fatalities etc.	• Potential E&S risk if 'Risk mapping exercise' is only done for road engineering without considering factors such as driver competency, consignor urgency to deliver consignment (driver incentivized to drive faster than usual to deliver on time), vehicle condition, driver fatigue etc.	• No Specific social risks. • Mapping of risk factor and identifying the key road segments/ blackspots is the first stage of moving towards addressing/ rectifying them in reducing the road accidents.
3	Remedial/ corrective measures taken at identified blackspots/crash risk spots based on risk mapping and identified road safety issues. This may include installation of safety features including signage, marking, lane separations, pedestrian footpath, crossings, safe bus	The key measures required for remedial measures include a combination of measures as below depending on assessment of the type of black spots (see Annx-5). • Improve signage • Improve lighting/ visibility • Speed limiting measures • Improve road markings • Remove roadside obstacles	• While several of the measures for black spot fixing or road maintenance (rectifying potholes etc.) may not require major civil works and will potentially have minimal environmental risks. However certain type of activities e.g., improving road condition, clearing and/or widening of footpath, and widening of road etc. may have low to moderate	While many of the measures for black spot fixing may not require any measure civil works and will have minimal or no social risks. However certain type of activities e.g., improving road, clearing and/or widening of footpath, and road improvements etc. may have low to moderate social risks based on the need for temporary disturbances to hawkers and vendors on the existing

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
	stops etc. (Excluding major infrastructure[9])	• Improve road surface e.g., rectifying potholes, road edges, drainage etc. • Remove roadside obstacles, installing crash barriers • Installing warning signs (e.g., for bends, junctions, narrow roads) • Removing on road parking etc. • Mechanism for reducing driver fatigue • Avoid contra traffic flow • Active police enforcement • Improve road geometry e.g., Eliminating sharp changes in alignment – curve/ slope etc. • Improve facilities for pedestrians walking along the road (including clearing and widening where required) • Widening the lanes and / or shoulders	environmental risks based on scale of work involved, the need for additional land if any including the requirement to cut trees. Hence, depending on type of road condition corrective measures/fixing black spots the environmental risk level may vary for specific sites and activities. It may be noted that large scale civil works are excluded from financing under this PforR. • Initiatives such facilities to relieve driver fatigue (resting centres) may require minor construction which will trigger environmental risks associated with construction. • Similarly, road widening will involve civil works and associated environmental risks for construction activities.	Government land that is required for black spot fixing.
4	Implementation and institutionalization of iRAD (Integrated Road Accident Database) and its application for identification and rectification of blackspots/ accident risk spots and linked to evidence-based State road safety programs and action plans	• Strengthening the institutional processes for capturing data in iRAD through mobile & web application for identification of black spots for rectification. • Assessment of implementation of iRAD at State level and operationalization of iRAD	• Since procurement of electronic devices are involved, the associated e-waste generated is an environmental risk if e-waste is not disposed appropriately.	• No specific social risk(s) • Integrated real time database for identifying and rectifying blackspots will help in timely actions and in turn contribute towards reducing accidents and fatalities.

[9] No new major construction of civil projects involving land acquisition such as construction of flyover, foot-over bridge will be included in remedial/ corrective measures. However, refurbishment projects that do not trigger social and environmental safeguards will be included.

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
		application in all districts including integration with VAAHAN, SARATHI, CCTNS / Police IT or appropriate systems specific to the State • State instituting mechanism for generating Accident-related FIRs using iRAD application		
5	All new PPP Contracts in State Highways (SH) to include yearly payment adjustments based on Infrastructure Risk Rating (IRR) / Road Safety Audit (RSA). IRR assessment and RSA should also consider the effect of Annual Average Daily Traffic (AADT) and Pedestrian Count	• Strengthening institutional processes of contracting to include Infrastructure Risk Rating (IRR) / Road Safety Audit (RSA) outcomes as part of contract and payment adjustment to make contractors more accountable towards road safety.	• No specific environmental risk/s	• No specific social risk(s)
B. Theme 2: Vehicle Safety & Driver Training				
6	Setting up of Accredited Driver Training and Automated Testing Centers and increased number of licenses issued through such centers.	• Undertaking study to identify number of centers to cover districts in individual States considering Central guidelines • Conducting feasibility study to identify center configuration along with PPP structure for each center or at a bundled level or in line with any central government scheme. • Setting up Accredited Driver Training and Automated Testing Centers at district level through PPP mechanism	• Setting up/construction of driver training and automated testing facilities will involve construction and associated environmental risks/impacts even if facility is constructed on government land. • Environmental risks/impacts may also be triggered if tree cutting is required/involved • If concrete/asphalt is laid over large areas of land, soil compaction will take place and the soil will be impermeable and impact groundwater recharge capability	• To be built only on government land as land acquisition and resettlement are not allowed under the program.

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
			• Major civil works are excluded from the program.	
7	Setting up of Authorized automated vehicle fitness centers (Inspection & Certification) and increased number of fitness checks through such centers.	• Conducting assessment of its implementation at state level and feasibility of setting up Authorized automated vehicle fitness centers at district level in participating states. • Conducting feasibility study to identify center configuration along with PPP structure for each center or at a bundled level or in line with any central government scheme. Setting up Accredited Driver Training and Automated Testing Centers at district level through PPP mechanism	• Setting up/construction of automated vehicle fitness facilities will involve construction and associated environmental risks/impacts even if facility is constructed on government land. • Environmental risks/impacts may also be triggered if tree cutting is involved • If concrete/asphalt is laid over large areas of land, soil compaction will take place and the soil will be impermeable and impact groundwater recharge capability • Major civil works are excluded from the program	• To be built only on government land as land acquisition and resettlement are not allowed under the program.
C. Theme 3: Enforcement				
8	Procurement and implementation of e-devices (including CCTV based automated chalan system) for issuing of e-challans for violation for high-risk behavior such as speeding, drunk driving, non-usage of helmets and seatbelts etc.	• Procurement of equipment of e-devices for e-challans • Integrating e-devices with SARATHI and VAAHAN for booking traffic violations •	• Increase in procurement of electronic devices of all types is anticipated which will have increased e-waste generation which need to be only disposed through authorized e-waste recyclers for proper disposal.	• No specific social risk(s) • Enhanced enforcement will benefit in reducing accidents and fatalities and in turn will benefit in saving human life and assets
9	Increased Enforcement for violation of traffic rules (over-speeding) through use of speed management devices (at a maximum of 10 km interval) by Police on NH, SH and Urban Roads.	• Procurement and operationalization of Automated speed measuring devices and linked to active speed enforcement.	• Increase in procurement of electronic devices of all types is anticipated which will have increased e-waste generation which need to be only disposed	• No specific social risk(s) • Enhanced enforcement will benefit in reducing accidents and fatalities and in turn will benefit in saving human life and assets

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
			through authorized e-waste recyclers for proper disposal. • Environmental benefits may be accrued by the reduction of accidents which may involve spillage of fuels and oils that contaminate soil and even water bodies/ groundwater.	
D. Theme 4: Post Crash Care				
10	States to undertake procurement of ambulances (BLS and ALS) to meet the gap.	• Need assessment of BLS ambulance and ALS Ambulance including their standards and filling the gaps where required.	• Procurement of most fuel-efficient ambulance models should be preferred (built into procurement specifications) to reduce emissions • Disposal of ambulances at the end of life needs to be done through authorized recyclers/ dealers only and as per MoRTH guidelines. • All electronic devises in ambulances to be only disposed separately through authorized e-waste recyclers.	• No specific social risk(s) • Filling the gap of BLS and ALS ambulances will benefit in saving precious lives of the accident victims and in turn will benefit.
11	Ambulances to be GPS tagged (as per AIS 140 standard), establish Data Center (Command & Control Center) for ambulances and single accident reporting number.	• Assessment of current status of use of GPS in Government Ambulances and mechanism of tracking/ guiding them. • Developing standard operating procedures for working of ambulances with GPS devices. • Establish a central ambulance command & control room by refurbishing existing available office spaces.	• All electronic devises in ambulances to be only disposed separately through authorized e-waste recyclers.	• No major social risks. Civil work for repair and refurbishment may require following and adhering to occupational health and safety measures.

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
		• Operationalizing single accident reporting number in the state		
12	Improve response time of ambulances (time to reach crash spot and from crash spot to medical facility) to 30 minutes	• Conducting study for assessing ambulance response time. • Develop mechanism for reducing the response time for ambulances to accident site. • Setting up District Command & Control Center for coordinating	• If additional electronic devices are required to improve response time, these electronic devices in ambulances are to be disposed only through authorized e-waste recyclers.	• No specific social risk(s) • Reduced response time will benefit in saving lives caused by road accidents.
II. ELECTIVE PARAMETERS – ELECTIVE PERFORMANCE INDICATORS				
A. Theme 1: Road Engineering				
1	Development of pedestrian footpaths along major urban arterial roads.	• Identify priority corridor on major urban arterial roads based on available blackspot/ risk assessment or any other available data. • Development of pedestrian footpath on the identified corridor.	• Construction related environmental impacts are expected. Environmental risk level will depend on scale of work and the associated civil works. Major civil works are excluded from the program.	• Alternative options to be explored in case additional required as no land acquisition and resettlement is allowed under the project. • Temporary disturbances to hawkers and vendors
2	Development of dedicated lane for two wheelers on priority corridor on SH and urban roads.	• Based on available blackspot/ risk assessment or any other available data, identify priority corridor on SH and urban roads for development of dedicated lane for two wheelers. • Design and construction of dedicated lane for two wheelers in the identified priority stretches of SH and urban roads.	• Any civil works associated with development of dedicated lane for two wheelers will have environmental risks and impacts. The risk level will depend on the scale of work involved and the processes adopted for management and disposal of any excavated soil or construction debris. Major civil works are excluded from the program.	• Alternative options to be explored in case additional required as no land acquisition and resettlement is allowed under the project.
3	Annual review of speed limits on State Highways and Urban Roads.	• Formulation of Framework to review the speed limit in the identified priority corridor on SH and urban roads.	• No specific environmental risks.	• No specific social risk(s) • Annual review of speed limit will contribute to reducing

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
		• Undertaking speed limit review annually in the identified priority corridor on SH and urban roads.		accidents and fatalities and hence benefit the road users.
B. Theme 2: Vehicle Safety & Driver Training				
4	Design and roll out campaigns for appropriate communication with consumers on the cost and benefit implications of safer vehicles. Campaigns to be conducted on social media and at least 2 of the following media platforms – TV, Newspaper and Radio.	• Designing and undertaking campaigns for appropriate communication with consumers on the cost and benefit implications of safer vehicles.	• No specific environmental risks • Enhanced awareness is anticipated to have environmental benefits as safer driving practices and reduced accidents involve associated environmental risks/impacts.	• No specific social risk(s) • Increased awareness due to campaign will help in reducing accidents and fatalities and hence benefit the road users
5	Design targeted advocacy campaigns for improved road user behavior (speed management, following traffic rules, avoiding drunk driving etc.), Campaigns to be conducted on social media and at least 2 of the following media platforms – TV, Newspaper and Radio	• Designing and undertaking targeted advocacy campaigns for improved road user behavior such as speed management, following traffic rules, avoiding drunk driving etc.	• No specific environmental risks • Enhanced awareness is anticipated to have environmental benefits as safer driving practices and reduced accidents involve associated environmental risks/impacts.	• No specific social risk(s) • Increased awareness due to targeted campaign for behaviour change will help in reducing accidents and fatalities and hence benefit the road users.
6	School curriculum to be revised to include at least 1 chapter on road safety	• Preparation of revised school curriculum for State Boards for classes 6th to 12th on road safety. • School curriculum in State Boards revised with a chapter on Road Safety for classes 6th to 12th. And issue of notification to schools to conduct one road safety workshop as part of extra-curricular activity once every 6 months.	• No specific environmental risks • Enhanced awareness in the early school years is anticipated to influence elders in the family and in the community to drive safely and lead to environmental benefits as safer driving practices are adopted and reduced accidents implies lowered associated environmental risks/impacts.	• No specific social risk(s) • Increased awareness of students will benefit in them being aware about road safety before they become adult, and they will also be able to influence behaviour change among adults in their homes/ community. This will in turn change the societal behaviour in due course and have social benefit by reducing

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
				accidents caused by road user behaviour.
C. Theme 3: Enforcement				
7	Enforcement agencies to carry out programs to reduce driver fatigue	• Design and undertake program targeted at reducing driver fatigue.	• If initiatives such as development/ construction of facilities (resting centres) along highways to reduce driver fatigue are planned, it will involve civil works and construction which will trigger environmental risks associated with construction. Major civil works are excluded from the program. • If the programs are essentially around awareness generation among drivers and vehicle owners, no specific environmental risks are anticipated.	• No specific social risk(s) • Reducing driver fatigue will contribute to reducing accidents and fatalities and hence benefit the road users.
8	Deployment of ITS components – Advanced Traffic Management System[10] (ATMS)	• Development and deployment of MoRTH Guidelines on ITS/ ATMS systems • High-risk corridors identified as per the road safety audit/ infrastructure risk rating in SH network to have ITS / ATMS systems.	• Procurement of electronic devices will ultimately lead to generation of e-waste. These need to be only disposed through authorized recyclers to minimize risks.	• No specific social risk(s)

[10] ATMS comprises a sub-set of systems within the ITS (Intelligence Transport Systems) with multiple technology elements like Automatic Traffic Counter and Classification System (ATCC), Weather Monitoring System (Meteorological Station), Emergency Call Box (ECB) System, CCTV (Closed-Circuit Television) Monitoring System, Supervisory system at control room etc.

Sl. No.	Activities/ KPIs	Potential Activity/ Activities	Environmental Risks	Social Risks
9	Reduce speed limits to 30 kmph in school zones, and in designated public places involving children of less than 10 years of age, and deploy appropriate infrastructure and enforcement	• States to identify all school zones in all districts Issuance of guidelines by State highlighting all aspects that must be undertaken to improve road safety around school zones. • Annual review and enforcement of speed limits in school zones.	• Minor/negligible environmental impacts are expected due to construction of relevant small-scale infrastructure such as signages and speed bumps.	• No specific social risk(s) • Reducing speed limit in school zones will have social benefits by reducing accidents in school zones.
D. Theme 4: Post Crash Care				
10	Undertake First Responder (FR) training during onboarding for all types of police and State Transport Undertaking (STU) personnel with yearly review training	• Designing curriculum for First Responder Training and a detailed training plan along with qualifying evaluation test. • Initiating First Responder training and issuing certificates to them based on evaluation test.	• No specific environmental risks	• No specific social risk(s) • First Responder training will help awareness and appropriate skills in responding to accidents and in reducing accident fatalities.
11	At least 30% women staff operates the ambulance control rooms	• Identify number of staff required to support ambulance command & control rooms in various districts by the states. • Preparation and implementing policy/ plan for hiring women staff to operate the ambulance control rooms.	• No specific environmental risks	• No specific social risk(s) • Implementation of this policy/ plan will help in better understanding of accident victims involving pregnant women and their immediate medical requirements.
12	Implementation of guidelines for protecting “Good Samaritans”	• Good Samaritan guidelines displayed in all hospitals and police station to promote more Good Samaritans. • Preparation of training/ workshop module and finalization of vendor to provide training.	• No specific environmental risks	• No specific social risk(s) • Promoting and implementing Good Samaritan guideline and further training will help save precious lives during road accidents and hence have larger social benefits.

4.3 Indirect and Cumulative Impacts

71. With rapid motorization and the provision of high-speed road infrastructure have serious implications for the safety of vulnerable road users. Improving road safety in India is vital to the nation's health, well-being, and economic growth. However, the rapid motorization also brings its own set of indirect and cumulative environmental impacts due to increased air and noise pollution, increased use of electronic devices and components and their ultimate disposal, disposal of used batteries, disposal of used oils, replaced parts and components and scrapped vehicles. The MoRTH Annual report 2021, states that there are almost 28 crore vehicles, and 17 crore license records are available in the central repository (National Registry). This gives an indication of the number of vehicles that travel on Indian roads. To keep the emission checks in place, the integration of Pollution Under Check (PUC) certificates are in place. To promote safety in vehicles and influence driver behaviour for road safety initiatives such as integration of VAHAN database with vehicle location tracking device; integration of speed limiting device/speed governor and integration of insurance data are in place. The economic losses associated with a failure to take action are substantial. The impact of vehicle accidents on the underprivileged is often disproportionate. Pedestrians, cyclists and motorcyclists, usually hailing from low-and middle-income strata, account for more than 50 percent of the road traffic deaths in India. These accidents affect people's livelihood and push them into poverty. Studies show that poor households go into debt by borrowing money to cope with the additional medical expenses, in addition to losing income after an accident. This disproportionate impact of road crash mortality and morbidity on this economically productive segment of the population has a negative impact on productivity and is likely to significantly depress GDP growth rates.

72. Investing in road safety in India and reducing road crash fatality and injury prevention will contribute to the accumulation of human capital in India, which in turn will contribute to sustainable and inclusive economic growth and overall country wealth along with contributing to SDG 3.6 targets. Scaled-up road safety investment in India will also contribute to the achievement of other sustainable mobility goals related to improved transport productivity, universal accessibility, climate change mitigation and adaptation, and reduced local air and noise pollution as well as environmental contamination due to the accidents.

5 ASSESSMENT OF ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM, CAPACITY AND PERFORMANCE

5.1 Assessment of Existing System

73. As mentioned earlier, the PforR Policy of the Bank requires the proposed Program to operate within an adequate environmental and social management system that can manage environmental and social effects (particularly adverse impacts and risks) identified during the ESSA process. This includes:

a. an adequate legal and regulatory framework and institutional setting to guide environmental and social impact assessment and the management of environmental and social effects, and
b. adequate institutional capacity to effectively implement the requirements of the system including staffing, resources and process and practices in place

74. This section assesses whether the program's environmental and social management systems are consistent with the core principles and key planning elements contained in the PforR Policy and whether the involved institutions have the requisite capacity to implement the requirements of these systems. Both elements (e.g., program systems and capacity) are necessary towards ensuring that the environmental and social effects identified in Section 4 of this document are effectively managed. Through the analysis, the ESSA team has identified some gaps, which can be addressed through actions recommended under Section 7 of this report. A detailed analysis of the proposed program with respect to key elements against the core principles laid out in PforR policy/ESSA guidance is presented in the Annex V.

75. A program system is constituted by the rules and "arrangements within a program for managing environmental and social effects[11], "including institutional, organizational, and procedural considerations that are relevant to environmental and social management[12]" and that provide "authority" to those institutions involved in the program "to achieve environmental and social objectives against the range of environmental and social impacts that may be associated with the Program[13]." This includes existing laws, policies, rules, regulations, procedures, and implementing guidelines, etc. that are applicable to the program or the management of its environmental and social effects. It also includes inter-agency coordination arrangements if there are shared implementation responsibilities in practice[14].

76. Program capacity is the "organizational capacity" of the institutions authorized to undertake environmental and social management actions to achieve effectively "environmental and social objectives against the range of environmental and social impacts that may be associated with the Program." This ESSA has examined the adequacy of such capacity by considering, among other things, the following factors:

a. Adequacy of human resources (including in terms of training and experience), budget, and other implementation resources allocated to the institutions;

b. Adequacy of institutional organization and the division of labor among institutions;

c. Effectiveness of inter-agency coordination arrangements where multiple agencies or jurisdictions are involved; and

[11] Drawn from Program-for-Results Financing: Interim Guidance Notes on Staff Assessments, "Chapter Four: Environmental and Social Systems Assessment Interim Guidance Note," Page 77, paragraph 1

[12] Ibid, page 82, paragraph 12

[13] Ibid., Page 77, paragraph 2, and page 82 paragraph 12.

[14] Based "Chapter Four: Environmental and Social Systems Assessment Interim Guidance Note," Program-for-Results Financing: Interim Guidance Notes on Staff Assessments

d. The degree to which the institutions can demonstrate prior experience in effectively managing environmental and social effects in the context in projects or programs of similar type and magnitude.

5.2 Key Program Implementing Agencies

77. The Government constituted a committee in the year 2005 to deliberate and make recommendations on creation of a dedicated body on road safety and traffic management. Based on the recommendations of Sunder Committee, the Union Cabinet approved National Road Safety Policy in 2010. The National Road Safety Policy outlines the policy initiatives to be framed/taken by the Government at all levels to improve the road safety activities in the country. Government of India, through this National Road Safety Policy, states its commitment to bring about a significant reduction in mortality and morbidity resulting from road accidents. In order to achieve a significant improvement in road safety, the Government of India is committed to: Establish a Road safety Information Database; Ensure safer road infrastructure; Safer vehicles; Safer drivers; Ensure safer road infrastructure; Safety of vulnerable road users; Road traffic safety education and training; Enforcement of safety laws; Emergency medical services for road accidents; HRD & Research for road safety; and Strengthening enabling legal and institutional and financial environment for road safety.

78. For the implementation strategy, the Government has decided to establish a dedicated agency viz. a National Road Safety Board (NRSB) to oversee the issues related to road safety and evolve effective strategies for implementation of the Road Safety Policy. The Government has also decided to establish a National Road Safety Fund to finance road activities through the allocation of a certain percentage of the cess on gasoline and diesel.

A. At National Level

79. MoRTH will be the apex body at Central level, with a Central Steering Committee (CSC) chaired by Secretary, MoRTH, comprising representatives from stakeholder ministries and departments such as MHA, Ministry of Housing and Urban Affairs (MoHUA), and MoHFW. CSC will be supported by a Central Project Management Unit (CPMU), headed by Additional or Joint Secretary, MoRTH and will be responsible for day-to-day monitoring the progress of various road safety interventions being undertaken by the states, and managing interim outcomes of the same and ascertaining whether they align with the targets under proposed performance indicators. CPMU team will be further supported by staff with expertise in technical, procurement, fiduciary, and safeguard issues. Central PMU will also be supported by PMC for project coordination with the Participating States. CSC at any time during the duration of program, may revise the KPIs, scheme guidelines and verification protocols based on the priorities of the government or effectiveness of the program, in mutual agreement with WB.

B. At State Level

80. At the State-level, program implementation and oversight shall be led by a State Road Safety Lead Agency (SRSLA) chaired by the Secretary of either Transport or Home Department of the State and a member Secretary at the level of Joint Secretary appointed by the State Government. The SRSLA will also have representatives from the respective departments of Transport, Home, Public Works or Roads and Building, Health, Urban Development, and Education. Under the SSPSRS a state may nominate an existing agency or authority or department as the SRSLA, if the broad institutional structure and management functions can be met as proposed under the Government program. The SRSLA will coordinate with the existing District Road Safety Committees (DRSC) as needed for the implementation of the program. The broad management functions of the SRSLA, expected to meet at least quarterly, include: (i) providing policy advice and guidance for the effective implementation of the SSPSRS; (ii) ensuring and promoting coordination and collaboration across involved government stakeholders and levels; (iii) approving work programs, budgets, and program implementation reports; (iii) monitoring program implementation and results and address any issue related to program implementation and achieving its results; (iv) ensuring adequate transparency of program

implementation i.e. publishing work program and budget, program implementation reports, program results and (v) ensuring private sector and civil society stakeholders engagement.

5.2.1 Existing Institutional Arrangement and Performance in Participating States

81. The Table below presents the existing institutional arrangement in each of the participating states and how they function, their performance and capacity.

Table (5.1A): Institutional Assessment at State Level

	Uttar Pradesh	Andhra Pradesh	Telangana
Lead Agency	Transport Department	Transport Department	Transport Department
Institutional Arrangement for Road Safety	• **State Road Safety Council** formed under Chairmanship of CM-UP. • **State High Powered Empowered Committee** under Chairmanship of Chief Secretary with Principal Secretaries of Home, Transport, Medical, Finance, Planning, PWD, Law, Urban Development, Basic Education Department, and DGP, Director Traffic & Transport Commissioner as Member Secretary. • **Road Safety Cell** was established as a secretariat of the State Road Safety Council and State High Powered Committee is at Transport Commissioner Office, Lucknow. • Road Safety cell is headed by Transport Commissioner and along with other officials have 4 Officer on Special Duty (OSD) from Health, Police, PWD, and Education Department and 02 departmental OSDs working in the Road Safety Cell. • Under Chairmanship of Divisional Commissioner, Regional Road Safety Committees are there at Division level (18 Division). And each district has the	• State Road Safety Council formed under the chairmanship of the CM with Chief Secretary and Secretaries and HODs of line departments and NGOs as members. • Committee headed by Chief Secretary to approve projects and sanction funds for various activities under AP Road Safety Fund. • Road Safety Cell in office of Transport Commissioner, Vijayawada • Proposal in government to create a lead agency to supervise the activities of all stakeholder departments at the state and district level.	• State Road Safety Council was set up in 2015 • Members from Transport, Police, PWD/R&B, Health, Education Department • Road safety policy and Road safety action plan were formulated and adopted 2015 • A Lead Agency with members from Transport, Police, PWD/R&B, Health, Education Department and Other Departments was set up for improving Road Safety. • Annual calendar for the purpose of identification and rectification of Black Spots was prepared by R&B dept. National Highways have identified 25 black spots, NHAI have identified 44 Black spots

	Uttar Pradesh	Andhra Pradesh	Telangana
	District Road Safety Committee under the Chairmanship of District Magistrate which meets once every quarter. • Dedicated Road Safety Division in PWD headed by Executive Engineer has been established at PWD headquarter for ensuring road safety provisions in road proposals and monitoring implementation.		
Adequacy of staffs designated and responsible for Environmental and social aspects in the participating departments especially in Lead Department, and PWD	• While the PWD has the Environmental and Social expert as part of the ongoing World Bank supported road project in UP, there are no specifically designated persons for environmental and social aspects in any of the participating departments.	• The PWD has built the Environmental and Social expertise in its officers by implementing recently concluded Bank assisted State Highways project. There are no specifically designated persons for environmental and social aspects in any of the participating departments.	The PWD has built the Environmental and Social expertise in its officers by implementing recently concluded Bank assisted State Highways project. There are no specifically designated persons for environmental and social aspects in any of the participating departments.
Adequacy of skills and training for E&S aspects especially to the E&S designated officials	• While there are sectoral skills dealing with road engineering, enforcement, medical response, bio-medical waste management, and communication do exist with the participating departments, there are limited awareness and knowledge about addressing both environmental and social risks within the Road safety cell or collectively in the participating departments.	• There are sectoral skills dealing with road engineering, enforcement, medical response, bio-medical waste management • However, awareness or knowledge on E&S aspects is limited. • No specific training plans in place.	• There are sectoral skills dealing with road engineering, enforcement, medical response, bio-medical waste management • However, awareness or knowledge on E&S aspects is limited. • No specific training plans in place.
Mechanism for interagency collaboration for delivery of services or for managing E&S effects under road safety program	• The Road safety cell and placement of OSDs from various department does provide good opportunity for managing E&S aspects in collective manner, however, it requires further strengthening to be more effective.	• The Road safety cell under transport department and coordination with other department does provide good opportunity for managing E&S aspects in collective manner, however, it requires further strengthening to be more effective	The Road safety cell under transport department and coordination with other department does provide good opportunity for managing E&S aspects in collective manner, however, it requires further strengthening to

	Uttar Pradesh	Andhra Pradesh	Telangana
		as well by District Collector at the district level.	be more effective as well by District Collector at the district level.
Key Gaps Identified	• The key gaps include (a) No designated staff responsible for implementing the E&S activities in Road Safety cell or in the participating departments for the overall road safety program; (b) No mechanism of training and orientation of field staffs of the participating department on E&S aspects; (c) No system of monitoring or reporting on E&S aspects.	• No designated personnel to address E&S aspects • No training plans or training calendars in place • No systematic monitoring of E&S aspects.	• No designated personnel to address E&S aspects • No structured training plans or training calendars in place • No systematic monitoring of E&S aspects.
Potential Measures for plugging the gap identified	• The key measures for addressing the gaps will include (a) Placement of or co-designating Environmental expert and Social Expert in Road Safety Cell for screening, mitigation and monitoring; (b) Mechanism of training and orientation of field staffs on E&S aspects especially for PWD by having a training module on E&S aspects and a training calendar accordingly.	• The key measures for addressing the gaps will include (a) Placement of or co-designating Environmental expert and Social Expert in Road Safety Cell for screening, mitigation and monitoring; (b) Mechanism of training and orientation of field staffs on E&S aspects especially for PWD by having a training module on E&S aspects and a training calendar accordingly.	• The key measures for addressing the gaps will include (a) Placement of or co-designating Environmental expert and Social Expert in Road Safety Cell for screening, mitigation, and monitoring; (b) Mechanism of training and orientation of field staffs on E&S aspects especially for PWD by having a training module on E&S aspects and a training calendar accordingly.

Table (5.1B): Institutional Assessment at State Level

	Gujarat	Tamil Nadu	West Bengal	Odisha
Lead Agency	Gujarat Road Safety Authority	Transport Department	Transport Department	Transport Department
Institutional Arrangement for Road Safety	• Gujarat Road Safety Authority (GujROSA) is the lead agency with Minister of Transport as the Chairman, Secretary Transport is the Vice Chairman along with Secretaries from	• State Road Safety Council is the senior most institution on Road Safety in the State. The Minister for Transport is a chairman of this council with 20 members. It meets once in	• Road Safety Policy – 2016 • Road Safety Council is established • Headed by Chairman – Chief Secretary	• Road Safety Council is established • Headed by Transport Minister

	Gujarat	Tamil Nadu	West Bengal	Odisha
	Home Department, Health and Family Welfare, Education, Roads and Building Dept, DG Police, MD Gujarat State Road Transport Corporation (GSRTC), Chief Engineer NHAI, Municipal Commissioner Ahmadabad Municipal Corporation, Chairman Western India Automobile Association, and Transport Commissioner and being the members of the group. The Chief Enforcement officer is the Member Secretary of GujROSA. The Chief Road Safety Commissioner is the CEO of the Authority. • The Executive Committee of the Authority is headed by the Secretary Transport Department as Chairman and the Transport Commissioner as Vice Chairman. It has members from Health, Education, Police, Road and Bridges, National Highway and Ahmadabad Municipal Corporation. • The State Road Safety Council • District and City Road Safety Committee	three months. The Transport Commissioner is the Member Secretary of the Road Safety Council. • The Road Safety Cell is the Lead Agency as per instructions by Supreme Court Committee headed by Joint Transport Commissioner (Road Safety) of the Transport Department. It has senior officials as members from Police Department, Education Department, Medical Education, Highways Research Station from Highways, and Institute of Road Transport. • **District Road Safety Committee** under the to chairmanship of District Collector, and Superintendent of Police as the member Secretary, review road safety measures on monthly basis.	• Member secretary – Principal Secretary Transport • Other members: IGP, DGP Police; CP – Kolkata, Bidhan Nagar, Barrackpore, Howrah, Durgapur and Siliguri; CE – NHAI; Health and Welfare; Secretary transport and other relevant departments. • District Road Safety Committee • Headed by District Magistrate • Member Secretary – Regional Transport Officer • Members: DCP Traffic, SP; Executive Engineer PWD, UDD; CMO Health; Sub-divisional Officers and DI of Schools.	

	Gujarat	Tamil Nadu	West Bengal	Odisha
Adequacy of staffs designated and responsible for Environmental and social aspects in the participating departments especially in Lead Department, and PWD	• No staff are allocated for E&S aspects	• The PWD has built the Environmental and Social expertise in its officers by implementing recently concluded Bank assisted State Highways project. There are no specifically designated persons for environmental and social aspects in any of the participating departments.	• No staff are allocated for E&S aspects	• No staff are allocated for E&S aspects • Training on vehicle emission management/fuel efficiency and other emission related issues are being conducted frequently by various institutions like Centre for Science and Environment, ESCIH Hyderabad & ARAI Pune etc. • Selected officials from the organization are attending these trainings.
Adequacy of skills and training for E&S aspects especially to the E&S designated officials	• Limited awareness or knowledge on E&S aspects. • Staff Training College carries out training for field staff.	• There are sectoral skills dealing with road engineering, enforcement, medical response, bio-medical waste management • However, awareness or knowledge on E&S aspects is limited. • No specific training plans in place.	• Limited awareness or knowledge on E&S aspects. •	• Limited awareness or knowledge on E&S aspects • Training on identification and management of E&S risks needs to be built in.
Mechanism for interagency collaboration for delivery of services or for managing E&S effects under road safety program	• Commissioner Transport is member of State Road Safety Council, Executive Committee of Road Safety, Member of Traffic Management Committee, therefore coordination with other departments is seamless.	• The Road safety cell under transport department and placement of OSDs from other department does provide good opportunity for managing E&S aspects in collective manner, however, it requires further strengthening to be more effective as well by District Collector at the district level.	• Lead agency coordinates with all other related departments for various road safety activities. The concerned officers coordinate with the respective departments regarding various road safety related programs / issues.	• Lead agency coordinates with all other related departments for various road safety activities. The concerned officers coordinate with the respective departments regarding various road safety related programs / issues.

	Gujarat	Tamil Nadu	West Bengal	Odisha
Key Gap Identified	• Limited awareness or knowledge on E&S aspects.	• No designated personnel to address E&S aspects • No training plans or training calendars in place • No systematic monitoring of E&S aspects.	• Need to build greater awareness on E&S aspects	• Need to build greater awareness on E&S aspects
Potential Measures for plugging the gap identified	Measures to address gaps include: • Allocation of dedicated personnel (environment and social expert) or at least officials given additional responsibility to look into E&S aspects • Training modules to include E&S aspects and develop a training calendar accordingly, particularly for PWD/R&B staff.	• The key measures for addressing the gaps will include (a) Placement of or co-designating Environmental expert and Social Expert in Road Safety Cell for screening, mitigation and monitoring; (b) Mechanism of training and orientation of field staffs on E&S aspects especially for PWD by having a training module on E&S aspects and a training calendar accordingly.	• Allocation of dedicated personnel (environment and social expert) or at least officials given additional responsibility to look into E&S aspects • Training modules to include E&S aspects and develop a training calendar accordingly, particularly for relevant PWD staff.	• Allocation of dedicated personnel (environment and social expert) or at least officials given additional responsibility to look into E&S aspects • Training modules to include E&S aspects and develop a training calendar accordingly, particularly for relevant PWD staff.

5.3 Summary of Institutional Capacity and Gaps Identified

5.3.1 Institutional Capacity Environment

82. This section is an analysis of the roles, proposed activities, identification or environmental risks, existing capacities, resources required and training needs for enhanced awareness on environmental aspects for the proposed program. This analysis is based on the available existing data, supported by the compilation and collation of information received from the state departments as on date when this report is prepared.

Transport Department:

83. Activities involving civil works: Among the activities proposed for financing under the proposed program, it was learnt that driver training and automated testing centres and automated vehicle fitness centres will be set up. These will involve land acquisition and construction of new buildings in some districts. The departments shall ensure that state government regulations will be met for landscaping, building construction and management of air pollution. The Gujarat transport department feels that no civil works will be required/panned under this program. With respect to assessment and mitigation environmental risks, Gujarat feels that the activities of the transport department do not pose any risk to environment. With regard to black spot identification and rectification, the departments outlined that they would coordinate with other departments. The transport departments in the states do not anticipate any major civil works to be involved. It may be noted that no major civil works will be financed under this PforR program.

84. Inspection: Measures taken by states regarding frequency of inspection of public transports and trucks and other commercial vehicles to identify fitness have been taken as per MV Act. In Gujarat, there is a system of frequent inspection of public transports and trucks and other commercial vehicles to identify fitness issues that may cause accidents. Inspections are carried out as follows: (i) 24x7 checking at 58 checkpoints across the state (ii) special checking at weekends for road safety and (iii) special checking for busses. In Odisha, all the commercial vehicles are required to get fitness test within a period of 2 years for new vehicles and within one year for old vehicles.

85. Enforcement: With regard to the mechanism for linking driving license renewal based on traffic violations, Gujarat has made a detailed proposal which are under consideration by the State Government. Odisha has outlined that a 'Command and Control Centre' is under construction at Bhubaneswar. The department also outlined that e-devices for issuing Vehicle Checking Report (VCR) will be one of the proposed activities. The departments are keen to have greater enforcement of traffic rules and roll out targeted campaigns for safer vehicles and driving behaviour to influence greater awareness on road safety. These campaigns would include social media, TV, radio and newspapers. Apart from this, the enforcement officials of Transport Departments regularly conduct the fitness check of vehicles along with other violations checking. Mechanism for linking driving license renewal based on traffic violations is also in place and steps have been taken to integrate the SARATHI and e-challan so that strict action can be taken for the repeated offenders. In Telangana, systems to regulate work hours especially for commercial vehicle drivers is done at border check posts for vehicles such as lorries and buses and cases booked in instances where second driver is not available particularly with respect of National Permit vehicles. Pollution Under Control (PUC) certificates are issued by licensing agencies and these agencies are required to calibrate their equipment annually. In some of the states, enforcement officials are trained to identify and penalize for pollution, over speeding, drunken driving which result in heavy penalties. It was learnt that in Andhra Pradesh there are over 400 breath analyzers and 2 speed guns per district to ensure enforcement. However, in Telangana, executive staff of the department are involved for this assessment.

86. Staffing for E&S management: Because of the low direct environmental risks and impacts from the tasks of transport departments, most state transport departments do not have dedicated staff for this

role. Similarly, in most states there are no dedicated resources (financial and manpower) that are allocated for environment and social risk assessment.

87. Coordination with other departments: The lead agencies for road safety in the states facilitate and coordinate with all other stakeholder departments for issues related to road safety. As per the direction of the Supreme Court Committee on Road Safety, officers from PWD, Health, Police and School and Mass Education department are deputed for Road Safety. Gujarat has outlined that since Commissioner of Transport is member of State Road Safety Council and is also on the Executive Committee of Road Safety and a member of Traffic Management Committee, the coordination with other departments is seamless. For instance, in Odisha, the departmental DMP for the Commerce and Transport Department is being prepared and shared with the Odisha State Disaster Management Authority (OSDMA) and Road safety is also a part of this. In Andhra Pradesh, the department coordinates with district disaster/emergency management unit through district road safety committees headed by the senior most MP in each district.

88. Unique state environmental policies: The departments have clarified that there are no unique environment/social policies in the state which are relevant to the program. The departments follow the national legislative framework and policies and the state legislative framework is in line with national frameworks and there are no *unique* policies at the state level apart from the policies to scrap old vehicles.

89. Disposal of old/severely damaged vehicles: Each state also has their own policy for old vehicle scrapping and new vehicle procurement. For example, in Andhra Pradesh, as part of the electric mobility policy of AP, there are incentives to purchase electric vehicles by exempting them from paying the Motor Vehicle Tax. The department also ensures that government vehicles that are old are not kept operational. The department is also the registering authority for "Registered Vehicle Scrapping Facility (RVSF)" as per the Motor Vehicle Act. In this line, the department also incentivizes the purchase of new vehicles against submission of certificates of scrapping old vehicles.

90. Vendor compliance with environmental legislation: Regarding the policy to consider the environmental compliance/performance of potential vendors before awarding contracts, the Andhra Pradesh transport department confirmed that environmental clearances are of the necessary conditions for award to contracts to vendors.

91. Disposal of e-waste: Disposal of e-waste is done through applicable norms in most states. All states do not always invite only authorized bidders to auctions. The list of Dismantlers/Recyclers as per the authorization issued by SPCBs/PCCs under E-Waste (Management) Rules, 2016 (As on 06-12-2021) is presented in the footnote[15]: The links to the applicable rules for e-waste disposal are presented in Annex 6.

92. Training needs and calendars: With respect to training needs assessment and training imparted to staff, it was learnt that in states like Odisha, training is imparted frequently on vehicle emission management/fuel efficiency and other emission related issues by various institutions like Centre for Science and Environment, ESCIH Hyderabad & ARAI Pune where selected relevant officials participate in these trainings. It is also learnt that as part of the advocacy and refresher courses, road user behaviour and training of drivers with repeat traffic offences is proposed to be conducted. Some states are proposing to have first responder training for police, State Transport undertaking and other personnel with yearly review and also Implementation of guidelines for protecting "Good Samaritans".

93. *In summary, it is assessed that the transport departments in the states are cognizant of the key roles they play regarding road safety and will be expected to take the leading role under this proposed PforR. It is felt that the there is scope to enhance the awareness and manpower capacity in the departments related to issues to mitigate environment related issues. This may be achieved relatively*

[15] https://cpcb.nic.in/uploads/Projects/E-Waste/List_of_E-waste_Recycler.pdf

easily by allocating dedicated financial resources for this purpose and plan targeted training for relevant officials. Some senior officers may be given additional responsibility to look into the environmental issues and ensure these are addressed through the support of other junior staff assigned.

PWD/R&B Departments:

94. Activities involving civil works: Activities planned by the PWD/R&B departments in the states are in line with the mandatory and elective parameters under the proposed PforR and include black spots rectification and speed control that may involve civil works for safety improvements at sharp curves, junctions and narrow culverts and bridges. However, it is noted that in Andhra Pradesh the proposed activities are essentially retrofitting road safety improvement works for which construction of new buildings will not be required. In Telangana, some of the permanent measures will involve civil works and minor land acquisition if any may also be involved which will be taken up by the Revenue department based on the requisition made by R&B department. Forest permissions will also be obtained if the road is passing through the Forest area. In Andhra Pradesh, other activities will include road safety improvement in 17 District Demo Corridors of SH (1,000 kms) as per DPRs (Road safety audit done using Road Safety Funds). The development of dedicated lane for 2-wheeler on SH and urban road network will involve construction of 2-wheeler track. The activities will need to involve civil works and the associated environmental risks and impacts will be addressed and managed as per the applicable existing national and state legislations such as Construction & Demolition Waste Management Rules, 2016 which seeks to effectively tackle the issues of pollution and waste generation and management arising from construction and demolition. In Gujarat, the proposed activities are similar to the other states where activities involve small scale infrastructure works – particularly for black-spot rectification, the associated approvals will be undertaken. Scale of civil works and the extent of excavation involved is calculated prior to initiating construction activities and proper disposal of construction debris and other wastes are managed as per applicable Environmental Acts. To track air pollution, measures such as afforestation, frequent monitoring of air quality and mitigation measures are being implemented by the departments. In Odisha, in the event of felling of trees required for civil works, twice of the number of trees are planted to compensate the felling. To avoid accidents due to light from oncoming vehicles, it is learnt Odisha plants bushed along the dividers. Such practices may be replicated in other states. For activities like the involvement of tree cutting, application for necessary permission is submitted online to Forest department by the concerned divisional office and relevant approvals are obtained. To avoid accidents due to collision with wildlife, if roads are expected to pass through reserve forests, proper fencing is installed for wildlife and signages are installed for drivers as per Wild Life Protection Act. Development of dedicated wildlife crossings have not been reported from the states. The department also maximizes mechanized/ automated construction to reduce exposure of workers.

95. Prior experience on World Bank other MDBs and E&S staffing: Andhra Pradesh has completed the APSHP, APERP and APSRP projects which had an Environmental Officer and an Environmental Engineer for externally aided projects. The ongoing VCICDP project have an Environmental Safeguard Expert looking after the Social and Environmental aspects of ongoing Projects. Telangana has also worked with the World Bank on the "Andhra Pradesh & Telangana Road Sector Project". Similarly, the completed Gujarat State Highway Project I and the ongoing GSHP II projects have E&S experts as part of the PMU. In Uttar Predesh, completed projects include the ADB Phase 1 project. Ongoing projects include the World Bank funded UPCRNDP where staff include CE (EAP), PD SRP II, SE (P) and SE (IDS). In Andhra Pradesh, for the environmental/social risk assessment for externally aided projects, guidelines of the funding agency are followed. Apart from National level legislations Andhra Pradesh Water, Land and Trees Act 2002 and other legislations are complied with. In Andhra Pradesh and in Telangana, Initial Environmental Examination (IEE) report are prepared for each project and follow the requirements as per IEE report guidelines. The current practices in the department to assess and mitigate environmental risks include project specific EMP/IEE being prepared and followed. It is noted that these experts are allocated specifically for each project and their contracts are linked to the

project duration only. No real long-term institutional capacity is built on E&S aspects and this aspect is required to be considered for the state departments for all projects and not just for externally aided projects.

96. Staff for E&S management: In Andhra Pradesh currently one AEE and one LA and R&R specialist are designated for ongoing projects. In addition, consultants are engaged on need basis. In Odisha, one consultant has been engaged to support this function. No specific staff is assigned for this role in Gujarat. In Uttar Pradesh, while the PWD has the Environmental and Social expert as part of the ongoing World Bank supported road project in UP, there are no specifically designated persons for environmental and social aspects in any of the participating departments. In most states, the financial resources and manpower allocated are also project and need based.

97. Inspection: State departments have a system of frequent inspection of stretches of highways to identify dangerous potholes/road damage/black spots that may cause accidents. Other departments such as police also report such black spots to the departments so that necessary action is taken. Some State departments also assess the rainwater drainage systems before every monsoon to prevent water logging. In Odisha, there is a continuous endeavor to provide RCC cover over drains to reduce risk to communities and rainwater harvesting systems are constructed along highways to facilitate ground water recharge. In Gujarat, Field engineers visit sites and based on site visits and assessments, if environmental clearances are required applications are made to the Ministry of Forest and Environment. In Uttar Pradesh, inspection is done frequently by field staff and during construction, excavated materials are disposed properly.

98. Disposal of e-waste: No specific systems are being followed in many states, and disposal is based on auction. In Gujarat, these are disposed through empaneled agencies registered by Pollution Control Board. Recommendations for proper procedures and considerations for the disposal of electronic devices have been outlined in the relevant section of this report. The links to the applicable rules for e-waste disposal are presented in Annex 6.

99. Disposal of old/severely damaged vehicles: Similarly, the disposal of vehicles at the end of life is through the auction process without sufficient oversight on the systems used by the winning bidder for final disposal of these old/scrapped vehicles. It is relevant to note that the MoRTH has drafted Guidelines for vehicle scrapping[16] and guidelines on provisions for end-of-life vehicles[17] are also in place. MoRTH has also issued circulars on vehicle scrapping policy[18]. Therefore, it may be noted for this department in all the states as well as other departments in the states that require to dispose vehicles, need to follow the MoRTH guidelines and policies for scrapping vehicles and take measures as required in these guidelines.

100. Vendor compliance with environmental legislation: In Andhra Pradesh, environmental compliance by vendor is compulsory as per Contract. In case of non-compliance, the contractor's payment is linked with compliance. In Gujarat, for asphalt work involved, at the time of bidding, the contractor has to produce plant fitness certificate and environmental clearance certificate issued from Pollution Control Board. This aspect is not currently considered by some of the other states, and it is

16 https://morth.nic.in/sites/default/files/circulars_document/Draft%20Guidelines%20for%20Vehicle%20Scrapping%20%281%29.pdf

17 https://morth.nic.in/sites/default/files/ASI/AIS-129%20Provision%20for%20end%20of%20life%20vehicles.pdf

18 https://morth.nic.in/sites/default/files/circulars_document/GSR%20653(E)%20regarding%20the%20Motor%20Vehicles%20(Registration%20and%20Functions%20of%20Vehicle%20Scrapping%20Facility)%20Rules,%202021.pdf

highly recommended that vendor compliance with applicable environmental legislation is made a mandatory criterion to be eligible for award of contracts.

101. Coordination with other departments: With regard to assessment of the existing mechanism of coordination with other departments, it is learnt that in Odisha, lead agency coordinates with all the relevant departments for all road safety activities. In Andhra Pradesh, the department coordinates at the state level through regular meetings headed by Principal Secretary and at the district level there is regular coordination meetings headed by the District Collectors with line departments. Similarly, regarding coordination with district disaster/emergency management unit, district level coordination meetings are held headed by the District Collector. In Telangana, instructions are issued through Transport and the Police departments for coordinating with district disaster management unit. The process in Gujarat is slightly different as concerned departments are informed and coordination is carried out via e-mail, letter, and telephone and in person communication.

102. Training needs and calendars: In terms of training needs and plans with respect to environmental and social aspects, no specific plans are in place in most of the participating states, and this is done on need basis and in some states, consultants have been engaged and as part of knowledge sharing with the department engineers and workshops are conducted. In Gujarat, Staff Training College carries out training for field staff.

103. *In summary, it is assessed that the PWD/R&B department plays a critical role in road safety as it responsible for the black rectification including repair and maintenance of roads. The role and activities of this department also involve works at sites which often involve small to moderate civil works which can in turn have adverse impacts on the environment. The scale of environment impacts will depend on scale of works involved and the associated environmental risks need to be identified beforehand by using a screening checklist so that planning for mitigation is in place. Since the large-scale investments are excluded under this PforR financing, the E&S impacts under this program are low to moderate. There is a room to enhance the awareness and manpower capacity in the departments to identify environment related issues proactively and take adequate and timely mitigative measures. This may be achieved relatively easily by allocating dedicated manpower and financial resources for this purpose and plan for targeted training for relevant officials. Some senior officers may be given additional responsibility to look into the environmental issues and ensure these are addressed through the support of other junior staff assigned.*

Health Department

104. Activities involved/proposed: The Heath department of Andhra Pradesh has outlined that one of the main activities to be implemented under the proposed program is the 108 emergency response services. Along similar lines, Gujarat has indicated its intent for Procurement of Ambulance (BLS and ALS) which are to be GPS tagged and to establish single accident reporting number. The state department also intends to establish a data centre for ambulances. Currently, the department has established Centralized Control and Command Center in Ahmedabad for 108 Ambulances, however, if any further expansion will be planned under this PforR, then the department will intimate the Bank and is expected to follow the government norms for construction to minimize E&S risks.

105. Prior experience on World Bank other MDBs: The health department in Andhra Pradesh has prior experience of working on externally aided projects such as the Andhra Pradesh Health System Strengthening Project (APHSSP) where there is a ESMF Consultant from Technical Support Unit (TSU) of APHSSP. Health department of Uttar Pradesh has also worked with the World Bank under Uttar Pradesh Health System Strengthening Project. It is learnt that the health department in Gujarat has taken some proactive good practices such as procurement of energy efficient appliances, use of solar energy where feasible and segregation of different types of wastes.

106. Enforcement: With regard to the current practices in the department to assess and mitigate environmental risks, Uttar Pradesh is following Biomedical waste management 2016 rules for the disposal of bio-medical wastes. The medical wastes are disposed through Common Biomedical Waste

Treatment Facilities. Along similar lines, Gujarat follows the state bio-medical waste guidelines[19]. In Andhra Pradesh under APHSSP to improve the quality of health care in the state, bio-medical waste segregation and management, infection control measures are also factored in. As part of Andhra Pradesh Health Systems Strengthening Project (APHSSP), a comprehensive baseline report on Environmental and Social Management Framework was prepared and published in January 2020 by the department. Quarterly assessments of health facilities are carried out with the assistance of questionnaires to assess adherence to environmental and social safeguards measures. Over time, it has been observed that there is an improvement in compliance with respect to environmental and social safeguards in health facilities. In addition to this, Quality Consultants at the State and District are responsible for environmental and social safeguards as in ensuring biomedical waste management, proper wastewater treatment in health facilities etc.

107. Disposal of e-waste: There is no specific system in Uttar Pradesh for the disposal of electronic devices. E-waste management in Gujarat is carried out as per the guidelines. Disposal of e-waste from the health department is not systematic in most states and this aspect needs to follow the relevant government guidelines.

108. Disposal of old/severely damaged vehicles: For the disposal of old vehicles like ambulances in Gujarat, based on the results of Vehicle Inspection Report, old ambulances are sold to scrap dealers. Similar systems are practiced in Uttar Pradesh. It has been highlighted in the ESSA under the sections for the assessment of other departments like Transport and PWD, disposal of old vehicles including ambulances needs to be done as per the guidelines outlined by MoRTH. The health department is also obligated to follow the MoRTH guidelines in this regard.

109. Vendor compliance with environmental legislation: In Uttar Pradesh, it is mandatory for vendors to have environmental compliance certificates and the Uttar Pradesh Pollution Control Board has a provision of penalizing the service provider in cases of non-compliance. In Andhra Pradesh, the contractual terms take care of the compliance of vendors with respect to environmental aspects. Currently, in Gujarat, the department does not check environmental compliance/performance of potential vendors before awarding contracts. However, the department will consider the necessary checks for vendors related to this program.

110. Coordination with other departments: With respect to integration of local accident data with police, the system currently in place in Andhra Pradesh is 'Offline' reporting of accident cases to Police. To facilitate a centralized database of accidents, it is recommended to transit from the 'offline reporting system' to an online process for enhanced speed of reporting as well as reduced response time for accidents. The coordination with other departments such as Transport, PWD and Police to undertake initiatives to enhance health sector response including for accident-related trauma cases, it is learnt that program activities are initiated only after due approval/instructions/guidance is received from the District/ State level authorities of the Andhra Pradesh health department. In Gujarat, although the current system coordination via e-mail, letter, and telephone; the iRAD software is under preparation where all concerned departments will get information and details of road accidents to further facilitate coordination with regards to necessary actions to be taken. In Gujarat, local accident cases are registered under Medico Legal Case (MLC) in the hospital and the details of the case registered is informed to local Police. Similarly, coordination with the district disaster/emergency management unit is done based on instructions/directives from the due authorities from State/District in Andhra Pradesh. In Gujarat, at District Level, Chief District Medical Officer is a member of District Disaster Management Committee to coordinate activities within district disaster/emergency management unit.

111. Staff for E&S management: In Uttar Pradesh, one officer is designated as 'Biomedical Waste Management Nodal Officer' at the Directorate of Medical & Health Services whereas in Andhra Pradesh consultants are engaged. In Gujarat, the state department has deployed personnel from

[19] http://www.iapsmgc.org/userfiles/1GPCB-BIOMEDICAL_WASTE_MANAGEMENT_GUIDELINES.pdf

Environment and Health Cell and a state task force is formulated to monitor activities under the Environment and Health Cell. This task force is headed by Commissioner of Health. State Nodal officer is appointed and at each district level and District Nodal Officers are appointed to address environment and climate change issues in the Health Cell. The health department in Gujarat is open to consider deploying a consultant to assess E&S issues. In terms of resources allocated for E&S aspects,

112. Training needs and calendars: On the aspect of training needs assessment and training imparted on environment and social aspects, in Uttar Pradesh, the current system is need-based random trainings and no planned calendar have been made. In Andhra Pradesh, under APHSSP, the state and district officials and quality teams have been trained and sensitized on environmental and social safeguards. The capacity building programs were conducted online and during the session, findings from the quarterly survey on Environmental and Social Safeguards were also disseminated. For capacity building programs on bio-medical waste segregation and management, trainings are conducted on a regular basis through the health department. Gujarat has dedicated resources allocated for conducting capacity building and training, IEC activities and Acute Respiratory Infections (ARI) surveillance in the for matters related to environment. In this regard, the department has identified 11 hospitals as sites for ARI surveillance and monitoring. The district nodal officer, medical officers and paramedical staffs are being given regular training in Gujarat, under National Program for Environment, Climate Change and human health.

113. *From the environmental perspective, the most important aspect is the segregation, handling and disposal of bio-medical wastes that are generated at the accident site as well at the health centres/hospitals and it is learnt that the health departments manage such wastes by following the guidelines of the Biomedical waste management 2016 rules. Although the health systems are required to use substantial numbers of electronic devices including those requiring batteries to operate, currently all the state the departments do not follow a specific system to segregate such wastes and manage their disposal. It is highly recommended that such defunct or old devices are stored in a segregated manner and only disposed through authorized vendors to reduce the environmental impacts. Along similar lines, dysfunctional and old vehicles and ambulances should only be disposed through authorized vendors as per the MoRTH guidelines to minimize potential impact.*

Police Department

114. Activities proposed: The Andhra Pradesh police department seeks to install sign boards (speed check), painting on roads with certain instructions to vehicles particularly in accident prone spots/dark spots on SHs which do not involve any civil construction. Similarly, in Gujarat, the department seeks to procure interceptor vehicles and highway patrol and rescue vehicles. In Gujarat, it is also planned for the deployment of IT component – Advanced Traffic Management System. It also plans to procure mobile crash labs to investigate accident cases with the help of forensics.

115. Environment risk assessment: There are no environment risk assessments done by the departments. Given that accidents pose a risk to the environment, and the Police department is one of the first responders to accidents, it is recommended that the department considers setting up a system to assess the potential environmental risks to identify the causes and effects of accidents. This is particularly relevant to accidents involving transport vehicles carrying hazardous substances. The department may need to collaborate with relevant agencies to provide support for this initiative.

116. Staff for Environment management: In Andhra Pradesh, Tamil Nadu and Gujarat, currently, no staff capacity exists to assess environment and social risks associated with the role, activities and functioning of the department and neither are financial and manpower resources allocated for environment and social risk assessment.

117. Training needs and calendars: There is no training or training needs identified with respect to environmental and social aspects. Since the police are the primary enforcing authority, the basic awareness on potential environmental impacts due to non-compliance with road safety guidelines which may lead to accidents is essential in the department. Such awareness will help the staff to keep the

environment aspect of road safety in mind while delivering their enforcement role. Some senior officers in the department may be given additional responsibility to look into the capacity of police personnel to have the basic necessary awareness regarding the relationship between road safety enforcement and environmental risks. These aspects may be rolled out through training and refreshers courses for all staff.

118. Enforcement: Police personnel impose penalty if vehicles carrying hazardous chemicals without appropriate labels/markings are identified. Similarly, penalty is imposed in most states if the vehicle driver does not carry the relevant Material Safety Data Sheets (MSDS) of the items being carried, overloaded vehicles, carrying materials such as sand/stone chips that are not adequately covered to avoid spilling on roads which may cause accidents for other vehicles and driving on wrong side. In Gujarat and Tamil Nadu, driver competency is not assessed for driving vehicles carrying hazardous chemicals. It is recommended that Police departments consider this aspect seriously as accidents involving vehicles carrying hazardous substances have the potential to cause serious environmental impacts, particularly if leakage/spillage of such materials takes place. As per the MSIHC Rules there are 684 hazardous substances[20] identified and several of these may be transported along roads. The environmental risks arising from the accidents of such vehicles is very high, therefore, segregated accident data involving these vehicles is critical to assess the accident trends. These trends may be for routes prone to accidents involving hazardous chemicals, time of accidents, driver fitness/competency, driver knowledge of vehicles carried, reasons for accidents and any accident history and the measures undertaken to plugs the gaps that can avoid future accidents. The spot penalty varies widely between states. While in Andhra Pradesh the penalty for wrong side driving is Rs. 100 and driving beyond the speed limits in leads to a penalty of Rs. 400. In comparison, the penalty in Gujarat for 2-wheelers is Rs. 1,500, LMV 3000 and other vehicles Rs. 5,000. It is learnt that Police personnel also conduct breathalyzer tests on drivers and book them for drunken driving. In Gujarat, the penalties range from Rs. 1,500 to Rs. 4,000 depending on the type of vehicle. When the penalty is too meagre there is insufficient incentive for drivers to comply, therefore, departments may consider setting a penalty value that will serve as an adequate disincentive for offences.

119. Good environmental practices: As good environmental practices, the Police departments in Andhra Pradesh and Gujarat promote the procurement of energy efficient appliances and offices also use renewable energy such as solar; in Andhra Pradesh the outposts have sewerage/soak pits for toilet waste and considers segregating different types of wastes.

120. Disposal of e-waste: Electronic wastes are disposed through tenders for recycling and department vehicles are disposed through auction. It is recommended that disposal of e-waste is only done through authorized vendors only to minimize environmental impacts. Similarly, bidders eligible to participate in auctions should have the facilities to scavenge the vehicle thoroughly for recycling to reduce the environmental risks.

121. Coordination with other departments: In Andhra Pradesh, the system to record accidents involving spillages/leakages of hazardous chemicals along roads/highways and communicating to the central database is through uploading in Crime and Criminal Tracking Network & Systems (CCTNS). In Gujarat, such accidents are recorded through a separate report. Tamil Nadu does not have such a system. In Andhra Pradesh, for the system to integrate local/state accident data with hospitals and fire departments there is no proper system in place right now. However, data is shared through the District Magistrate. The practice in Gujarat so far was to share data with hospitals and fire departments through messages. However, MORTH has recently launched 'e-DAR' (e-Detailed Accident Report) to provide

20 https://thc.nic.in/Central%20Governmental%20Rules/Manufacture,%20Storage%20and%20Import%20of%20Hazardous%20Chemical%20Rules,%201989..pdf and https://ciflabour.assam.gov.in/sites/default/files/MSIHC%20Rules.pdf

instant information on road accidents and help accelerate accident compensation claims. This will be linked to the Integrated Road Accident Database (iRAD) through which all stakeholder departments will be integrated, and accident data will be available in one virtual platform. In Tamil Nadu, the information is shared with hospitals but not with fire service. In Andhra Pradesh, the mechanism of coordination with other departments such as Transport, PWD and Health to undertake the program activities works at the state and district levels. At State level, State Road Safety Council (SRSC) meetings are convened by CS. All the stakeholder departments participate and discuss regarding coordination issues, targets, plans etc. At District level, District Road Safety Council (DRSC) meeting is held once in every quarter for assessing the enforcement, education, engraving done so far and planning for the subsequent quarter. The department also coordinates with district disaster/emergency management unit during disasters. In Gujarat, the Traffic Management Committee takes the lead to coordinate with all the other stakeholder departments and coordination with the district disaster management unit is done through a senior IPS officer who represents the Police department in the District Disaster Management Committee. In Tamil Nadu, the coordination is done through State Road Safety Council and District Road Safety Committee.

122. *The Police department plays the most significant role for the enforcement of traffic rules which in turn plays a crucial role for road safety. Considering the interrelationships between road safety (prevention of accidents) and the potential impact on the environment, it is essential that the Police department is able to assess how their enforcement role is closely intermingled with the associated potential environmental risks. It is observed that the penalties for traffic offences varies widely between states, and it is highly recommended to assign a fitting penalty value that serves as a strong deterrent for others and is expected to reduce the number of future offences. The Motor Vehicles (Amendment) Act 2019 provides that the State Governments can have a multiplier up to 10 times for the penalties for offences relating to Motor Vehicles. MoRTH has notified the conditions to be taken into consideration by the State Government for the purposes of specifying a multiplier under Section 210A, which include data collected by the Central Government or State Government pertaining to road safety, traffic management, offences committed, fines and penalties levied; or advice rendered by National Road Safety Board, National Road Safety Council or State Road Safety Council. It is also felt that the department does not perceive that its role has any relationship with the protection of the environment. This is evident as there is the lack of staff capacity, allocation of resources and training. All of these aspects are essential to bring this perspective into their operations which will go a long way to contribute even more towards road safety.*

5.4 Legal and Regulatory System

123. ESSA reviewed the applicable Government of India, and the state government laws, regulations, policies, programs and procedures relevant to managing the environmental and social effects of the proposed program and included environmental and social protection laws and policies also[21]. The legal framework for environmental and social systems are adequate and backed by set of comprehensive laws, regulations, technical guidelines, and standards, that apply nationwide and to participating states as well.

124. With regard to environment, the following relevant legal and regulatory frameworks were assessed:

- National Environment Policy, 2006
- The Environmental (Protection) Act, 1986
- Indian Forest Act 1927
- Forest (Conservation) Act, 1980
- Coastal Regulation Zone Notification 2019, and Island Protection Zone Notification 2019
- Water (Prevention and Control of Pollution) Act, 1974
- Air (Prevention and Control of Pollution) Act, 1981
- Environment (Protection) Seventh Amendment Rules 2009
- Noise Pollution (Regulation and Control) (Amendment) Rules, 2000
- Municipal Solid Wastes (Management & Handling) Rules, 2016
- Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
- The Batteries (Management and Handling) Rules, 2020
- The e-waste Management (Management & Handling) Rules 2016 (Amended in March 2018)
- Construction & Demolition Waste Management Rules, 2016
- Bio medical waste management Rules 2016; and
- The Ancient Monuments, Archaeological sites and Remains Act, 1958.

Overall, there are no significant gaps in the legal and regulatory systems that need to be addressed under this Program. Gaps were observed in enforcement of the existing legal and regulatory frameworks and backing them with well-defined institutional mechanisms and operational procedures.

125. The existing legislative framework is adequate to ensure social sustainability and inclusion of marginalized and vulnerable population including the SC and ST population, labor welfare, and gender and inclusion but requires strengthening of institutional capacity for better compliance. The key social legislations and provisions assessed includes:

- Constitutional provisions under Articles 15,16 and 46
- Provisions as per Fifth and Sixth Schedule Areas in the Constitution of India
- Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act 1989 and further Amendments 2018
- Minimum wages Act, 1948
- The Building and Other Constructions Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the associated Central Rules, 1998
- The Child and Adolescent Labour (Prohibition & Regulation) Act, 1986; and Notification of the Child Labour (Prohibition and Regulation) Amendment Act, 2016 and Rules 2017
- Public Liability Insurance Act, 1991

[21] Covering protection of rights and interests of backward, scheduled caste (SC) and scheduled tribe (ST) and other marginalized communities, citizen engagement, livelihoods, inclusion, gender, labor and other sector related laws and policies.

- Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR)
- The Right to Information Act 2005; and rules by the respective states
- The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014
- The Rights of Persons with Disabilities Act, 2016
- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013; and
- Criminal Law (Amendment) Act, 2013 - Sexual Offences.

126. **The Motor Vehicles (Amendment) Act of 2019**: The Motor Vehicle Act, 1988 has been the primary legislation governing road safety scenario in India for over 30 years till 2019. The enactment of Motor Vehicles (Amendment) Act, 2019 came with the objective to create an enabling framework to improve road safety in India. The Motor Vehicles (Amendment) Act of 2019 (MVAA) seeks to bring about changes in the Central Motor Vehicles Act of 1988. This is in lieu of solving some major issues of road safety, third party insurance, etc. and is the key policy for road safety in India. The key changes that the act has brought about includes:

1. **Road and environmental health measures** especially in case the vehicles are not fit to be used on roads, and manufacturing defects etc.
2. **Road safety measures with increase in the penalty for traffic rule offenders** more stringent rules for offences like juvenile driving, drunken driving, over speeding, overloading and driving without a license etc.
3. **Vehicle fitness with mandating for fitness checks** and promoted certification of automobiles after they were successfully tested.
4. **Setting up of a National Road Safety Board** under the central government.
5. **Compensation for victims of road accidents**, and provisions towards cashless treatment of victims of road accidents, during the golden hour.
6. **Protection of Good Samaritan** who stands up for helping out a road accident victim immediately after such mishappening takes place.
7. **Compulsory insurance and setting up setting up Motor Vehicles Accident Fund** for compulsory insurance to all drivers on-road. Also, providing for better insurance facilities and simplifying the process of claiming the compensation.
8. **Providing licenses to taxi aggregators**.
9. Promotes the **formation of National Transportation Policy** in collaboration with states.
10. **Strengthens the process of driving training** and propagates the opening up of more driver training institutes for ensuring the production of better commercial drivers in India.
11. **National register for driving license and vehicle registration** and harmonization and integration of issuance of driving license and vehicle registration.

127. The Motor Vehicle (Amendment) Act 2019 (MVAA) recognizes road safety programs must be effectively managed and coordinated through an apex body. It includes a provision to establish an empowered and accountable National Road Safety Board (NRSB) and counterpart state agencies. The acts also suggests that the state governments are to constantly monitor state highways, national highways, and urban roads through electronic mode.

128. In addition, respective state road safety policies were also assessed and includes:

- Andhra Pradesh Road Safety Policy 2015
- Gujarat Road Safety Authority Ordinance, 2017

- Odisha Road Safety Policy, 2015
- Tamil Nadu Road safety Policy, 2007
- Telangana Road Safety Policy 2015
- Uttar Pradesh State Road Safety Policy 2014; and
- West Bengal Road Safety Policy 2016.

129. These road safety policies recognize the need and provides the measures to stop and reverse the increasing trend in number of accidents, number of deaths and number of injuries through comprehensive measures covering engineering, enforcement, education and emergency care. These includes measures towards (i) Awareness about road safety; (ii) Strengthening institutional arrangement for road safety; (iii) Establishing road safety database; (iv) Ensuring safe road infrastructure; (v) Safer vehicles; (vi) Safer drivers; (vii) Safety for vulnerable road users; (viii) Road safety education and training; (ix) Enforcement of traffic laws; (x) Emergency medical assistance to road accident victims; and (xi) Research for road safety. However, the capacity to translate these measures into a coordinated action varies a lot across states and requires strengthening and proper monitoring.

5.5 Environmental and Social Management System Assessed Against Core Principles

5.5.1 Core Principle -1: Program E&S Management System

Program E&S management systems are designed to: (a) avoid, minimize, or mitigate adverse impacts; (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.

System and Capacity Assessment

130. The State Road Safety Council or Road Safety Authority is the senior most institution on Road Safety in the State and is generally headed by the Chief Minister in some states, while headed by Chief Secretary or Transport Secretary in other states and often drawing members from Transport, PWD, Highway/ R&B, Home/ Police, Urban Development, Health and Education as its members. The Road Safety Council periodically reviews the progress and provides policy guidance while Road Safety Cell housed in Transport Department and headed by the Transport Commissioner works as an executive arm that operationalizes and undertakes road safety activities on day-to-day basis. In the Road safety Cell, there is representation from PWD, Police, Health and Education in the form of Officer on Special Duty (OSD) to help coordinate road safety activities with their respective department. At the district level there is District Road Safety Committee headed by the District Collector/ District Magistrate to review and guide the district level road safety activities.

131. All states also prepare Road Safety Action plan that covers the activities under the road safety program and details out the activities that each of the department has to take up. The Road safety cell coordinates and monitors the implementation as per Road safety action plan under the guidance of Road Safety Council.

132. While the availability of a good and reliable crash data is the core of any blackspot management program, at present the black spot identification in most states are done through local police station based on repeated accidents. They report to Traffic Department. The Traffic police identifies black spots each year based on the accident data of last 2-3 years and through them it comes to Transport Department. Transport Department then disseminate it to respective road owning departments for fixing which are the responsibilities of mainly PWD, and Highway Authorities, Urban Development Departments, and Rural Roads.

133. All the states have emergency response service through 108 which is functional to attend to any emergencies/ accident victims and includes both Basic Life Support (BLS) and Advance Life Support (ALS) ambulances. Also, at the national highways, the Incident Management System (IMS) instituted by NHAI has ambulances positioned at every 50 kms so that it can respond to any accident within 15 minutes of it being informed on a national accident helpline. The Bio-medical waste management from the Ambulances is followed as per BMW guidelines issued by the state Pollution Control Boards.

Management of Environment Aspects

134. Environmental legislation at the national and state level for the conservation and management of the environment and on pollution management are well defined and in place, and so is the institutional structure for the management of the environment. Therefore, procedures and clearances required for environmental protection are well defined. Existing legislation also help minimize or mitigate possible adverse impacts on the natural habitats, archaeological sites and cultural resources. However, environment specific capacity is presently insufficient because of lack of dedicated E&S staff and relevant training in the implementing departments and nodal agencies may play a more proactive role to help enhance this capacity.

135. The program seeks to reduce the number of road accidents along stretches of roads through various interventions which, in itself is expected to contribute to environmental benefits and sustainability. The departments of Transport, PWD and Police are expected to ensure stricter enforcement of safe driving through their respective roles. Fewer road accidents will lead to reduced environmental impacts from such crashes. Moreover, the decongestion of bottlenecks will reduce the vehicle emissions and dust levels and also reduce noise levels from vehicular congestion and honking. For vehicles carrying hazardous substances, stricter and more frequent vehicle inspection, driver competence, proper vehicle labeling for materials being carrying will reduce accident probability which will play an important role to reduce environmental risk and promote sustainability.

136. Since the proposed program activities under this PforR is not expected to involve major construction activities on the ground that require conducting of IEE or EIA studies, or other initiatives that may pose significant potential environmental adverse impacts, it is felt that environmental impacts in this PforR are low to moderate under Core Principle 1.

Management of Social Aspects

a. The typical remedial measure required for black spots varies for different types of black spots are generally have a combination of remedial measures which includes (a) Improve signage; (b) Improve lighting/ visibility; (c) Speed limiting measures; (d) Improve Road markings; (e) Remove roadside obstacles; (f) Improving Road surface e.g., rectifying potholes, road edges, drainage etc.; (g) Remove roadside obstacles, installing crash barriers; (h) Installing warning signs (e.g., for bends, junctions, narrow roads); (i) Removing on road parking etc.; (j) Mechanism for reducing driver fatigue; (k) Avoid contra traffic flow; (l) Active police enforcement; (m) Improve road geometry e.g., eliminating sharp changes in alignment – curve/ slope etc.; (n) Improve facilities for pedestrians walking (footpaths) along the road (including clearing and widening where required); and (o) Widening the lanes and / or shoulders. Hence, except for road widening for some of the measures, and/or making footpath etc., rest of the remedial measures does not require any additional land.

137. Majority of the road safety activities as identified under the program does not involve any civil works except certain type of activities for fixing accident black spots, and setting up Driver Training & Automated Testing Centers, and for Automated Vehicle Fitness Centers at district level. The black spot fixing is undertaken by the road owning department which could be Highways, Road and Bridges, PWD, or Urban Development department. However, any construction activities by the Transport department or Police Department or Health department is generally done by PWD on their behalf. In some case, there are Engineering cell within the Health or Police department, where PWD engineers are deputed and follow PWD norms. PWD in each of participating states has its own well-defined guidelines and procedures for undertaking any civil/ construction activities including through contractors and have built in mechanism to follow national and state regulations as applicable.

138. While PWD take up the construction activities on behalf of various departments including for Transport, Health, and Police, the provision of land and ensuring that the land is free from any encumbrances lies with the main department on behalf of which PWD may be undertaking the civil works. The process is well defined for takeover and handover of the site for civil works by the PWD. Also, for any land requirement by any department, the process of requesting Revenue Department through District Collector/ Magistrate is also well laid, who then allot the land to the requesting department based on need.

Key Gaps Identified

139. While the institutional mechanism seems well defined at state and district level for road safety, and there are elements of environmental and social responsibilities which is visible in externally aided projects being implemented by the respective departments, but in normal day-to-day operations and part of institutionalized capacity, there is no specific staff with the responsibility to ensure environmental

and social risk management is addressed and guiding the process towards environmental and social sustainability.

140. There is no training or orientation of the field staffs of PWD, and the road owning departments/ agencies towards environmental and social sustainability, and this is required to be strengthened.

Recommendations

141. The key recommendations include:

- While there is need to orient key planning and field level officials on environmental and social sustainability aspects on the read safety activities, there is a need to have key officials in the Lead Agency responsible for supervising, monitoring and reporting on environmental and social safeguard aspects of the program. Although this PforR excludes the financing for large scale civil works, proposed civil works should include a E&S screening before finalizing and approving commencement of works.

5.5.2 Core Principle -2: Natural Habitat and Physical and Cultural Resources

Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.

System and Capacity Assessment

142. The program interventions are unlikely to disturb natural habitats or environmentally sensitive zones or require any associated rehabilitation. There is well defined legislation at the national and state level for the conservation, management, impact minimization and mitigation of any environment issue identified and also for pollution management, including an institutional structure defining the authorities in-charge of various activities and conservation areas. Existing legislation and institutional systems also help minimize or mitigate possible adverse impacts on cultural resources. Program activities are not anticipated in the vicinity of existing cultural resources and also not expected to adversely impact natural resources. In case there are activities required to be undertaken in areas such as black spot rectification in stretches of highways running through or adjacent to forest areas or in the proximity to cultural resources, the requisite permissions will be obtained, and adequate mitigation will be taken by the responsible departments. Compensatory planning for afforestation is required in case the tree clearance is required.

143. Also, in case any physical cultural structures coming on way to black spot fixing, the current practice in many of the states involve consultation with local community representatives, community leaders along with Police Department, District Administration/ Revenue Department and other stakeholder departments to identify a culturally appropriate method of identifying the way forward.

144. Therefore, it is anticipated that no significant adverse impact on natural habitats and physical and cultural resources will take place from program activities. On the contrary, the reduction of accidents and decongestion of bottlenecks will help to reduce dust and vehicular emissions.

5.5.3 Core Principle -3: Public and Workers Safety

Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

System and Capacity Assessment

145. Anticipated physical activities are small in scale and no large construction activities are foreseen as a part of the program boundary. In case of repair of road sections and installation of road safety signages, the use of hazardous materials are not likely. Enforcement of PPE use and workplace safety is a mitigation measure. The operational staff such as traffic enforcement staff of the police departments are exposed to high levels of vehicular emissions. For protection against these emissions, officers engaged in high traffic routes and spots wear masks to trap most particulate matter before they enter the respiratory tracts. The Police department is one of the first responders therefore, a system needs to be in place to assess the potential environmental risks for the cause and effects of the accidents. Provisions to maintain best practices related to Public Occupational Health and Safety oversight will be included into the planning and implementation of activities are part of the contract document. The practice for the disposal of e-waste is not consistent across the participating states and guidelines and recommendations for this has been outlined in the relevant sections of this ESSA. The departments also coordinate with the District Disaster Management department and seeks their support to deal with any natural disasters.

146. Civil construction works by the PWD and/or by the road owning departments follow the relevant Labor laws applicable in the State. Necessary clauses are mentioned in the bid and contract document for prohibition of child labor. In some states drives are being undertaken by the Labor Department of the state to prevent the practice of child labor in business establishments and in civil/construction work.

147. In all states, necessary labor laws and labor welfare related measures as per the regulations are mentioned in the bid and contract document for any civil work. Also, all necessary amenities are to be provided by the contractor at work site. However, its adherence differs across states in absence of close monitoring.

148. Also, all Government orders/ guidelines/ advisories on COVID19 are being followed by all the concerned departments/ agencies. Compliance on orders/ guidelines/ advisories on COVID19 are being followed through effective enforcement.

Key Gaps Identified

149. The key gap is to ensure adherence to most of the labor related contract clauses by the contractors undertaking civil works due to lack of monitoring and reporting on those aspects by the departments. Wastes emanating from the proposed activities include construction debris, e-waste and scrapped vehicles. The address the gaps for appropriate e-waste management disposal has been detailed in the relevant sections of this ESSA. The state departments are expected to follow the state e-waste management guidelines and dispose e-waste only through authorized e-waste recyclers. Similarly, the disposal of old/severely damaged vehicles needs to be done in line with the MoRTH guidelines. All construction debris needs to follow the applicable legislation for these activities and associated wastes. The primary reason for these gaps is the lack of dedicated suitably trained manpower resources to regularly monitor, enforce and report.

Recommendations

150. It is advised that PWD and the road owning department need to orient their field staffs and familiarize them regarding the monitoring and reporting formats that they use during site visits.

5.5.4 Core Principle -4: Land Acquisition and Resettlement

Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards. The road safety program, however, does not allow any land acquisition and resettlement under the program.

System and Capacity Assessment

151. The national legal and regulatory framework on land acquisition and involuntary resettlement is adequate, especially for land title holders. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR) is followed on all states for any requirement of land acquisition, which also emphasizes on extensive consultation and consent and provision of replacement cost, and support towards livelihood enhancement in a transparent and participatory manner. However, the limitation it has is being silent on treatment of squatters, where states have varied practices of considering compensating for loss of assets and livelihood. 'The Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act 2013' is being followed by all departments through Revenue Department. The states have well defined process for any land acquisition, and especially the PWD, Roads and Bridges (R&B) department, and Highway departments are well aware of the process that needs to be followed and have a long experience of doing so, as required.

152. Reviews of existing road safety measures and associated risks, activities by different stakeholder departments such as Transport, PWD/ Road and Bridges/ Highways, Police/ Home, and Health department in participating state suggests that land acquisition is largely limited to civil/ construction works in fixing accident black spots of certain types, which comes in the domain of road owning department i.e., PWD, Road and Bridges, and Highways whichever is the key department(s) involved in road construction and maintenance of the roads in the state. The other three departments i.e., Transport, Home/ Police, and Health generally does not require any civil work and thereby any need for additional land under the program and as most of the activities are softer in nature.

153. While many of the measures for accident black spot fixing may not require any major civil works, in all the project states only government land will be used for setting up Driver Training & Automated Testing Centers, and for Automated Vehicle Fitness Centers.

154. While the system and capacity for land acquisition and resettlement exist within the State Governments, no land acquisition and/or resettlement is allowed under the proposed road safety program as the SSP scheme document clearly articulates this in their list of excluded activities. And hence, in such cases where any land is required beyond the land owned by the Government, there will be need to explore alternative options and measures.

155. Fixing accident black spots poses the risks of temporary disturbances to hawkers, and vendors in some cases, especially where clearing and/or widening of footpath and widening of road etc. is required. Though some of the states mention that they have not encountered such issues of relocating vendors and hawkers, other states do mention it in few cases. These are being addressed as per the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014. Some of the states also undertake consultations with key stakeholders including with road users and local community members while planning any civil work in those areas.

156. Though proper care is taken during the progress of work to ensure no adverse effects are there to any community infrastructure or services. However, in unavoidable situations, necessary measures are taken in consultation with respective department and local community.

Key Gaps Identified

157. The key gaps identified is (a) Systematic screening to identify risks of potential measures being planned for the black spot fixing especially where clearing and/or widening of footpath and widening of road is required, and or where new construction is being planned; and (b) Systematic stakeholder consultation to identify community concerns and garnering community support.

Recommendations

158. The key recommendations to fill the identified gap are:

a. Environmental and social screening to be instituted during the planning phase of any new construction under the program including for identified black spot fixing, construction of

Driver Training & Automated Testing Centers, and for Automated Vehicle Fitness Centers, to identify any adverse social risks and impact. Based on risks identified, key measures to be planned towards mitigating the same.

b. While the land donation is a common practice, there is need to ensure that it is done on voluntary basis and these are no coercion for doing so, and the process of donation shall be institutionalized through gift deed.

5.5.5 Core Principle- 5: Rights and Interests of Indigenous People

Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups

System and Capacity Assessment

159. All the participating states and especially Transport Department and police have reported on conducting regular road safety awareness programs through mass media, mix-media, also on social media. In most states' messages on TV, FM radio, distribution of pamphlets, screening of audio-visual materials, street plays for commercial vehicle drivers and truckers, and public consultation workshops are conducted, and public awareness campaigns undertaken towards road safety are being undertaken in local language. Also, education programs undertaken for students on road safety. IEC materials are put up for display in public places and appropriate signboards are put up as per norms to inculcate positive road safety behavior among the public.

160. Many states also tweaked school curriculums to integrate road safety awareness to children along with holding activity campaigns in schools towards this.

161. NGO/CSO are also engaged for undertaking awareness campaigns on road safety in an active manner in most of the states.

162. In addition, some of the states also instituting training of first responders who provide immediate assistance to the Road accident victims at the accident spot to save lives in golden hour. An example of that in Odisha where First Responders are being trained under Project "*Rakshak*" - a first responder training.

***Project Rakshak**: 30 Weeks-30 Districts-300 Master Trainers-30000 First Responders. Project Rakshak is first of its kind state level program where in 30,000 volunteers staying or working at the eateries and different business establishments near accident prone areas and police personnel will be trained as First Responders to road accident victims. The program is being conducted in two phases. In the first phase 300 Master Trainers have already been trained in Training of Trainers (TOTs) by experts. Master Trainers include volunteers from Indian Red Cross Society, Odisha State Branch and NGOs across the state. After the TOT, in the second phase these 300 Master Trainers will go to accident prone areas in all the 30 districts and train and empower people to render help to the victims of road accidents. They will be equipped to administer first aid and pre-hospital trauma care to accident victims within the golden hour. There is a comprehensive plan to put up Display Boards about Good Samaritan Policy and Solatium Fund Scheme in all the Hospitals, Police stations, RTO office and other important locations in all the districts of the State. Tender has been floated and work order is being issued to an able vendor by end of March 2022 for executing the same.*

Recommendations

163. While there are no specific gaps identified, it is important to have a comprehensive social and behavior change communication (SBCC) to illicit enhance social benefit as this will contribute in reducing road accident fatalities.

5.5.6 Core Principle- 6: Social Conflict

Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

164. The program activities do not exacerbate any social conflict in fact it benefits in reducing loss of life and asset caused by accidents.

165. Though some of the states have LWE (Left Wing Extremism areas), no conflicts are reported to have been faced for road safety works. In those areas, states generally get their work is done through existing contractors working in those areas/ road stretches and are familiar with local issues and cultural practices.

5.6 Grievance Redressal Mechanism

166. The current Road safety program in participating states leverage existing country system to receive, resolve and manage grievances, and includes (a) Chief Minister's (CMs) grievances portals; (b) State and Department specific grievance redress mechanism; and (c) Centralized Public Grievance Redress and Monitoring System (CPGRAMS) at national level. The current grievance redress mechanism in the participating states has multiple ways to register grievances and get redressal. This includes:

a. Using Right to Information (RTI) Act to get information and resolution of grievances as mandated under the Act. All states and departments follow RTI and have deputed officials looking after the RTI within their department.

b. Registering grievances online through Chief Minister's (CM's) grievance cell in all the participating states under the control of Department of Personnel Administration and Reforms (DP&AR) which are generally received and tracked through state online portals such as https://www.spandana.ap.gov.in/ in Andhra Pradesh; https://cmogujarat.gov.in/en/ in Gujarat; https://janasunani.odisha.gov.in/ in Odisha; https://grievances.maharashtra.gov.in/en in Maharashtra; https://jansunwai.up.nic.in/ Uttar Pradesh; https://excise.wb.gov.in/pgms/page/Login.aspx in West Bengal ;and https://cpgrams.ts.nic.in/citizen/grievance.php in Telangana;. On receipt of the grievances, initial screening is done at DP&PR and forwarded to the concerned department for resolution. The concerned departments make further investigations and address the grievances and report back to DP&PR where the grievances are monitored and tracked online.

c. Registration of grievances can also be done through written application in most of the departments across the states in local district offices and have system of resolution and escalation. With majority being resolved locally, tracking them at state level is lacking in many cases.

d. In addition to the online system, https://cot.gujarat.gov.in/post-grievance.htm in Gujarat; and http://odishatransport.gov.in/ in Odisha has a system of registering grievances at Transport Department websites. Also, in some states there are Toll free helpline no such as in Uttar Pradesh (1800 1800 151); and in Maharashtra (1800 120 8040) that not only used for seeking information but also for feedback and grievances.

e. At the national level, the Centralized Public Grievance Redress and Monitoring System (CPGRMS) is an online web-enabled system (https://pgportal.gov.in/) in association with Directorate of Public Grievances (DPG) and Department of Administrative Reforms and Public Grievances (DARPG) to register and track grievance. And is being used in all Central Ministries and Departments including for MoRTH. Any State specific grievances can also be lodged here which are further directed to respective state and department for resolution and reported back through CPGRMS system.

167. While there are various mechanisms to register grievances, it is the CM's grievance cell and the manual written complaints at the local district offices of the departments which are the ones mostly used by the common people. However, the current system lacks in systematic recording, monitoring and reporting on grievances related road safety and requires strengthening. The Central and State Road Safety Authorities/Societies will attempt to streamline consolidating and monitoring the grievance redressal in project states.

6 CONSULTATIONS WITH KEY STAKEHOLDERS AND DISCLOSURE

6.1 Stakeholder consultations

168. As part of preparation, consultations were undertaken with each of the department in each of the participating states both face-to-face and virtual over December 2021 to February 2022 period. Consultations with each of the departments in each state, included discussion on environmental and social aspects. In addition, a detailed checklist was prepared specific to each department and shared for their written feedback.

169. Details of the face-to-face and virtual/ hybrid consultations with ESSA team along with other teams undertaken in different states is as below.

State	Date	Type of consultation	Key Departments/ Agencies Met
Uttar Pradesh	14-15 December, 2021	Face-to-face	Transport, PWD, Police, and Health
Telangana	16-17 December, 2021	Face-to-face	Transport, Police, Health, R&B, and PWD
Andhra Pradesh	22-23 December, 2021	Face-to-face	Transport, Police, Health, R&B, and PWD
Tamil Nadu	28-Feb – 02 Mar, 2022	Face-to-face	Transport, PWD, Police, and Health
West Bengal	10 Feb, 2022	Virtual	PWD
Odisha	12 Jan, 2022	Virtual	Transport

170. The consultation with all the implementing agencies and the seeking information through checklist from states and each of the participating department was largely concentrated in the areas of (a) key activities that the implementing departments are planning under the State Support Program (SSP) for Road Safety; (b) the institutional mechanism including environmental and social capacity within each of the participating department; (c) current practices in the departments to assess and mitigate environmental and social risks associated with the road safety activities undertaken by them; (d) mechanism for integrating community concerns during planning and implementation of road safety activities; (e) occupational health and safety related issues and concerns for staffs/ workers, laborers and community; (f) land requirement for key road safety measures and mechanism for identifying and procuring them; and (g) concerns related to training and capacity building of staffs on identifying and managing environmental and social risks and impacts.

6.2 Summary of Multi-stakeholder consultation workshop

171. A multi-stakeholder workshop was organized on 22nd April 2022 at the national level covering participants all stakeholder groups including from each of the participating states, civil society organization and academia. It was joined by more than 100 participants including key officials form MoRTH, key officials from various departments of the participating states and NHAI, representatives from various NGOs and civil society groups, members from academia, and members from Asian Development Bank (ADB) and World Bank task team. The details of the workshop minutes are presented as Annexure 7.

6.3 Disclosure

172. The draft ESSA will be disclosed in country at the MoRTH's website and on the World Bank's external website, prior to appraisal of the program, to serve as the basis for discussion and receipt of feedback and comments. The final ESSA will be re-disclosed at the MoRTH's website and at the World Bank's external website.

7 RECOMMENDATIONS AND ACTIONS

7.1 Exclusion of High-Risk Activities

173. While the government program has eligibility criteria which excludes new major construction or civil works which involves land acquisition and/or resettlement such as construction of flyover, foot over bridge, building infrastructure, testing sites, in the State Support for Road Safety Program, the exclusion criteria will be further clarified and the following activities that would cause high or substantial E&S risks and impacts will not be financed:

- Any land acquisition, physical relocation and/or involuntary resettlement impacts.
- Program activities should not involve large scale civil works or works that may have adverse and irreversible impact on the environment.
- Program activities should not be in forest or ecologically sensitive areas.
- Activities that are not in compliance with Central and State environmental legislation.
- Use of child or bonded or forced labor or labor involved in any hazardous activities.
- Destruction or damage to any physical and cultural resources.

7.2 Summary of Identified Gaps and Recommendations

7.2.1 Summary of Environment gaps

174. The summary of environment related gaps is primarily related to the disposal of E-waste, disposal of end-of-life or severely damaged vehicles requiring vehicle scrapping, compliance of vendors with relevant environmental legislations, segregation of accident data involving vehicles carrying hazardous substances, staff capacity in the departments to identify, assess and manage potential environmental risks and focus on training on E&S aspects.

175. It has been observed that most state departments do not always dispose electronic and e-waste through the authorized recyclers and these are generally disposed through auctions leaving little opportunities for the departments to ensure that these wastes are finally disposed as per the prescribed legal frameworks and norms are followed.

176. Departments do not follow the MoRTH guidelines for disposal of old/end-of-life vehicles which is a gap identified across departments and states. MoRTH has laid out these guidelines which have been detailed in other sections of this document.

177. Vendor compliance with environmental legislations is enforced in some states and their respective departments, however, this practice is not uniform across states and departments. Several state departments have a strict enforcement on this aspect, but others do not have a system in place to enforce this.

178. One of the most glaring gaps is the lack of segregated accident data involving vehicles carrying hazardous substances. Since accidents involving these vehicles have a tremendous potential to impact the environment due the risk associated with leakages and spillages of the chemicals, it is absolutely essential to track these kinds of accidents and analyze the causes of such accidents so that the appropriate prevention measures are put in place. This is anticipated to reduce the number of such accidents thereby reducing the associated potential risks to the environment.

179. Staffing on E&S aspects is very limited, and any existing staff are part of the PMU when there are existing road projects in the state. The PMU is only functional during the project period and the staff are also not available after project completion. Therefore, there is no institutional capacity strengthening on E&S aspects which is a gap that needs to be addressed. On similar lines, training of relevant staff on E&S aspects is not in place in most departments and no training modules or calendars are in place. Therefore, there is very limited focus to integrate E&S aspects for departmental staff.

180. It is felt that most departments are unable to relate their work with potential impact on the environment. Therefore, there is very limited focus to allocate staff or resources to build this capacity. The section on recommendations has highlighted the key recommendations to address all of the above points and these need to be considered seriously by the departments to reduce the potential risks to the environment.

7.2.2 Summary of Social gaps

181. The key social gaps are with respect to institutional mechanism for conducting E&S risks at the project site where any civil works to be undertaken such as black spot fixing or training center construction etc.; necessary staffs for planning, supervising, monitoring and reporting on E&S aspects within the implementation chain in key departments undertaking civil works, and especially at Lead Agency; varying degree of adherence to labor laws by the civil contractors in absence of limited monitoring on this aspect; and, training and capacity building of field level staffs on identification and management of E&S risks.

182. While the institutional mechanism seems well defined at state and district level for road safety, and there are elements of environmental and social responsibilities which is visible in externally aided projects being implemented by the respective departments, but in normal day-to-day operations there is no one responsible for ensuring environmental and social risk management and guiding towards environmental and social sustainability.

183. There is no training or orientation of the field staffs of PWD, and the road owning departments/ agencies towards environmental and social sustainability and requires to be strengthened.

184. In many states there is gap in monitoring mechanism to ensure adherence to most of the labor related contract clauses by the contractors undertaking civil works due to lack of monitoring and reporting on those aspects by the departments.

185. Systematic screening to identify risks of potential measures being planned for the black spot fixing especially were clearing and/or widening of footpath and widening of road is required, and or where new construction is being planned.

7.3 Summary of Recommendations and Actions

7.3.1 Environment Recommendations:

186. The following recommendations to address the environmental aspects are outlined in the section below:

- E&S screening: If activities are proposed which will involve moderate scales of civil works, it is recommended that departments develop and utilize a screening checklist prior to initiating and approving the works to assess the scale of work and the potential environments risks that may arise from such activities. The mitigation measures to manage these risks need to be drawn up prior to initiating and approving such works.
- Waste disposal:
    - The management and disposal of construction wastes and debris needs to be done as per the guidelines of the applicable legal frameworks.
    - Departments do not always disposal of electronic devices through registered recyclers, and these are often auctioned to the highest bidder. It is highly recommended that only authorized recyclers are invited to the auctioning process so that e-wastes are disposed as per the prescribed norms. The applicable state rules for e-waste disposal are presented in the ESSA document as weblinks.
    - Departments do not always dispose old/scrapped vehicles through vendors that have the systems and facilities/provisions in place to ensure that scrapped vehicles are scavenged

thoroughly for any recyclable parts/components and the left-over parts are disposed with minimal impact on the environment. It is recommended the bidding eligibility criteria considers these aspects before auctioning the old/scrapped vehicles. MoRTH has drafted guidelines for vehicle scrapping and provisions for end-of-life of vehicles. The departments are recommended to review these guidelines and follow them for vehicle disposal practices.

- Integration of environmental aspects into road design/maintenance:
    - Accidents risks are often increased when headlight of oncoming vehicle impairs visibility. It is recommended that bushes of sufficient height are planted and maintained along the dividers to address this aspect.
    - Some states have a constructed rainwater harvesting systems along highways to facilitate ground water recharge. Such initiatives may be considered by other states also, particularly in districts that have challenges associated with depleting groundwater resources.
- Compliance/Enforcement:
    - All departments do not consider vendor compliance with applicable environmental legislations as a mandatory requirement to be eligible for contract award. It is recommended that vendor compliance with applicable environmental legislation is made a mandatory criterion to be eligible for award of contracts.
    - For vehicles carrying hazardous substances, driver competency, vehicle inspection for fitness, proper labeling of vehicles with respect to hazardous materials being carried, drivers carrying MSDS sheets, driver awareness on first response in cases of accidents needs to be strictly enforced.
- Capacity building:
    - It is learnt that the current staff capacity is lacking in most states to assess environment and social risks associated with the role, activities and functioning of the department. Departments such as Transport and PWD in particularly are encouraged to engage some dedicated staff to look into these aspects. Existing staff may also be given additional roles to address these aspects. If permanent staffing is unfeasible, staff may be engaged on a project specific basis or a consultant may be engaged on retainer basis to provide the necessary support.
    - Given that accidents pose a risk to the environment, and the Police department is one of the first responders to accidents, it is felt that the department considers setting up a system to assess the potential environmental risks for the causes and effects of accidents. This is particularly relevant to accidents involving transport vehicles carrying hazardous substances. The department may need to collaborate with relevant agencies to provide support for this initiative.
    - Based on the information received from the state departments, it is understood that in most states, there are no training calendars drawn up and training modules are not in place. It recommended that relevant department staff are provided with basic awareness and training on the potential environmental impacts of the department activities so that all planning and implementation of works consider the environmental aspects and develop mitigation plans to address these. For training of specific aspects on management of environmental aspects, senior officials may be involved for oversight and management.
- Data Management:
    - Currently there is no segregated accident data for accidents involving vehicles carrying hazardous substances. The police and transport departments are highly recommended to maintain a segregated record of accidents involving vehicles carrying hazardous chemicals.

These accidents have a much larger potential to on adverse environmental impacts as the hazardous materials itself may be leaked, spilled or dropped on the road and along roadsides which can have immense impacts beyond the accident site. The details of the accidents need to be gathered and causes analyzed to prevent future accidents involving such vehicles.

- In states that currently use an offline reporting system for accident data with police, it is recommended that health facilities transit to an online reporting system at the earliest which will enhance the speed of reporting as well as response time for accidents. There may be instances where accident victims are brought to the health facilities before the police have been involved or are aware of the accident. Therefore, the online reporting will ensure that all accidents are recorded in the police database.

7.3.2 Social Recommendations

187. The key recommendations include:

a. Strengthening Staffing and institutional mechanism for E&S aspects with clear roles and responsibilities at different administrative levels within the Lead agency and also preferably in department undertaking civil works I.e., PWD/ R&B/ Highway etc.

b. Environment and Social Screening. Undertake Early screening at the time of planning for civil works for any E&S risk and mitigation especially for the black spot fixing involving civil works and where new construction is being planned.

c. Providing E&S Training and Capacity program for frontline program staff to enhance their capacity in E&S risk identification and management.

d. Strengthening civil works monitoring mechanism to ensure adherence to labor laws and labor welfare measures to be instituted by the contractors.

e. Mechanism for systematic stakeholder consultation to identify community concerns and feedback, and garnering community support especially where civil works is planned.

f. To enhance citizen engagement, the program needs to further strengthen the engagement with road users and the community through: (i) increased participation of civil society organizations in providing feedback to the central and state road safety lead agencies; (ii) improving the design and roll out of campaigns for improved road user behavior (speed management, compliance to traffic rules, avoiding driving under influence if alcohol etc.) under RA-3; (iii) periodic assessment of change in behavior and feedback from road users on perceived benefits of awareness programs; (iv) perception surveys with road user associations, and the community in general during risk mapping and site-specific planning for any blackspots; (v) enhanced engagement with private sector engagement for Corporate Social Responsibility programs and (vi) including provisions in M&E arrangements (such as in the IVA tasks) for due consultation with the stakeholders on overall program delivery.

g. GRM shall establish a framework to consolidate grievances related to road safety activities under the Program which were received through the Stakeholders Departments' grievance redress mechanisms.

7.4 Measures for Inclusion in the Program Action Plan

188. Based on the assessment and in order to strengthen the existing system and processes, the World Bank team suggests the following recommendations to be part of Program Action Plans along with key responsibilities, timelines, and indicators for its measurement.

Action Description	Source	DLI#	Responsibility	Timing	Completion Measurement
Report segregated data on crashes involving vehicles carrying hazardous substances	ESSA		State Road Safety Lead Agency	Yearly, starting 24 months after the Effective Date	Report on crash data involving vehicle carrying hazardous substance is notified by the State Road Safety Lead Agency to MoRTH
Conduct environmental and social Screening and prepare site specific mitigation measures where civil works are being planned such as for Black spots fixing and other building construction sites.	ESSA		Public Works Department or equivalent of each Participating State	Continuous	State Road Safety Lead agency to share half-yearly reports of E&S screening conducted and mitigation planned with MoRTH
Establish a framework to consolidate grievances related to road safety activities under the Program which were received through the Stakeholders Departments' grievance redress mechanisms	ESSA		State Road Safety Lead Agency	Within 24 months of the Effective Date	Participating States to share a summary report with MoRTH

ANNEXURES

ANNEXURE 1: LIST OF DOCUMENTS REVIEWED

GoI, 2019. The Motor Vehicles (Amendment) Act of 2019. Available at https://egazette.nic.in/WriteReadData/2019/210413.pdf

MoRTH, GoI, 2021. Road Safety State Support Program - Sadak Suraksha Yojana Scheme Document (Draft).

World Bank, 2021. Traffic Crash Injuries and Disabilities: The Burden on Indian Society, World Bank Group Publication. Available at https://www.worldbank.org/en/country/india/publication/traffic-crash-injuries-and-disabilities-the-burden-on-indian-society

World Bank 2020. Delivering Road Safety in India: Leadership Priorities and Initiatives to 2030. Available at https://openknowledge.worldbank.org/handle/10986/33339

IRC 2020. Guidelines for Identifying and Treating Black spots. Indian Road Congress. Available at http://www.irc.nic.in/admnis/admin/showimg.aspx?ID=329

NIMHANS 2017. Advancing Road Safety in India— Implementation is the key (Summary). National Institute of Mental Health & Neurosciences. Bengaluru. India. Available at https://nimhans.ac.in/wp-content/uploads/2019/02/UL_BR_m010-11_Main-rprt_FINAL.pdf

MoRTH annual report 2020-21: https://morth.nic.in/sites/default/files/Annual%20Report%20-%202021%20%28English%29_compressed.pdf

MSIHC Rules: https://thc.nic.in/Central%20Governmental%20Rules/Manufacture,%20Storage%20and%20Import%20of%20Hazardous%20Chemical%20Rules,%201989..pdf and https://ciflabour.assam.gov.in/sites/default/files/MSIHC%20Rules.pdf

ANNEXURE 2: LIST OF INDIVIDUAL/OFFICIALS CONSULTED DURING ESSA PREPARATION

Sl. No.	Name	Designation	Department/ Institution
Uttar Pradesh			
1.	Mr. Vinod Kumar Sonakia	Additional Transport Commissioner	Transport Department
2.	Mr. Pushp Sen Satyarthi	Deputy Transport Commissioner	Transport Department
3.	Mr. Sanjay Nath Jha	Regional Transport Officer - HQ	Transport Department
4.	Dr. Namita Verma	OSD (Medical)	Health Department
5.	Dr. Shipra Pandey	Nodal Officer, BMWM	Health Department
6.	Dr. A. K. Srivastava	Additional Director	Health Department
7.	Mr. Mukesh Chardra Uttam	OSD (Police)/ DSP Road Safety	Police Department
8.	Mr. Jyoti Narayan	ADG Traffic	Police Department
9.	Mr. V. K. Jain	CE, EAP	PWD
10.	Mr. P. K. Jain	SE, IDS	PWD
11.	Mr. Satish Kumar Rawat	Executive Engineer, Road Safety Division	PWD
12.	Ms. Chandni Seth	Assistant Engineer	PWD
13.	Dr. Seema Srivastava	Environmental Expert	PWD
14.	Mr. P.N. Roy	Social Expert	PWD
15.	Mr. Amardeep Sharma	Database Administrator	Transport Department
Andhra Pradesh			
1.	Dr. A Ravishankar, IPS	ADGP	Police
2.	KNT Ujela, IPS	ADGP, RS	Police
3.	D Nagendrakumar, IPS	IGP	Police
4.	G Palaraju, IPS	DIG, TS	Police
5.	L S M RamaShree	JTC, RS	Transport
6.	S Venkateshwara Rao	JTC (IT)	Transport
7.	R Sivakumar	Additional Informatics Officer	NIC
8.	P Salaja	Additional Secretary	Transport
9.	U Beenakumari	AO	Transport
10.	YBPTA Prasad	AP Road Safety	Transport
11.	C G Rajan	CAO	DGP
12.	Dr. T Muralikrishna, IPS (retd.)	OSP	Police
13.	T Murali Krishna	DGP	Police
14.	R K Singh	RO	NHAI
15.	PSR Anjaneyulu	Transport Commissioner, AP	Transport
16.	SAV Prasada Rao	Adnl. TC	Transport
17.	L Sreenavasa Reddy		R&B Dept.
18.	T Muralikrishna	DGP	Police
Telangana			
1	K.S. Sreenivasa Raju	IAS, Secretary to Government	Transport and R&B

Sl. No.	Name	Designation	Department/ Institution
2	P. Ravinder Rao	Engineer-in-Chief	R&B
3	Mr. Bapiraju EE	Executive Engineer	R&B
4	Dr Laxmi Kameshwari	Nodal Officer	Health
Odisha			
1.	Mr. Arun Bothra	Transport Commissioner	Transport
2.	Mr. Sanjay Biswal	Joint Transport Commissioner	Transport
Tamil Nadu			
1	Mr. S. Natarajan, IAS	Transport Commissioner	Transport
2	Mr. Uday Kumar	DTC	Transport
3	Mr. Pramod Kumar	ADGP, Traffic and Road Safety	Home
4	Mr. Ganesan	Project Director	TNRSP
5	Dr. S.Gurunathan	MS (GS), Director of Medical and Rural Health Services	Health
6	Dr. Ravi Kumar	Coordinator, National Health Mission	Health
West Bengal			
1	Partha Sarathi Bandyopadhya	Supt Engineer, RS	PWD

ANNEXURE 3: APPLICABLE LEGAL AND REGULATORY FRAMEWORK

The Government of India and the state government have enacted a range of laws, regulations, and procedures relevant to managing the environmental and social effects of the proposed Program. The following criteria were used to select the relevant legislation that best describes the country's system for managing the Program's effects:

i. Environmental and social policies,

ii. Environmental and social protection laws, and

iii. Laws, regulations, or guidelines in the relevant sectors and subsectors that provide relevant rules or norms for environmental and social management

I. RELEVANT NATIONAL POLICIES AND PROGRAMS

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
GENERAL			
Central Motor Vehicle Act, 1988 and rules 1989; **The Motor Vehicles (Amendment) Act, 2019**	The Motor Vehicles (Amendment) Act of 2019 seeks to bring about changes in the Central Motor Vehicles Act of 1988. This is in lieu of solving some major issues of road safety, third party insurance, etc. and is the key policy for road safety in India. The key changes that the act has brough about includes: a. **Road and environmental health measures** especially in case the vehicles are not fit to be used on roads, and manufacturing defects etc. b. **Road safety measures** with increase in the penalty for traffic rule offenders more stringent rules for offences like juvenile driving, drunken driving, over speeding, overloading and driving without a license etc. c. **Vehicle fitness** with mandating for fitness checks and promoted certification of automobiles after they were successfully tested.	Applicable. The Act provides the key measures promoting road safety and its enforcement, and acts as the primary legislation guiding road safety measures in India.	Transport Department [Licensing authority also for Pollution Under Control (PUC)], Police

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
	d. Setting up of a **National Road Safety Board** under the central government. e. **Compensation for victims of road accidents**, and provisions towards cashless treatment of victims of road accidents, during the golden hour. f. **Protection of Good Samaritan** who stands up for helping out a road accident victim immediately after such mishappening takes place. g. **Compulsory insurance** and setting up setting up Motor Vehicles Accident Fund for compulsory insurance to all drivers on-road. Also, providing for better insurance facilities and simplifying the process of claiming the compensation. h. **Providing licenses to taxi aggregators**. i. Promotes the **formation of National Transportation Policy** in collaboration with states. j. **Strengthens the process of driving training** and propagates the opening up of more driver training institutes for ensuring the production of better commercial drivers in India. k. **National register for driving license and vehicle registration** and harmonization and integration of issuance of driving license and vehicle registration. The acts also suggests that the state governments are to constantly monitor state highways, national highways, and urban roads through electronic mode.		

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
ENVIRONMENT			
National Environment Policy, 2006	Overall guidance on environment management.	Need to apply the principles of good governance (transparency, rationality, accountability, reduction in time and costs, participation, and regulatory independence) to the management and regulation of use of environmental resources.	State Pollution Control Board (SPCB), under MoEFCC. Department of Local Government.
The Environmental (Protection) Act, 1986	Overall protection of environment under which number of legislations enacted.	Covers all forms of pollution; air, water, soil and noise and provides safe standards for the presence of various pollutants in the environment.	Ministry of Environment, Forests and Climate Change (MoEFCC) and State govt. departments.
Indian Forest Act 1927	This is an act to consolidate the law relating to forests, the transit of forest-produce and the duty leviable on timber and other forest-produce. According to the provisions under the Act, apart from prohibition of cultivation and quarrying in reserve forest; cutting, sawing, removal of trees from protected forests is prohibited.	If proposed civil works under the PforR will involve tree cutting in protected forests, appropriate clearances will be required.	MoEFCC, State Forest departments and PWD (for obtaining clearances).
Forest (Conservation) Act, 1980	The Act is an interface between conservation and development. The act permits judicious and regulated use of forest land for non-forestry purposes.	If proposed civil works under the PforR will involve civil works in forest areas, appropriate clearances will be required.	MoEFCC, State Forest departments and PWD (for obtaining clearances).
Coastal Regulation Zone Notification 2019, and Island Protection Zone Notification 2019	To ensure livelihood security to the fisher communities and other local communities, living in the coastal areas, to conserve and protect coastal stretches, its unique environment and its marine area and to promote development through sustainable manner declared coastal stretches of the	If proposed civil works under the PforR will involve civil works in coastal areas, appropriate clearances need to be obtained.	MoEFCC, CPCB, SPCB or Pollution Control Committee (PCC) as may be applicable.

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
	country and the and water area up to territorial water limit as Coastal Regulation Zone (CRZ).		
Water (Prevention and Control of Pollution) Act, 1974	Regulates agencies responsible for checking water pollution and ambit of pollution control boards both at the center and states.	Enforce water quality conformance in any discharge of effluents and waste from water supply systems.	Central and State Pollution Control Boards (CPCB /SPCB)
Air (Prevention and Control of Pollution) Act, 1981	Air quality standards, including Diesel Generators (DGs).	System management for emissions from DGs.	CPCB/SPCB
Environment (Protection) Seventh Amendment Rules 2009	The Rules addressing issues related to national ambient air quality standards.	Applicable since minor to moderate air emission may occur from the project activities.	CPCB
Noise Pollution (Regulation and Control) (Amendment) Rules, 2000	The noise levels in any area/zone shall not exceed the ambient air quality standards in respect of noise as specified.	Mentions acceptable AAQ standards with respect noise levels in industrial areas.	CPCB/SPCB
Municipal Solid Wastes (Management & Handling) Rules, 2016	Municipal Authority responsible for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes.	Bio-medical wastes and industrial wastes are not to be mixed with municipal solid wastes.	CPCB/SPCB/State Health department, Municipal Corporation and other municipal bodies constituted under the relevant statutes.
Manufacture, Storage and Import of Hazardous Chemical Rules, 1989	It regulates the manufacture, storage and import of hazardous chemicals in India, including transport through carrier or pipeline.	Transport of hazardous chemicals is often done using vehicles travelling along urban roads and highways. Accidents involving such vehicles has huge potential for environmental and social risks.	CPCB/SPCB/Transport and Police departments
The Batteries (Management and Handling) Rules, 2020. ***Amended to recommend inclusion of Lithium Ion, Nickle Cadmium batteries***[22]	Bulk consumers should ensure safe transportation of the used batteries to designated collection centres or registered recyclers and ensure no damage is caused to environment during storage or transportation.	With increased digitization, numbers of electronic devices with batteries will increase substantially and their final disposal needs to be properly managed.	SPCB/CPCB/MoEFCC

[22] https://moef.gov.in/wp-content/uploads/2020/02/BATTERY-RULE.pdf

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
The e-waste Management (Management & Handling) Rules 2016 (Amended in March 2018)	Help the producers, consumer & bulk consumer, collection center, dismantler, recycler and regulatory agencies for effective compliance/ implementation of these rules.	Increased quantum of electrical, electronic and e-waste is expected with enhanced push for digitization of systems.	CPCB/SPCB, Municipal Authorities.
Construction & Demolition Waste Management Rules, 2016	The rules are an initiative to effectively tackle the issues of pollution and waste generation and management arising from construction and demolition.	Road safety measures including civil works for blind spot rectification may involve generation of construction waste which needs to be managed as per the rules.	MoEFCC, CPCB, SPCB or Pollution Control Committee (PCC) as may be applicable.
Bio medical waste management rules 2016[23]	Apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, Ayush hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs. There are generally 4 different kinds of medical waste: infectious, hazardous, radioactive, and general.	Relevant as road safety post-crash treatment is expected to generate bio medical wastes.	SPCB or Pollution Control Committee (PCC) as may be applicable.
The Ancient Monuments, Archaeological sites and Remains Act, 1958; and the (Amendment and Validation) Act, 2010	The Ancient Monuments and Archaeological sites should be protected from any developmental activity. The area within the radial of 100 m and 300m from the 'protected property' are designated as 'Protected area' and 'controlled area' respectively. No development activity (including building, mining, excavating, blasting etc.,) is permitted in the 'protected area' and developmental	Relevant as deals with Cultural safeguards and will be applicable for any civil work for black spot fixing close to any designated Archaeological sites.	PWD/ Highway; Archaeological Survey of India

[23] https://dhr.gov.in/sites/default/files/Bio-medical_Waste_Management_Rules_2016.pdf

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
	activities likely to damage the protected property are not permitted in the 'controlled area' without prior permission of the Archaeological Survey of India'		
SOCIAL			
The Constitution of India (especially, Articles 15,16 and 46)	The Indian Constitution (Article 15) prohibits any discrimination based on religion, race, caste, sex, and place of birth. Article 16 refers to the equality of opportunity in matters of public employment. Article 46 directs the state to promote with special care the educational and economic interests of the weaker sections of the people, particularly of the Scheduled Castes and the Scheduled Tribes and also directs the state to protect them from social injustice and all forms of exploitation.	Relevant to the overall Program	All Departments, Agencies and institutions
Fifth and Sixth Schedule Areas in the Constitution of India	The scheduled area under the Constitution has special provisions for the administration of the tribal dominated areas and autonomous regions with certain legislative and judicial powers. In the Scheduled Areas, involvement of tribal councils and communities, incorporating their views and culture specific needs will enhance their participation in the Program.	Relevant to the overall Program for enhancing access to services in tribal areas and participation of tribal population in the program.	Ministry of Tribal Affairs; State Tribal Development Department
Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act 1989 and further Amendments 2018.	To prevent atrocities against scheduled castes and scheduled tribes. The objectives of the Act clearly emphasized the intention of the government to deliver justice to these communities through proactive efforts to enable them to live in society with dignity and self-esteem and without fear or violence or suppression from the dominant castes. With the reported misuse of the Act, In August, 2018, the parliament of India passed the	This law promotes equity by safeguarding the rights of SC and STs, so is relevant to the program.	Ministry of Tribal Affairs; State Tribal Development Department; Ministry of Social Justice and Employment; State Social Welfare Department

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
	Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Amendment Bill, 2018, to bypass the ruling of the Supreme Court of India laying down procedures for arrests under the Act.		
Minimum wages Act, 1948	This act ensures minimum wages that must be paid to skilled and unskilled labours. The employer shall pay to every employee engaged in scheduled employment under him, wages at the rate not less than the minimum wages fixed by such notification for that class of employee without any deductions except authorized.	Applicable to the overall Program	Ministry of Labor; State Labor Department
The Building and Other Constructions Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the associated Central Rules, 1998	This is a social welfare legislation that aims to benefit workers engaged in building and construction activities across the country and regulates the employment and conditions of service of building and other construction workers and to provide for their safety, health and welfare measures and for other matters connected therewith or incidental thereto.	Relevant to the program and applicable for sub-projects involving any construction. It ensures through contractors that basic amenities are provided to the laborers; Vendors employed should have valid labor license; compensation of workers should not be lower than the daily wage rate as prescribed by the Government.	Ministry of Labor; State Labor Department
The Child and Adolescent Labour (Prohibition & Regulation) Act, 1986 **Notification of the Child Labour (Prohibition and Regulation) Amendment Act, 2016 and Rules 2017**	The Act prohibits employment of children in certain occupation and processes. The Act also specifies conditions of work for children, if permitted to work. The 2016 amendment also prohibits the employment of adolescents in the age group of 14 to 18 years in hazardous occupations and processes and regulates their working conditions where they are not prohibited.	Relevant as no child labor are allowed to be engaged at site for construction or operation works either directly or by the sub-contractors.	Ministry of Labor; State Labor Department

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
Public Liability Insurance Act, 1991	The main objective of the Public Liability Insurance Act 1991 is to provide for damages to victims of an accident which occurs as a result of handling any hazardous substance. The Act applies to all owners associated with the production or handling of any hazardous chemicals.	The road safety measure also includes measures towards transportation of hazardous substances.	MoRTH; State Transport Department; Insurance Agencies
The Right to Information Act 2005; and rules by the respective states.	Provides a practical regime of right to information for citizens to secure access to information under the control of Public Authorities. The act sets out (a) obligations of public authorities with respect to provision of information; (b) requires designating of a Public Information Officer; (c) process for any citizen to obtain information/disposal of request, etc. (d) provides for institutions such as Central Information Commission/State Information Commission. The rules passed by respective states provides the rules for operationalizing the provisions of the above-mentioned act.	Applicable. As all documents pertaining to the Program requires be disclosed to public.	All implementing departments/ agencies
The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014	The act aims at providing social security and livelihood rights to street vendors. It provides protection of legitimate street vendors from harassment by police and civic authorities, and demarcation of "vending zones" on the basis of "traditional natural markets", proper representation of vendors and women in decision making bodies, and establishment of effective grievance redressal and dispute resolution mechanism.	Relevant as it becomes applicable if the squatters to be removed comes under the preview of this act.	Ministry of Housing and Urban Affairs; State Urban Development Department
The Rights of Persons with Disabilities Act, 2016	The Act ensures that persons with disabilities enjoy the right to equality and	Applicable to the overall program.	Ministry of Social Justice and Employment; State Social Welfare Department

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
	nondiscrimination in all aspects of life. Every entity has to comply with the accessibility standards relating to physical environment, transport and information and communication technology as per the standards prescribed in the RPD Act. These include barrier free built environment having elevators/ramps for the benefit of wheelchairs. In respect to Access to Transport"- mentioned that-the appropriate Government shall take suitable measures to provide,—(a) facilities for persons with disabilities at bus stops, railway stations and airports conforming to the accessibility standards relating to parking spaces, toilets, ticketing counters and ticketing machines;(b) access to all modes of transport that conform the design standards, including retrofitting old modes of transport, wherever technically feasible Applicable to the project road infrastructure in terms of making it more accessible for those who are physically challenged		
Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR)	The act provides for a transparent process and fair compensation in land acquisition for public purpose and provides for rehabilitation and resettlement of landowners and those affected by land acquisition. It comprises four schedules that provide the minimum applicable norms for compensation based on market value, multiplier and solatium; resettlement and rehabilitation (R&R) entitlements to landowners and livelihood losers; and facilities at resettlement sites for displaced persons, besides providing flexibility to states and implementing agencies	Currently Not Applicable as the land acquisition is not expected under the proposed program. However, in case of any need for additional land (beyond Government owned land) for blackspot fixing or setting up any training institution etc., this will become applicable.	Department of Land Resources; State Revenue Department; State Public Works Department/ Highway Authorities

Legislation	Extract	Relevance to Road Safety PforR	Responsible Authority
	to provide higher norms for compensation and R&R.		
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013	An act that aims at providing a sense of security at the workplace that improves women's participation in work and results in their economic empowerment. It requires an employer to set up an "Internal Complaints Committee" (ICC) and the Government to set up a 'Local Complaints Committee' (LCC) at the district level to investigate complaints regarding sexual harassment at workplace and for inquiring into the complaint in a time bound manner. The ICC need to set up by ever organization and its branches with more than 10 employees.	Applicable to all participating departments, agencies, and their offices.	Ministry of Women and Child development; State Women and Child Development Department
Criminal Law (Amendment) Act, 2013: Sexual Offences	The Act recognizes the broad range of sexual crimes to which women may fall victim, and a number of ways in which gender-based discrimination manifests itself. It also acknowledges that lesser crimes of bodily integrity often escalate to graver ones and offences such as acid attack, sexual harassment, voyeurism, stalking has been incorporated into the Indian Penal Code (IPC). It seeks to treat cases as "rarest of the rare" for which courts can award capital punishment if they decide so. The Act clarifies and extends the offense of sexual assaults or rape as a result of abuse of position of trust. As per the Act, the police will also be penalized for failing to register FIRs – this will make it easier for rape victims to report their cases.	Relevant and applicable to deal with GBV including SEA/ SH issues.	Ministry of Women and Child development; State Women and Child Development Department; State Police Department

II. RELEVANT STATE SPECIFIC POLICIES AND LEGISLATIONS

Legislation	Key provisions and purpose
Andhra Pradesh Road Safety Policy[24] 2015	The state govt. recognizes that Road safety has become a public health issue which needs to be addressed with a holistic approach involving concerted efforts from all the stake holding departments/ organisations in the State and aims to reduce the mortality and morbidity on roads by 15% considering the baseline figure of 2013.
Gujarat Road Safety Authority Ordinance, 2017[25]	The Authority has members from departments such as Transport, Home including police, Health and Family Welfare, Education, Roads and Buildings, NHAI, Western India Automobile Association, Municipal Commissioner and Chief Enforcement Officer. It has a wide range of functions and has powers that include seizure of vehicles and order works. The Authority has the mandate to set up a Gujarat Road Safety Fund.
Odisha Road Safety Policy, 2015[26]	The policy states that the state is keen to take concerted efforts to control the incidents of road accidents and ensure safe travel for all road users. Its vision includes all road users with priority to pedestrians and cyclists to achieve zero road accidents in the long run while the mission aims to reduce road accidents by 20% by 2020. Actions include strengthening road crash database system, safe planning and design of roads, safe driving, awareness, education and training of road users, enforcement of safety laws, emergency medical services for road accidents, research for road safety, strengthening the legal and financial environment for road safety and the provision for a corpus fund.
Tamil Nadu Road safety Policy, 2007[27]	The policy vision is to stop and reverse the increasing trend in number of accidents, number of deaths and number of injuries through comprehensive measures covering engineering, enforcement, education and emergency care. The medium-term objective is to achieve a 20% reduction in fatalities and injuries by 2013, considering 2006 as the base year. A Road Safety Council has been established under the Chairmanship of the transport minister. The Government also created a Road Safety Fund to provide resources for road safety measures.
Telangana Road Safety Policy[28] 2015	The policy statement outlines that in order to achieve a significant improvement in road safety the government is committed to strengthen/ enable the legal, institutional and financial environment for road safety; improve safety of road infrastructure; safer vehicles; safer drivers; safety for vulnerable road users; enforcement of safety laws; improving awareness on road safety; Emergency care and medical services for road accident victims and improved data collection process reliable road safety information database.
Uttar Pradesh State Road Safety Policy 2014	Government of Uttar Pradesh (GoUP) recognizes that the road accidents involve roads, road users and motor vehicles so road safety demands a holistic approach. GoUP feels that reduction in road accidents, injuries and fatalities is the joint responsibility of both State and Central Governments. The key features of the GoUP Road Policy include (i) Awareness about road safety; (ii) Strengthening

[24] https://morth-roadsafety.nic.in//admnis/admin/showimg.aspx?ID=305

[25] https://morth-roadsafety.nic.in//admnis/admin/showimg.aspx?ID=311

[26] https://morth-roadsafety.nic.in//admnis/admin/showimg.aspx?ID=321

[27] https://www.tnrsp.tn.gov.in/archives/road-safety-book.pdf

[28] https://morth-roadsafety.nic.in//admnis/admin/showimg.aspx?ID=326

Legislation	Key provisions and purpose
	institutional arrangement for road safety; (iii) Establishing road safety database; (iv) Ensuring safe road infrastructure; (v) Safer vehicles; (vi) Safer drivers; (vii) Safety for vulnerable road users; (viii) Road safety education and training; (ix) Enforcement of traffic laws; (x) Emergency medical assistance to road accident victims; and (xi) Research for road safety.
West Bengal Road Safety Policy 2016[29]	The Government of West Bengal has considered it relevant to frame a Road Safety Policy aimed at reducing the incidence of road accidents and ensure safe travel for all road users through sustainable and well-planned public policy initiatives. The policy seeks to improve road engineering and design, management, bolster road safety awareness, provide emergency care and strict enforcement of the rules of the road. The objectives also include the designing, developing and implementing an 'Accident Information System' to enable better and prompt accident/crash management' in the state in the next one (as per RSA plan) years; providing a well-laid framework for undertaking coordinated actions and corrective measures by all concerned departments and ensuring accountability, evaluation, funding and research; and achieving substantial reduction in fatalities and injuries caused due to road accidents with special attention to Vulnerable Road Users.

[29] https://wbtc.co.in/wp-content/uploads/2018/08/Annexure-1-Road-Safety-Policy-Feb-2016.pdf

ANNEXURE 4: DESCRIPTION OF E&S MANAGEMENT SYSTEM AND CAPACITY ASSESSMENT

4A. ANDHRA PRADESH

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
Core Principle 1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.	• The State Road Safety Council formed under the chairmanship of the CM with Chief Secretary and Secretaries and HODs of line departments and NGOs as members. And the Road Safety Cell headed by Transport Commissioner exists. • The program will be implemented by the Nodal agency which will report to AP Road Safety Council. The Road Safety Cell in the Transport department will coordinate with other departments. • At district level, the department coordinates through District Road Safety Committee in every district headed by senior most MP in every district. • The Transport Department staffs participates in black spot identification and suggesting rectification measures.	• Initial Environmental Examination (IEE) report being prepared for each Project and follow the requirements as per IEE report. Based on this site specific EMP is prepared. • For externally aided projects in the past Environmental Engineer (Contract Base) were engaged. • In general, about 2% percentage of total value of work is allocated for road safety furniture. • AEE and one LA and R&R specialist are designated for ongoing projects (small/ medium) and on need-based staffing for large projects. • Regular pollution control check of vehicles and provision of PUC certificate to vehicles which adhere to pollution control norms • Regular inspections and audits on existing/ new roads and O&M of roads to meet functional requirements such as road condition, traffic controls and delineation and site clearance to ensure visibility, clearing obscured signs etc. • No specific training is being conducted on E&S aspects. Need based training is conducted using consultants as part of knowledge sharing. The departmental engineers	• The enforcement officials are trained polluting vehicle, over speeding, drunken driving etc. which result in penal actions as provided under the law. • There are 419 breath analyzers and 2 speed guns per districts through which risky behaviors of drivers are being detected. • Spot penalties are imposed on traffic violations. • Videography, Photography, CCTV footage, E-challan and even seizure of vehicles are done as deterrent to traffic violations. • The challenge is how to strike balance between enforcement and humanity. • For coordination with other departments, (a) at District level, there is DRASA meeting once in every quarter for assessing the	• Quarterly assessments of health facilities are carried out with the assistance of questionnaires to assess adherence to environmental and social safeguards measures. • As part of WB supported APHSSP on improving the Quality of health care in the state, wherein Biomedical waste segregation and management, infection control measures, provision of amenities for people within health facilities is functional. • Quality Consultants at the State and District are responsible for environmental and social safeguards as in ensuring biomedical waste management, proper wastewater treatment in health facilities etc. • Emergency response service through 108 is functional to attend to any emergencies/ accident victims. There are 532 BLS and 190 ALS ambulances. • Incident Management System under NHAI where in ambulances is positioned every 50 kms to be able to respond to any accident within 15 minutes

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
	• Transport Department follows the MVAA and guidance thereby. However, there is no such formal mechanism for identifying E&S risks. • Most of the road safety measures undertaken by Transport department are softer in nature and does not involve any civil works. • There is no separate E&S Risk assessment conducted with activities of the Transport Department except the pollution control measures of the vehicle. • The role of Transport Department is limited to enforcement against air and noise pollution. • Grievance Redress Mechanism Government has set up *Spandana*, One-Stop public grievance redressal platform for the citizens of Andhra Pradesh.	are trained through conducting workshops. • IEC materials are put up for display in public places and appropriate signboards are put up as per norms to inculcate positive road safety behavior among the public. • Regular awareness programs are also conducted by the department and through Department of Traffic Police to ensure road safety measures. • Oral story telling (locally known as *burra katha*) along with distribution of IEC materials wall poster, flexi banners, TV program, advertisements in theaters are the mechanism generally used for making the community aware of road safety program activities/ measures. • Grievance Redress Mechanism Government has set up *Spandana*, One-Stop public grievance redressal platform for the citizens of Andhra Pradesh. The grievances can be registered from various sources viz. GSWS, 1902 Call Center, Mobile App, Web Application, Collectorate grievance day (*Spandana* Monday). Grievances pertaining to all the departments and government programs can be raised through the platform and would be addressed by the concerned department/officer.	enforcement, education, engraving done so far and what needs to be done in the subsequent quarter. (b) At State level, there will be expand SRSA meeting convened by CS. All the Stake holding Departments will participate and discuss reg. coordination issues, targets, plans etc. • In case of E-Challans, the violator can share there grievance with AP Police – Police computer services online. • *Spandana* one stop public grievance redressal mechanism for citizen of A.P.	of it being informed on a national accident helpline. • Grievance Redress Mechanism Government has set up *Spandana*, One-Stop public grievance redressal platform for the citizens of Andhra Pradesh.
Core Principle 2: Program E&S management systems are designed to avoid,	• The activities of Transport Department do not impact any	• In case of the road passing through reserve forest then proper fencing and	• Not applicable and Police department enforcement activities for road safety	• There are Environmental and Social consultant placed in APHSSP.

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.	natural habitats and physical resources.	signages are to be installed as per wildlife protection Act. • Reallocation of Religious or cultural structures (if needed) is done through consultation with the concerned religious/ cultural committee and other involved stakeholder departments.	does not involve any issues related to this.	• Under APHSSP, the state and district officials and Quality teams have been trained and sensitized on Environmental and Social safeguards. The capacity building programs were conducted online and during the session findings from the quarterly survey on Environmental and Social Safeguards were also disseminated. • Capacity building programs on biomedical waste segregation and management, which is a major concern on the environmental safeguard side in health facilities, is also conducted on a regular basis through the health department.
Core Principle 3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of	• The road safety measures by crating awareness among road users, drivers, and ensuring safe driving are some of the key activities that benefit road users including local community, road users and drivers and public at large.	• Reduce exposure by maximizing mechanized/ automated construction works. • Frequent drives are being by the Labor Department of the state to prevent the practice of child labor in business establishments and in civil/construction work. • Frequent checks up will be made by concern labor officers and also contractor will give an undertaking that no child labor is being engaged in the work. • Civil construction works that are conducted in-house follow the	• All Covid protocols are being followed and made to be complied through effective enforcement.	• The Biomedical waste segregation and management, infection control measures, provision of amenities for people within health facilities are functional. • Health care staffs are also vaccinated as per requirements. • Contractual terms take care of the compliance of vendors with respect to environmental aspects.

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
infrastructure located in areas prone to natural hazards.		relevant Labor laws applicable in the State. For all other outsourced works, the contractual terms take care that the appropriate labor laws are being adhered to. The Labor Department, Government of Andhra Pradesh is responsible for monitoring the adherence. • All Government orders/ guidelines/ advisories on COVID19 are being followed by all the concerned departments/ agencies. Compliance on orders/ guidelines/ advisories on COVID19 is the responsibility of the Head of the Department.		
Core Principle 4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.	• The assessment by the department suggests there may be need for land acquisition in some districts for Driver Training & Automated Testing Centers, and for Automated Vehicle Fitness Centers in some districts. However, the SSP program document makes Land Acquisition ineligible under the program. This may pose some limitations to fully achieving the desired outcome in some districts.	• Majority of the road safety measures does not require land acquisition, however some of the retrofitting of road safety measures may require minimal amount of additional land. • Based on availability of government owned land (may be by other department) can be requested and transferred using standard government procedure. • For externally aided projects where LA is required, Spl. Dy. Collector (Revenue Dept.), Environmental Officer (Forest Dept.), Sociologist for LA and R&R are also deputed on need basis. • In case of requirement of displacing or resettling informal settlers, hawkers and vendors, compensation is paid as per applicable laws. In case of externally aided projects,	• Not applicable as program activities does not require any additional land.	• Not applicable as program activities does not require any additional land.

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
		compensation amount is arrived at based on the corresponding Act/ policies of ADB or World Bank and includes cost of structure, Construction cost, Transportation, subsistence and one time settlement etc. In case of vendors and hawkers, a lumpsum amount is paid.		
Core Principle 5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups.	• Communication campaigns for road safety works are undertaken in local language and culturally appropriate manner. • Road safety awareness programs are undertaken with distribution of pamphlets, screening of audio-visual materials, street plays for commercial vehicle drivers and truckers. Also, education programs undertaken for students on road safety in local language.	• Regular road safety awareness programs are conducted under different agencies to improve community awareness. • Short films on road safety are prepared and made available in public domain which helps in improving the community awareness. Road safety awareness games aimed at improving the awareness among children. • No specific measure is planned towards gender-based violence and are dealt on case-to-case basis. • NGO/CSO are engaged through notification for undertaking awareness campaigns on road safety, HIV, and implementation of resettlement plans (where required).	• Public awareness is generated through mass media campaigns towards following traffic rules and avoiding any violations.	• Public consultation workshops are conducted, and public awareness campaigns undertaken towards road safety.
Core Principle 6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	• The program activities and activities of the Department do not exacerbate any social conflict.	• The program activities do not exacerbate any social conflict.	• The program activities do not exacerbate any social conflict.	• The program activities do not exacerbate any social conflict.

4B. GUJARAT

Key Planning Elements	Transport Department	PWD/ R&B	Police/ Home	Health
Core Principle 1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.	• Given Commissioner of Transport Department is member of State Road Safety Council, also Chairs the Executive Committee of Road Safety, and Member of Traffic Management Committee, the coordination with other departments is seamless. • Licensing system is based on computerized test for learning license and driving competency test is done through automated driving test. • For commercial vehicle, driver training through motor driving school is necessary.	• Gujarat Road Safety Authority is a state level body for monitoring and implementation of road safety program. They are also engaging various NGOs for awareness building on road safety. • Black spots are decided by district level road safety committee chaired by District Collector. Executive Engineer from R&B, Dy. SP from Home Department, RTO from Transport Department etc. is members of the district road safety committee. These members look overall possible environmental and social /community related elements while planning black spot-fixing/ addressing accident-prone areas. • With ongoing road projects supported by World Bank, there is an Environmental and Social Management Unit (ESMU) is established and is well trained. It is expected that they will also handhold and train staffs in this operation initially.	• E-waste is disposed through empaneled agencies registered recyclers. • Any overloading of vehicles or spilling of hazardous materials, police detains those vehicles and takes necessary actions including imposing fines. • Traffic enforcement is done as per the MVAA, and challans are cut accordingly. • Till date the accident reporting is done to hospitals and firefighting departments. However, the system is expected to use iRAD once launched where all the stakeholder departments are integrated. • Spot fines, E-challans, vehicle detention, offence registration, court memo and RTO memo are used for enforcement. In case of spot penalties receipts are issued. • Creating real awareness on road safety and its adherence is a major challenge.	• The key activities involved (a) procurement of BLS and LS Ambulances; (b) Ambulances to be GPS tagged; (c) establish single accident reporting number; (d) Establishing Data Center for Ambulance; (e) Undertaking first responder training; and (f) Implementation of Good Samaritans Guidelines. • State Department has deployed personnel from Environment and Health Cell, and a state task is formulated to monitor activities under Environment and Health Cell. This task force is headed by Commissioner of Health. Also, District Nodal officer is appointed and at each district for Environment, Health, and climate change. In addition, Department can appoint consultant to assess environmental and social risks where required. • The Bio-medical waste management from Ambulances is followed as

Key Planning Elements	Transport Department	PWD/ R&B	Police/ Home	Health
		• E-waste is disposed through empaneled agencies registered by Pollution Control Board. • Obsolete vehicles are disposed through auction system. • Staff Training College carries out training for field staffs.		per BMW guidelines issued by Gujarat Pollution Control Board. • E-waste management is carried out as per guidelines implemented by CPCB. • Many ambulances after 5 years of use are deployed under '*Khikhilat*' Program which is a drop back facility for mothers and newborn child. • Based on the results of Vehicle Inspection Report, old ambulances are sold to scrap dealers. • District Nodal Officer, Medical Officers and Paramedical staffs are being given regular training under National Program for Climate Change and Human Health in regards with environment related matter. • The current coordination mechanism with other department is through e-mail, letter, and telephone. • First Responder training is also being conducted for Volunteers (Citizens) and officials of Police Department, Fire Department.

Key Planning Elements	Transport Department	PWD/ R&B	Police/ Home	Health
Core Principle 2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.	• Not applicable, given department does not directly execute any civil/ construction activity.	• Field Engineers visit sites, and based on their assessment, necessary application is made for permission to State Forest Department or Ministry of Environment and Forest (as required), and Archeological survey of India etc. • Necessary permission is applied through online system to Forest Department by concern Division office and relevant approvals are taken before cutting of trees (where required) especially on road widening etc.	• Not applicable, given department does not directly execute any civil/ construction activity.	• Not applicable, given department does not directly execute any civil/ construction activity.
Core Principle 3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.	• Issuance of COVID19 related circulars / advisories from time to time. With strict implementation of Govt. instructions and continuous monitoring and supervision is being done.	• During widening of the road, necessary signboards are installed, and work zone traffic management plan is prepared and implemented. • Short term measures for identified black spots are generally completed within 3 months. • Proper care is taken during the progress of work to ensure no adverse effects are there to any community infrastructure or services. • Necessary safety measures are ensured and implemented on site. • Contractors have to follow the prevailing the labor laws.	• Not applicable, given department does not directly execute any civil/ construction activity.	• There are dedicated resources allocated for conducting capacity building and training, IEC activities and Acute Respiratory Infections (ARI) surveillance in the matter of environment related matters. Department has identified 11 hospitals as sites for ARI surveillance and monitoring.

Key Planning Elements	Transport Department	PWD/ R&B	Police/ Home	Health
		All necessary amenities are to be provided by the contractor at work site. • No contractor/ agency is allowed to deploy child labor. And in case found any irregularities, necessary actions taken as per prevailing laws. • COVID19 related advisories are followed across all works.		
Core Principle 4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.	• No land acquisition or land requirement is there as department does not directly execute any civil/ construction activity.	• Special permission will be taken for land acquisition for remedial/ corrective measures of black spot including unmanned and manned level crossings on SH, and urban road networks (where required). • Any LA will follow 'The Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act 2013' and further amendments as notified. • Though no incident has been found till date on squatter removal for road developmental works. However, if required relocation of informal settlers can be addressed by the Department following Government guidelines.	• No land acquisition or land requirement is there as the program activities does not require any civil/ construction for the department.	• No land acquisition or land requirement is there as the program activities does not require any civil/ construction for the department.

Key Planning Elements	Transport Department	PWD/ R&B	Police/ Home	Health
		• No gender-based violence cases have been reported till date. However, if found, necessary actions will be taken as per prevailing laws.		
Core Principle 5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups.	• As a pilot, Transport department has deployed a Traffic Education and Awareness Mobile (TEAM) van in some of the districts. The van is used to showcase films, presentations and various other programs on safe driving. • Awareness through various medias and regular workshops and seminars to schools and colleges, as well open programs in public places are conducted. • Mass media campaign using FM Radios, *Akashwani*, Street Plays, social media are the most effective mediums for road safety awareness creation. • A concept of Road Safety Fair is also developed and occasionally organized. About 300 fairs have been organized before the COVID 19 period. • Collaboration with organizations/ NGOs working for the differently abled to identify their issues and address their needs were also done towards road safety. • Grievances from citizens are being taken seriously. Grievance Redressal Mechanism is as follows:	• As per site conditions, on case-to-case basis necessary provisions are made for women, elderly and children. • Though department is not involved in awareness creation on road safety. However, Gujarat Road Safety Authority publishes general awareness in regards with the road safety measures through mass media and social media platforms. • Complain received are attended at various level. These grievances are addressed in a time bound manner.	• Awareness generation is done through various media campaigns and through involving NGOs.	• Officials under 108-EMS services are duly trained and are providing relevant treatment to pregnant females victimized at the accident site. • Social media, mass media and engagement of NGOs are done for awareness campaign for road safety.

Key Planning Elements	Transport Department	PWD/ R&B	Police/ Home	Health
	• Grievances presented through social media, e-mail and posts are viewed by senior officers and then sent to respective branches with instructions. • Branches take necessary action in accordance with Govt. rules and procedures immediately. • Gujarat (Right of Citizens to Public Services) Act, 2013 is being implemented. • Transport Department website for grievance registration https://cot.gujarat.gov.in/post-grievance.htm			
Core Principle 6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	• The program activities and activities of the Department do not exacerbate any social conflict.	• The program activities and activities of the Department do not exacerbate any social conflict.	• The program activities and activities of the Department do not exacerbate any social conflict.	• The program activities and activities of the Department do not exacerbate any social conflict.

4C. ODISHA

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
Core Principle 1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.	• As per the protocol, the notified Black Spots notified are treated by the Road owning agencies for short term measures like signages, reflective cat eyes etc. immediately. immediately. Apart from this, funds have been placed to the RTOs for erection of road signages in all	• While planning for measures addressing black spot, economic opportunities, loss of land and assets, removal of unavoidable settlements, and potential traffic speed and congestion are generally being considered.		

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
	the important roads of the districts. • Long term rectification measures in the Black spots and vulnerable accident-prone zones mainly need civil works by the road owning department. • As per the current MV act all the commercial vehicles have to get fitness test within a period of 2 years for new vehicles and within one year for old vehicles. Apart from this, the enforcement officials of Transport • Departments regularly conduct the fitness check of vehicles along with other violations check. • Steps have been taken to integrate the SARATHI and e-challan. So that strict action can be taken for the repeated offenders. • STA has initiated a training program '*Vahak*' for heavy vehicle drivers of the State. It is a first of its kind for the state level Heavy Motor Vehicle (HMV) Driver's refresher training program. In the three day long residential training program, HMV drivers are being trained on driving skills, fuel efficiency, basic first aid, road safety and road	However, there are no standard set of indicators or format for the same. • Civil society organizations take active part in road safety programs in the state. They are also funded by State Transport Authority (STA) and District Road Safety Committees for undertaking various road safety programs. • No dedicated staffs are placed for environmental and/or social aspects. However, need based consultants are appointed on time to time. • Coordination with other department is done by placing officials in the lead agency for road safety as directed by the Supreme Court.		

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
	signages. This will hone the skills of drivers and in will contribute towards reducing accidents in the state. • Intelligence e-enforcement system are being implemented in various accident-prone road stretches. • The e-challan system is already in place in the State, where the notice is sent to owner of the vehicle found violating traffic rules. • MoU has been signed with Save LIFE Foundation (SLF), an NGO working towards road safety in India. SLF will identify, recommend and assist with the treatment of 100 vulnerable black spots in Odisha where maximum accidental death have taken place in last few years. The MOU aims to reduce the road deaths on Odisha roads significantly in next three years. • Integrated Road Accident Database (iRAD) has been implemented in the State. The application is expected to enable collection of accident data on the spot which will help in analyzing causes of road accidents to establish an accurate and uniform accident data collection mechanism			

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
	towards improving road safety in the State. • Training on vehicle emission management / fuel efficiency and other emission related issues are being conducted frequently by various institutions like Centre for Science and Environment, ESCIH Hyderabad & ARAI Pune etc. for Departmental staffs.			
Core Principle 2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.	• Not applicable, given department does not directly execute any civil/ construction activity.	• All approvals and statutory clearance are obtained as per need.		
Core Principle 3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic	• Transport department does not perform any civil and construction work directly. • It is done through the Civil engineering department or Odisha Police Housing Corporation. In case of construction work being awarded through contractor, the	• Where construction is awarded to contractor, the clause related to prohibition of child labor is mentioned in the contract document.		

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.	law relating to the prohibition of child labor in the construction work is being mentioned in the contract and department ensures it is being followed at the construction site. • The department doing the construction work deals with the labor law requirements and are very much stringent in ensuring the implementation of the required rules and regulations.			
Core Principle 4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.	• Command and Control Centre is under construction at Bhubaneswar and no additional required. • Program activities of Transport department does not require any land acquisition.	• For any land acquisition, RFCTLARR 2013 is followed (where required). • In case public infrastructure and services that are getting affected are shifted to another location in consultation with respective department. Also, where community is affected, they are monitory compensation as per RFCTLARR 2013. • Framework for resettlement and rehabilitation and environmental management have been prepared through extensive consultations.		

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
		• For loss of land and/ or asset, replacement cost is being paid. • Also, public consultation meeting is carried out in each location. • All squatters are paid onetime cash assistance for their structures. While planning for fixing black spot, consultations are carried out with affected community groups and garnering community support.		
Core Principle 5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups.	• Road Safety awareness is being done regularly on social media and electronics media, FM channels and Print media. • For immediate assistance to the Road accident victims at the accident spot First Responders are being trained under Project "*Rakshak*"[30]- a first responder training.	• Various road safety program is being conducted including with special focus on women, disabled, children and elderly. • There is comprehensive road safety program in the state through various media including print, audio,		

[30] **Project *Rakshak***: 30 Weeks-30 Districts-300 Master Trainers-30000 First Responders. Project Rakshak is first of its kind state level program where in 30,000 volunteers staying or working at the eateries and different business establishments near accident prone areas and police personnel will be trained as First Responders to road accident victims. The program is being conducted in two phases. In the first phase 300 Master Trainers have already been trained in Training of Trainers (TOTs) by experts. Master Trainers include volunteers from Indian Red Cross Society, Odisha State Branch and NGOs across the state. After the TOT, in the second phase these 300 Master Trainers will go to accident prone areas in all the 30 districts and train and empower people to render help to the victims of road accidents. They will be equipped to administer first aid and pre-hospital trauma care to accident victims within the golden hour. There is a comprehensive plan to put up Display Boards about Good Samaritan Policy and Solatium Fund Scheme in all the Hospitals, Police stations, RTO office and other important locations in all the districts of the State. Tender has been floated and work order is being issued to an able vendor by end of March 2022 for executing the same.

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
	• Civil Society Organization and NGOs take active role in various Road safety related programs observed in the State. They are also funded from the Road safety cell of STA through the District Road Safety Committees for observance of various Road Safety Programs. • Road safety awareness program are conducted with special focus on women, elderly, children and differently abled people. • Comprehensive Road safety Awareness programs are being conducted to sensitize citizens, by using creative methods to teach road safety lessons and spread awareness. There are regular posts on social media handled of STA. Periodic campaigns are done through, electronic media, print media, Radio, Outdoor etc. Road safety videos messages are being displayed in all the cinema halls of the State. • In addition, online competitions relating to road safety are being organized through social media. • Lessons on Road Safety in School Syllabus-Students are being educated on traffic signals, administering first aid	audio-visual, and social media. • Grievances received either through online or offline are resolved within stipulated time. • Road safety month is observed every year with posters, banners, and leaflets distribution.		

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
	after accidents, rules to be followed while riding a motorcycle and crossing a road, the importance of wearing helmets and seat belts and road safety laws as part of curriculum. • It is also proposed to provide compulsory road safety and First aid training to the driving license aspirants. • STA proactively handles grievances[31]; whether it's through social media, customer care or direct complaint, each grievance is handled with a personal touch. •			
Core Principle 6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	• Department do not exacerbate any social conflict.	• No conflicts ae faced. Most of the work is done through existing contractors working in those road stretches. The program activities do not exacerbate any social conflicts.		

[31] Grievance to the department can be registered through letters, emails, social media and helpline number. There is dedicated call center and communication cell to address the grievance via helpline number, social media and e-mails at the office of State Transport Authority (STA). They are escalated to the concern officers for resolving the issue and are usually addressed within 48 hrs. Input received from citizens ➡ Acknowledgement ➡ Forwarded to Relevant executives ➡ Action taken ➡ Delay in taking action ➡ Escalated to Senior Executives ➡ Action taken ➡ notification

4D. TAMIL NADU

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
Core Principle 1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.			• There are State Road Safety Council, and District Road Safety Committee are in place to steer the road safety activities through stakeholder departments. • At present there is no system in place to record accidents involving spillages/ leakages of hazardous chemicals along roads/highways and communicating to the central database. • Accident data is shared with Hospitals, but there are no mechanisms to share with Fire Service.	
Core Principle 2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.			• The program activities do not require any civil works and hence not applicable.	

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
Core Principle 3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.			• All COVID19 related protocols are followed and monitored.	
Core Principle 4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.			• The program activities do not require any civil works and hence no additional land is required.	
Core Principle 5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to			• Awareness campaign is undertaken through TV Channels, Radio, Cinemas and Hoardings. Also, awareness creation is done involving school children, and awareness videos at Traffic Police Stations.	

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
the needs or concerns of vulnerable groups.				
Core Principle 6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.			• The program activities do not exacerbate any social conflicts. It is for safety of the road users and local community.	

4E. TELANGANA

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
Core Principle 1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.	• The state level road safety and district level road safety committee ensure the coordination among the different departments to undertake the road safety related activities. The road safety action plan is prepared in consultation with all stakeholder department and implemented by each department. • All e-waste is disposed through Telangana State Technological Services (TSTS) as per applicable protocols. • The departmental vehicles are disposed in public auction after condemnation,	• Most of the road safety works have no or minimal environmental and social risk. However, there is no systematic process in place to assess environmental and/or social risks. • Most of the e-waste and used vehicles are disposed through auction. • The inspection of roads/ highways to identify dangerous potholes/ damages, frequent accident-prone area identifications are a continuous process undertaken by the Field Officers throughout the year to identify the hazardous locations and take up remedial measures.		

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
	following prescribed procedure and norms. • The authorized private driving schools are imparting training to drivers of commercial vehicles. • The executive staff of the department are involved in assessment of environmental and social risks. •	• Further the Black spots are identified by the Police Dept. and communicated to R&B and accordingly the remedial measures are taken up on these locations along with other hazardous location identified by the R&B dept, etc. • The scale of work is less where temporary measures are taken up for rectification. In case of Permanent measures certain types of civil works are taken up where the excavated material which are not useful for re-use are disposed off to a safe place under instructions by the Field Officers so as not to create any hazard for the environment. • Monitoring is carried out at critical locations and the required signage are placed in Consultation with the Police dept. • Most activities are taken up in co-ordination with Transport and Police Departments.		
Core Principle 2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical	• The program activities do not require any civil works and hence there are no adverse impacts.	• Any physical cultural structures coming on way to black spot fixing, the current practice is to involve		

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.		consultation with local community representatives, community leaders, and in consultation with the Police Dept, Revenue Dept. and other stakeholder dept.		
Core Principle 3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.	• All COVID19 protocols including wearing mask, sanitization and physical distancing are followed by all the staff members during discharge of their duties. •	• Given the scale work for road safety measures are generally small, and hence no labor camps required, except in very few cases where the scale of work is big enough such as over bridge construction. • Necessary clauses are mentioned in the bid and contract document for prohibition of child labor. Also, all necessary labor laws and labor welfare related measures as per the regulations are mentioned in the bid and contract document for any civil work. • All COVID19 related guidance issued by the GoI/ State Govt. are being followed.		
Core Principle 4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and	• Not applicable, given department does not directly execute any civil/ construction activity.	• For road safety measures in some cases, minor land acquisition if any involves minor acquisition which will be taken up by the Revenue		

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.		Dept. based on the requisition made by R&B dept. • Where community infrastructure services may be getting adversely affected, it is shifted in consultation involving the local community representatives, community leaders, and in consultation with the Police Dept, Revenue Dept. and other stakeholder dept. • There are very few cases in the past where the encroachments may have to be removed at some junctions or at narrow roads in village/ town limits or where informal land users on existing RoW need to be displaced for taking up the Black spot rectifications. In such cases R&B department addresses them in consultation with Revenue Department and Local Bodies/ Local Authorities to clear the encroachment according to prevailing laws.		
Core Principle 5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe	• Conducting awareness programs among different of categories of drivers of commercial vehicles, school, and college students and public at large.	• The Transport and Police Dept undertake Road safety awareness program directly by involving local community and road users in coordination with the R&B		

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups.	• Also, awareness is created using print media, social media and electronic media; through short films and cartoon films displayed in cinema theatres; awareness rallies undertaken. • Road safety Club, India Federation of Road Safety etc. and a few other NGOs impart awareness to prevent Road Accidents. • Women are sensitized about precautions to be taken while riding two wheelers. • Under aged children are not allowed to drive vehicles. • The Transport Department portal has provision to register grievances and to monitor the status of the grievances.	dept and other stakeholder deps. • Road safety awareness creation activities are also taken up by the Transport and Police department through mass media. • The provisions of the Bid Condition ensure that gender-based violence issues and provision are adequately addressed and complied with by the Agency. • A provision for lodging grievance is available in the Website for Roads & Buildings department (roadbuild.telangana.gov.in). On receipt of any grievance, the same is communicated to the concerned Section within the R&B Dept and the reply is sent to the Grievant directly. Most of the Grievances are addressed within a month. • For employees, any employee can approach the higher Officers in the hierarchy for addressing their grievances.		
Core Principle 6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas,	• The program activities do not exacerbate any social conflicts.	• The program activities do not exacerbate any social conflicts as it is more for safety of the local community/ road users.		

Key Planning Elements	Transport Department	R&B	Police/ Home	Health
or areas subject to territorial disputes.				

4F. UTTAR PRADESH

Key Planning Elements	Transport Department	PWD	Police	Health
Core Principle 1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.	• Road Safety Cell housed at Transport Department acts as the key institutional measure to coordinate road safety activities in the state. • The UP Road Safety Policy 2014 outlines the key actions to be undertaken in order to reduce road accidents and fatalities. Of the eleven actions suggested, majority are related to awareness creation, behavioral aspects of safe driving and keeping the vehicle safe, and enforcing adherence to road safety norms, medical assistance in case of accidents, and creation of safe road infrastructure. • Among the above set of activities, only the safe road infrastructure requires civil works. These are in the nature of identifying black spots and fixing them. • Black spots are identified by local police station based on repeated accidents. They report to Traffic Department. Traffic police identifies black spots each year on the basis of the accident data of last three years and through them it comes to Transport Department. Transport Department then	• A dedicated Road Safety Division headed by an Executive Engineer has been established at PWD headquarter for ensuring road safety provisions in road proposals and monitoring implementation.	•	• Department of Health has MoU with GVK-EMRI to run ambulances under 108 for any emergency services including for road accidents. A total of 2200 BLS and 250 ALS type of ambulances are available under 108 services. 67 other ambulances from NHAI, UPSHA, YEIDA and UPEIDA are being integrated under 108. • The 108-service operator GVK-EMRI deploys ambulance strategically to minimize response time. Currently, the response time has been brought down to 15 minutes and efforts are on to reduce it further to 10.

Key Planning Elements	Transport Department	PWD	Police	Health
	disseminate it to respective road owning departments for fixing which are mainly PWD, and Highway Authorities, and a small number to Urban roads. • For coordination, the Road safety cell also has mid-level to senior officials of Health, Police, PWD, and Education departments as OSDs who help coordinate in taking forward the respective road safety activities in their departments. • The key gaps are no officials specifically designated for environmental and social aspects.			
Core Principle 2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.	• The activities of Transport Department do not impact any natural habitats and physical resources.	•	• The activities of Police Department do not impact any natural habitats and physical resources.	• The activities of Health Department do not impact any natural habitats and physical resources.
Core Principle 3: Program E&S management systems are designed to protect	• The road safety measures by crating awareness among road users, drivers, and ensuring safe	• The contractor takes all necessary step to reduce worker risks as the contract clauses	• The MVAA 2019 provides for penalties for transportation of hazardous	•

Key Planning Elements	Transport Department	PWD	Police	Health
public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.	driving are some of the key activities that benefit road users including local community, road users and drivers and public at large.	includes worker safety measures. And all labor laws are said to be followed. However, the gap is in the monitoring for adherence.	materials in an unsafe manner and the traffic police are to enforce the provisions of MVAA.	
Core Principle 4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.	• No land acquisition or resettlement is required for the activities being undertaken or proposed to be undertaken by the Transport Department.	• Sometimes it is needed to remove informal settlers. It is done with the help of district administration and follow defined procedures.	• No land acquisition or resettlement is required for the activities being undertaken or proposed to be undertaken by the Police Department.	• No land acquisition or resettlement is required for the activities being undertaken or proposed to be undertaken by the Health Department.
Core Principle 5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the		• Field staff consults with affected group during construction activity. • No NGOs/ civil society is involved		

Key Planning Elements	Transport Department	PWD	Police	Health
rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups.		• CM Helpline/ UPPWD is already in use for Grievance Redress Management		
Core Principle 6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	• The activities of the Department do not exacerbate any social conflict. • The State does not have any left-wing extremism (LWE) areas or any territorial disputed areas.			

4G. WEST BENGAL

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
Core Principle 1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.				
Core Principle 2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities				

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.				
Core Principle 3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.				
Core Principle 4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.				
Core Principle 5: Program E&S systems give due consideration to the cultural appropriateness				

Key Planning Elements	Transport Department	PWD/ Highway	Police/ Home	Health
of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups.				
Core Principle 6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.				

ANNEXURE 5: ACCIDENT BLACK SPOTS AND POTENTIAL RECTIFYING MEASURES

Accident Black Spots

Road crash is a random phenomenon; however, crashes may not be randomly distributed across road networks. There are locations with a concentration of crashes, and which are largely identified as black spots. Black spots are those locations where higher number of crashes having similar nature are occurring as a result of local risk factors. Location-specific, infrastructural measures can be implemented to decrease the number of crashes in order to mitigate them and generally known as treating the black spots or fixing the black spots.

According to MoRTH, Road Accident Black spot is a stretch of National Highway of about 500m in length in which either 5 road accidents in all three years involving fatalities/ grievous injuries took place during the last 3 calendar years or 10 fatalities in all fatalities on all 3 years put together took place during the past 3 calendar years.

Current Process of Identification of Black Spots

While the availability of a good and reliable crash data is the core of any blackspot management program, at present the black spot identification in most states are done through local police station based on repeated accidents. They report to Traffic Department. The Traffic police identifies black spots each year on the basis of the accident data of last three years and through them it comes to Transport Department. Transport Department then disseminate it to respective road owning departments for fixing which are mainly PWD, and Highway Authorities, Urban Development Departments, and Rural Roads.

Typical Type of Black Spots

A typical type of crashes that most states observe includes:

1. Single vehicle crashes (crashes such as ran-off, overturning, etc.)
2. Pedestrian crashes
3. Crashes for vehicles driving in the same direction (usually rear end collisions, side swipe, etc.)
4. Crashes at junctions (usually right-angled collisions)
5. Crashes between vehicles travelling in opposite directions on undivided roads (usually head-on collisions)
6. Railway crossing crashes

Potential Reasons for Accidents and Black Spot Rectifying Measures

It is highly likely that in most of the blackspots, any one of the above crash-type will be predominant. In such a situation (where a predominant crash type can be observed), it could be usually because of the local risk factors present in the blackspot. Such frequently occurring crash types can be treated by matching countermeasures (engineering interventions). For each crash type listed above, the likely contributory factors along with potential treatment measures are as below.

Table (5.1): Potential Reasons and Rectifying Measures for Fixing Accident Black Spots		
Typical type of crashes observed	**Potential Reasons for Accidents/ Crashes**	**Potential Rectifying Measures**
Single vehicle crashes (crashes such as ran-off, overturning, etc.)	• Excessive speed • Driver fatigue • Poor lighting/ visibility • Sharp curve; steep slope • Narrow carriageway width after a long wide section or lanes merging as one single road • Some obstacles such as tree/ pole etc. too close to the edge of the road and is poorly marked • Parked vehicle in front blocking visibility etc.	• Improve signage • Improve lighting/ visibility • Speed limiting measures • Improve road markings • Improve road geometry e.g., Eliminating sharp changes in alignment – curve/ slope etc. • Remove roadside obstacles • Improve road surface e.g., rectifying potholes, road edges, drainage etc. • Remove roadside obstacles, installing crash barriers • Removing on road parking etc. • Mechanism for reducing driver fatigue
Pedestrian crashes	• Lack of footpath • Footpath is obstructed with encroachments (temporary shops, parked vehicles) • Narrow Road • Poor visibility • Wide Road carriageway to cross • No crossing facilities or clear places to cross • High vehicle speed • Heavy traffic	• Improve facilities for pedestrians walking along the road (including clearing and widening where required) • Improve facilities for pedestrians crossing the road • Improve visibility • Limiting Speed
Crashes for vehicles driving in the same direction (usually rear end collisions, side swipe, etc.)	• Lack of lane markings • Lack of lane discipline • Lane too narrow • Careless driving • Dangerous overtaking • Sudden stopping of vehicle ahead • Excessive speed	• Improvement of road markings/ signs e.g., lane markings, centerlines, no overtaking zone etc. • Improvement of road facilities such as extra widening on curves, prevent hazardous U-turns etc. • Speed limiting measures • Avoid contra traffic flow • Active police enforcement

Table (5.1): Potential Reasons and Rectifying Measures for Fixing Accident Black Spots		
Typical type of crashes observed	**Potential Reasons for Accidents/ Crashes**	**Potential Rectifying Measures**
	• Wrong way driving along travel lane forcing vehicle use narrow passage or change lane in last minutes.	
Road Crashes at junctions	• Vehicle from side road overshoots the stop line and hits a vehicle on the main road • Vehicle turning out of main road is hit by oncoming vehicle • Vehicle going ahead is hit by a following vehicle in rear • Vehicle in the roundabout is hit by an entering vehicle • Vehicle entering the roundabout loses control	• Adequate warning signs including advance direction signs and stop line etc. on the side road • Proper visibility of the signage • Re-aligning minor road to joins the major road at a right angle • Altering the geometry of the approach road to encourage slower speeds • Installation of rumble strips or other traffic calming measures in the side road • Installing traffic signals • Improve visibility of the signals • Providing protected right/ left turning lane
Road Crashes between vehicles travelling in opposite directions on Undivided roads	• Excessive speeds - loss of control • Inadequate overtaking sight distance • Slow traffic uses centre of the road • Steep gradient with slow heavy traffic • Poor forward visibility • Vehicle swerves to avoid pothole, bad edges etc. • No centerline; Narrow Road	• Marking no overtaking zones and consider installing no overtaking signs • Install warning signs (e.g., for bends, junctions, narrow roads) • Install speed limit signs and provide active police enforcement • Centre line marking especially on sharp horizontal curves • Improve the road surface including potholes, bad edges • Improve road alignment by improving road geometry • Upgrade the road by widening the lanes and / or shoulders
Railway crossing crashes	• Excessive speed • Poor visibility • Careless overtaking • Inattention by driver • Failure of crossing control system • Crossing may be narrower than approach roads	• Install speed reducing measures e.g., rumble strips, road humps, etc. • Improve visibility of the crossing and light signals associated with it. • If the crossing is unmanned, improve the visibility along the rail track on the approach to the crossing • Upgrade the signing and marking

Table (5.1): Potential Reasons and Rectifying Measures for Fixing Accident Black Spots		
Typical type of crashes observed	**Potential Reasons for Accidents/ Crashes**	**Potential Rectifying Measures**
		• Discourage overtaking by means of signs, markings or delineator posts • Consider provision of street lighting • Consult the railway authority about changing the control system (unmanned to manned or automatic). • Consult the railway authority about widening the crossing if it is narrower than the approach roads • Consider replacing the crossing with an over bridge or under pass
Source: Guidelines for Identifying and Treating Black spots. IRC. Available at http://www.irc.nic.in/admnis/admin/showimg.aspx?ID=329		

ANNEXURE 6: APPLICABLE RULES FOR E-WASTE DISPOSAL

The links to the applicable rules for e-waste disposal are outlined below.

- Andhra Pradesh: https://pcb.ap.gov.in/a_ewaste_management.html#:~:text=Public%20shall%20not%20dis%2Dintegrate,%2F%20burning%20of%20e%2DWaste.
- Gujarat: https://gpcb.gujarat.gov.in/webcontroller/viewpage/ewaste
- Odisha: http://ospcboard.org/divisions/waste-management-division/e-waste-management/
- Tamil Nadu: https://www.it.tn.gov.in/sites/default/files/2018-09/e-wate_0.pdf
- Telangana: https://www.telangana.gov.in/PDFDocuments/Telangana-e-Waste-Management-Policy-2017.pdf
- Uttar Pradesh: http://www.upecp.in/PDFFiles/SolidWasteNew/E-Waste%20Management.pdf
- West Bengal: https://www.wbpcb.gov.in/e-waste-management#:~:text=Recyclers%20and%20dismantlers%20are%20also,from%20State%20Pollution%20Control%20Board.&text=West%20Bengal%20is%20a%20predominantly%20rural%20state

ANNEXURE 7: NATIONAL MULTI-STAKEHOLDER CONSULTATION WORKSHOP

A National Consultation workshop was organized by MoRTH on 22nd April 2022, and this was done virtually due to COVID restrictions. The relevant national and state government organizations as well as CSOs were invited and attended workshop. In total, more than 100 participants attended the workshop (detail list attached).

The workshop was kicked off by a keynote address by the Joint Secretary at the MoRTH outlining the importance of Road Safety and need to understand the potential environmental and social impact implications associated with Road Safety.

PricewaterhouseCoopers (PwC) supporting the Government of India (GoI) program development and implementation presented the GoI India State Support Program for Road Safety and presented the objective, scope, boundary of the program and the role of the World Bank (WB) and Asian Development Bank (ADB). It was outlined that the WB is supporting 7 of the states (Andhra Pradesh, Gujarat, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal) while The ADB is supporting the other 7 states under the GoI's program that covers a total of 14 states. This laid the framework within which the WB's ESSA plays a crucial role to assess the key environmental and social risks that may affect the achievement of the development outcomes of the program and the Government's ability to manage those risks.

This was followed by a presentation by the WB Environment and Social team members comprising of Mr. Takeaki Sato, Senior Environmental Specialist and Mr. Venkata Rao Bayana, Senior Social Development Specialist. The World Bank specialists outlined how the ESSA seeks to assess extent to which the applicable government environmental and social policies, legislations, program procedures and institutional systems are consistent with the six 'core principles' defined under WB Policy for PforR financing instrument and the recommendations and actions suggested to address the identified gaps for enhancing performance during program implementation. The WB Specialists outlined that of the six Core Principles, four are applicable to the proposed program. The methodology adopted to conduct the ESSA was also presented which involved desk review of existing documents; interaction with MoRTH and States; including the departments of Transport, PWD/R&B, Health, Police, and other key agencies/institutions and finally the consultations/discussions with key stakeholders. The key E&S benefits of the program were presented which include positive health and safety impacts by reducing road accident-related deaths and injury and increased awareness on road safety among road users, children, and the community.

The key environmental risks were presented which include the construction-related EHS risks and impacts resulting from civil works for rectification of black spots/accident risk spots; disposal of e-devices used for road safety and compliance of traffic rules and its monitoring which includes disposal of used batteries; scrapping old or severely damaged vehicles and the potential environmental risks/impacts due to accidents involving vehicles carrying hazardous chemicals. The social risks include any additional land requirement to be met from existing Government land for activities such as development/widening of the footpath, widening of the road, establishing driver training centers, vehicle fitness centers; and the weak community and stakeholder engagement processes. Similarly, the key E&S gaps identified were presented.

The WB E&S specialists then outlined the nine key recommendations from the ESSA:

- Strengthening the process of safe disposal of electronic waste
- Strengthening the mechanism for recording and reporting segregated data on accidents involving vehicles carrying hazardous substances
- Enhancing the vendor compliance with environmental regulations in the procurement process
- Strengthening the institutional mechanism and capacities for managing environmental and social risks and impacts
- Screening of the sub-projects for upfront environmental and social risk and impact identification

- Strengthening the monitoring mechanism during civil works for environmental and social risks, impacts and mitigation activities including compliance with labor laws and labor welfare measures by the contractors
- Instituting a mechanism for systematic stakeholder consultation to identify community concerns and feedback, and garner community support and
- Strengthening the existing grievance redress mechanism for road safety for systematic recording, monitoring, and reporting towards enhancing transparency and responsiveness.

The four Program action Plans were also presented:

- Mechanism for recording and reporting segregated data on accidents involving vehicles carrying hazardous substances - Within 12 months of program effectiveness
- Conduct E&S Screening and prepare site specific mitigation measures where civil works are being planned such as for Black spots fixing and other building construction sites – To be a continuous process
- Strengthen existing grievance redress mechanism for road safety at the state and district level for systematic recording, monitoring and reporting towards enhancing transparency and responsiveness - Within 12 months of program effectiveness.

The session was then thrown open for the participants to provide their feedback and suggestions on the ESSA findings. At the very beginning, it was made clear by the WB Team that the WB's Program will not support any activities that involve land acquisition or are located in forest/ecologically sensitive areas among other criteria.

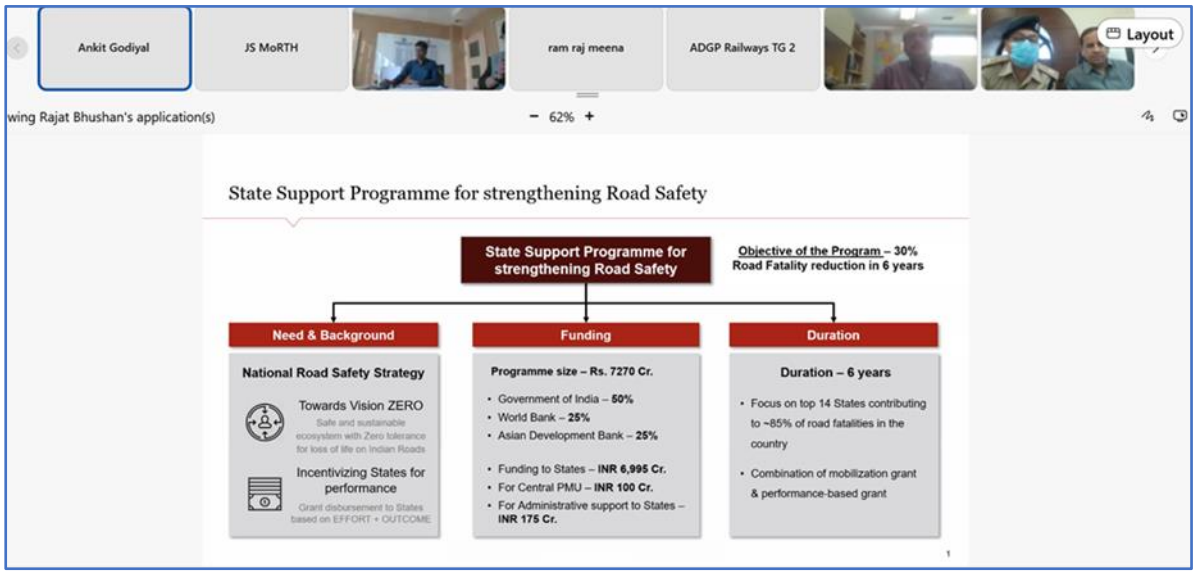
- Madhu Sudan Sharma was keen to know the list of KPIs including the district level KPIs and what will be the precise role of Civil Societies or NGOs in the program? Moreover, he wanted to know regarding specifics of NGO role and involvement. It was clarified b the WB team that these aspects have been detailed in the project preparation and is outlined in the other project documents.
- There was a query regarding the Citizen Engagement and how enhancing Road Safety improves E&S aspects. Another query was regarding the movement of animals which can lead to road accidents. The response by the WB E&S specialists outlined that increased E&S performance has some very tangible as well as intangible benefits and some of these have already been presented in the slides. Increased awareness on Road Safety also includes increased environment and social performance. It was also brought out that the anticipated E&S risks are very nominal with regard to Road Safety.
- Mr. Madhusudhan CUTS, Jaipur, was interested to know if the vulnerable road users including pedestrians, cyclists, Non-Motorized Transport (NMT) etc. were considered and if there are plans to develop dedicated lanes for 2-wheelers and if there was any plan to strengthen the district Road Safety Committees. Once again, the WB Team clarified that these aspects have been thought through in details and are being considered in the project preparation and scope.
- Mr. Dilip Patro felt that to reduce fatalities, social marketing is required and common awareness materials to may be shared, perhaps through modes such as WhatsApp groups. He felt that this type of social awareness/marketing will have very high impact. He also feels that schools and hospitals need capacity building on Good Samaritan scheme. Mr. Arnab Bandyopadhy of WB responded that the program design has provisions for setting up a PMU, setting up Citizen Engagement processes, first respondent programs and a common uniform framework for all.
- Mr. Vasu, VHEEDU opined that capacity building and training for the heavy and LMV driving school instructors is required as many drivers come from the unorganized sector and they are often the ones creating Road Safety concerns. He shared that vehicles such as tractors and shared autos (commercial three-wheeler commuters) etc. are also high risk vehicle types that pose risks that increase road safety concerns.
- Mr. A S Rao, Project Director opined that the majority of the accidents involve 2-wheelers that are hit by trucks and these are often due to truck driver fatigue. Therefore, there is a need to provide

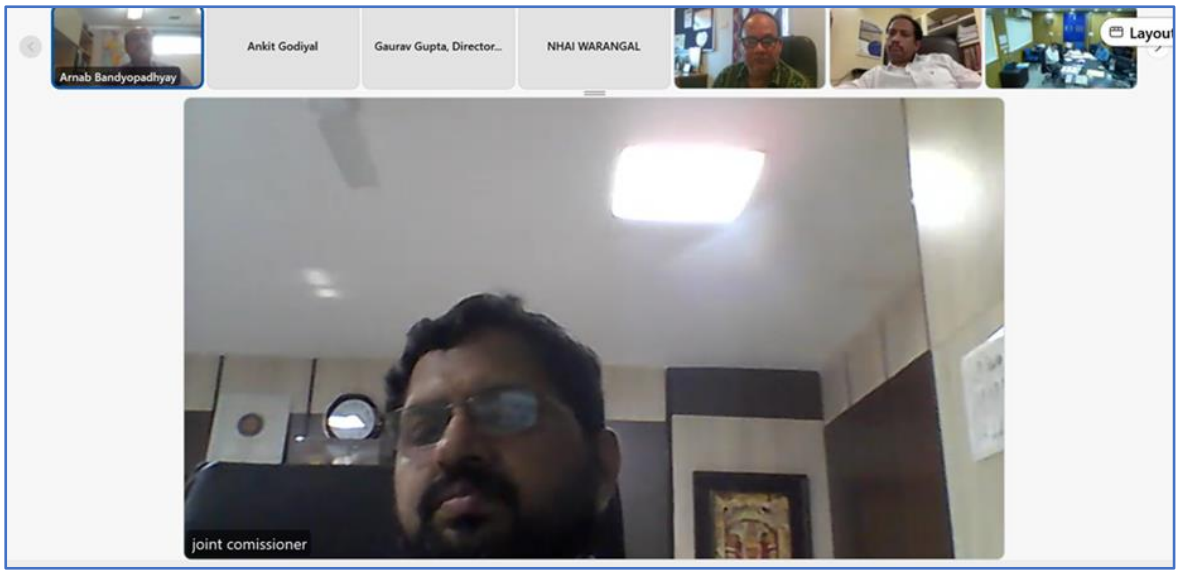
driver resting points. Also, the enforcement of helmet wearing and penalty for wrong side driving is essential. The WB team outlined that these are major objectives of the program.

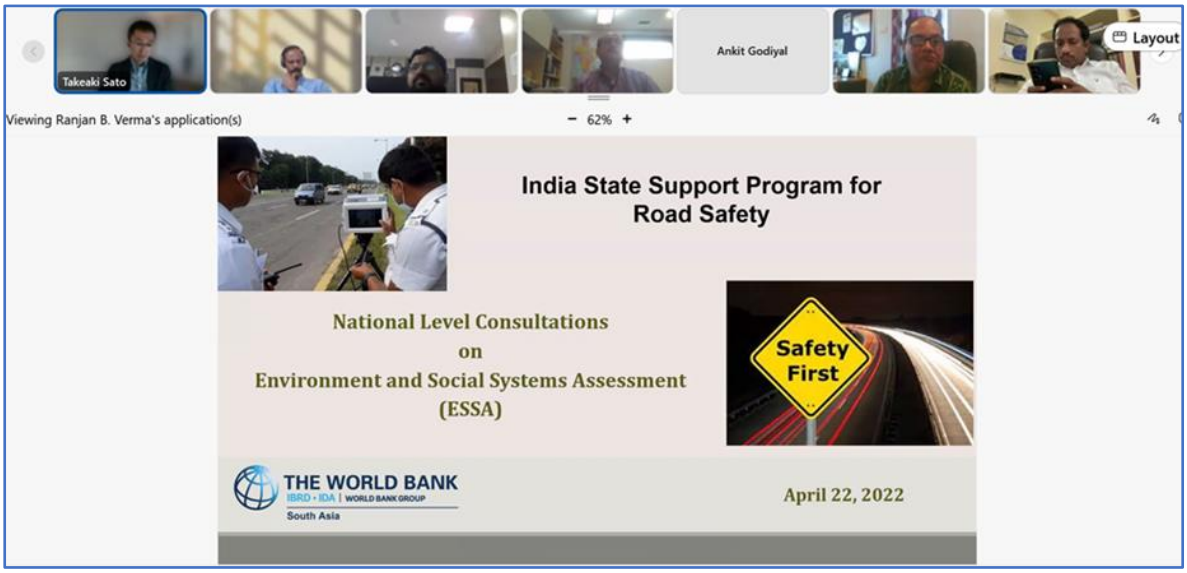
- Ms. Roochita Desai felt that there is a need for capacity at the sites and refresher courses for driver training and NGOs can play a role in this aspect. The WB team responded that behaviour change aspects of road users is being considered and CSOs can participate in various capacities.
- Mr. D. Kirubakaran, Tech SI - Tamil Nadu shared that reminder messages with road safety slogans may be send to the offenders through MoRTH/states to change their behaviour.
- An interesting suggestion was to rename Road Safety as Road User Safety!
- Mr. Bikash, FRRA felt that there should be a representation of CSOs in the monitoring mechanism.
- Mr. Krishnamoorthy suggested that computerized testing range should be developed in all districts and more stringent checks should be implemented while issuing driving licenses.
- Mr. Girijesh Tyagi from Uttar Pradesh felt that manufacturers may be encouraged to set speed limits on vehicles to check over speeding. He also felt that from his experience, he has learnt that enforcement through speed guns is only has temporary benefits as drivers reduce speed when they know where speed guns are installed and then increase speed after they cross those spots.
- Mr. Gaurav Gupta, Director MoRTH outlined that KPIs will give focus on more than 30% reduction in crashes on NH which will help reduce crashes.

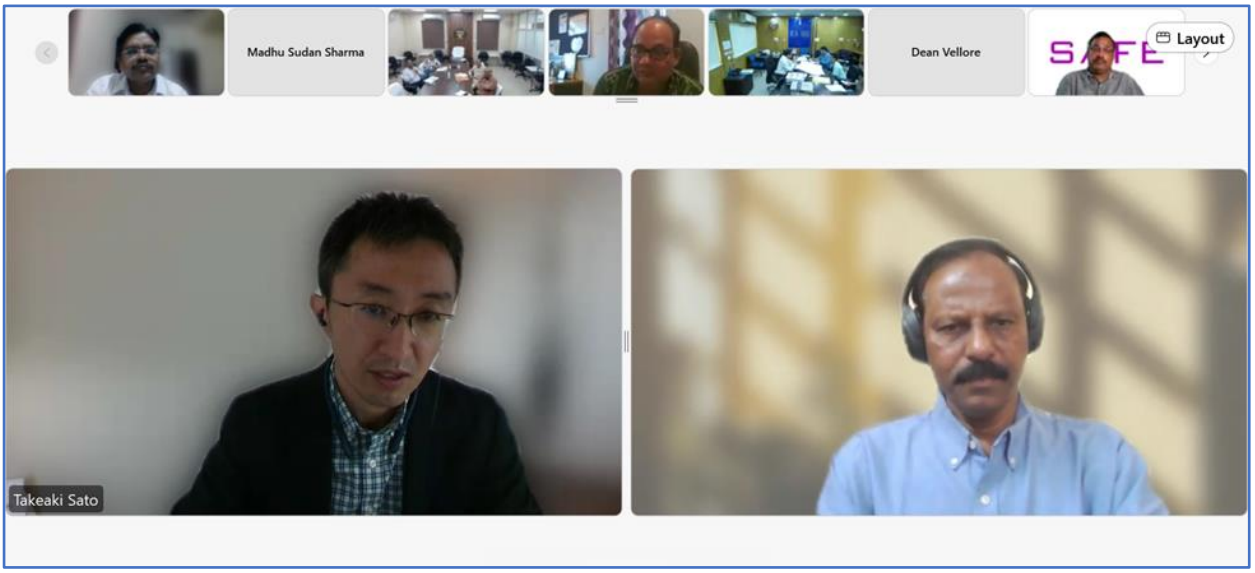
With this the session was brought to a close with the closing remarks by Mr. Gupta of MoRTH. He mentioned that although the workshop was for E&S issues, many other points and suggestions surfaced which shows the deep interest of stakeholders on the subject. He thanked all the participants for making time to join this important workshop and offering their feedback and suggestions. He also congratulated the WB Team for the ESSA.

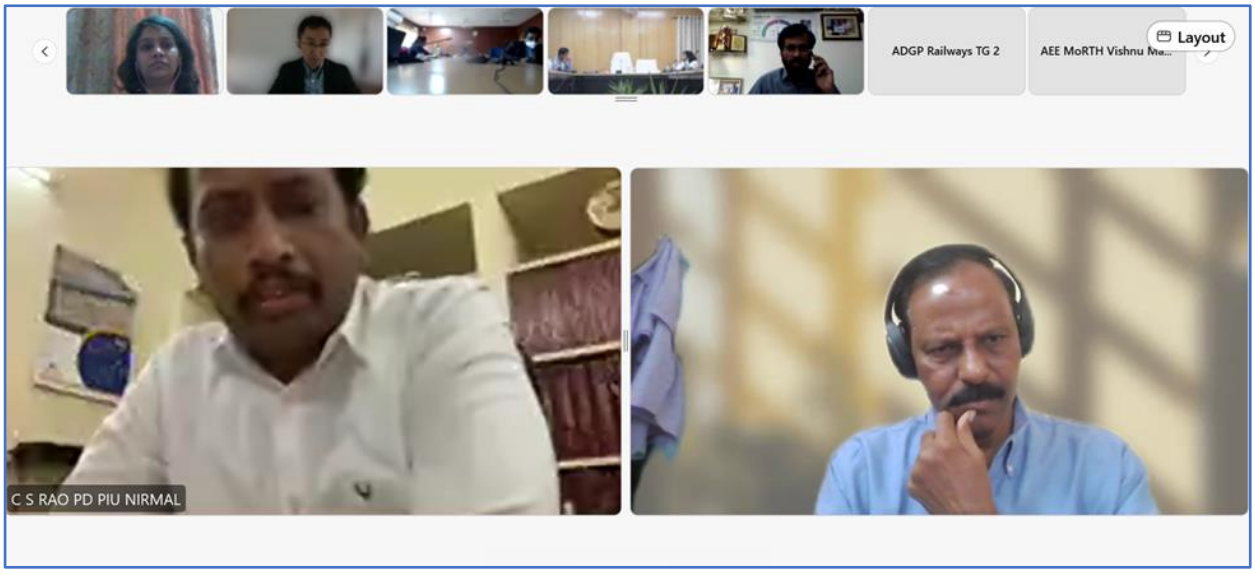
Selected the pictures (screenshots) from the Virtual workshop are presented below:

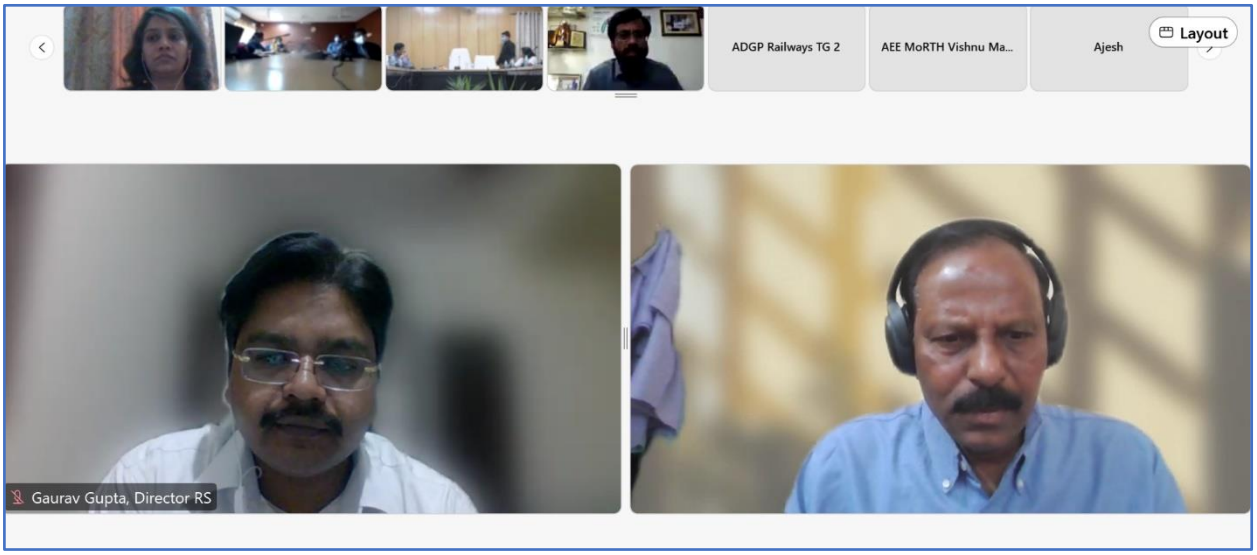



Arnab Bandyopadhyay
Ankit Godiyal
Gaurav Gupta, Director...
NHAI WARANGAL
Layout
joint comissioner


Takeaki Sato
Ankit Godiyal
Layout
Viewing Ranjan B. Verma's application(s)
62%
India State Support Program for Road Safety
National Level Consultations on Environment and Social Systems Assessment (ESSA)
Safety First
THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP
South Asia
April 22, 2022


Madhu Sudan Sharma
Dean Vellore
Layout
Takeaki Sato


ADGP Railways TG 2
AEE MoRTH Vishnu Ma...
Layout
C S RAO PD PIU NIRMAL


ADGP Railways TG 2
AEE MoRTH Vishnu Ma...
Ajesh
Layout
Gaurav Gupta, Director RS

List of Workshop Participants:

1. Mansoor ul Haque
2. PIU NIRMAL
3. Kripa
4. Akhilesh Maddhesiya
5. PIU Mancherial
6. Gi Soon Sing, ADB
7. PIU_Warangal
8. Muniswamy Vasu
9. Mariappan
10. Sudheekshan Foundation
11. DGP office
12. P. Ravinderrao
13. JTC Road Safety - Tamil Nadu
14. Girijesh Tyagi, Uttar Pradesh
15. GM APRDC
16. Gujarat Road Safety Authority
17. Balwant Kumar Chaudhary
18. Bodhisatya Datta, World Bank
19. Dillip Panda-SAFE India
20. JS MoRTH
21. Joint Commissioner Transport RS Odisha
22. K. S. Sreenivasaraju IAS Principal Secy TR&B
23. Ranjan B. Verma, World Bank
24. Rashi Grover, World Bank
25. Roochita Desai
26. S S Baskaran
27. TNSHRP
28. TRSC Office
29. Takeaki Sato, World Bank
30. VHEEDU - M. vasu
31. Venkata Rao Bayana, World Bank
32. Telangana PCS&S
33. Andri Heriawan, ADB
34. Arnab Bandyopadhyay, World Bank
35. Chief Engineer, Planning, P.W.RdsDte
36. DILIP PATRO
37. Dean Vellore
38. Dipan Bose, World Bank
39. Gaurav Gupta, Director RS, MoRTH
40. Highways
41. Indranil Bose, World Bank
42. Krishnan S, World Bank
43. Madhu Sudan Sharma
44. Madhusudan Rao, DGM Tech & PD, PIU- Sangareddy
45. Rajat Bhushan, PwC
46. Somashree

47. Transport Commissioner UP
48. Vinod Kanumala
49. Jothi
50. Ram Raj Meena
51. Vheedu NGO Vijayawada
52. C S Rao PD PIU NIRMAL
53. AEE MoRTH Vishnu Maurya
54. Ankit Godiyal, PwC
55. Ramasree
56. Michel Ragnvald Mallberg, World Bank
57. Bikash, FPRA
58. Papun Kumar Pradhan
59. ADGP Railways TG 2
60. Neha Vyas, World Bank
61. Krishnamoorthy
62. Ramesh Chidura
63. D. K. Solanki
64. Sujit Senapati
65. Satyapal Singh
66. P. Ravinder Rao
67. Debu Nayak, OCF,Odisha
68. HQ UPPWD
69. Kannan Arunachalam
70. Joint Commissioner
71. Ajesh
72. B Sreenivasa Prasad
73. IGP Traffic
74. Iris Bombay
75. S. Udhayakumar, DTC II, STA
76. NHAI Warangal
77. NHAI RO Hyderabad
78. PIU Warangal
79. Prakash Patni, Joint Secretary
80. Minati Bindhani
81. Sharath M
82. B Sreenivasa Prasad
83. Dr S Maruthu Thurai
84. Women & Child Welfare Society
85. NHAI WARANGAL
86. Manisha Palaskar
87. UP-PWD
88. Ramesh Chidura
89. Transport Commissioner, Andhra
90. Kannan Arunachalam
91. Chief Engineer, Planning, P.WRdsDte
92. PIU Khammam
93. RTA Telangana
94. PIU Khammam

95. Dr S Maruthu Thurai
96. Ramasree
97. S.A.V. Prasada Rao
98. Bharadwaj Keerthi
99. Rakesh Malpani
100. Mansoor ul Haque
101. PD, NHAI Karaikudi
102. UP-PWD

ANNEXURE 8: SUB-PROJECT SCREENING FORMAT FOR POTENTIAL ENVIRONMENTAL AND SOCIAL ISSUES

The Screening checklist is applicable to any civil work activities towards black spot fixing and/or and other building construction sites under the program. This form is to be used by the functionaries of participating departments to rule out any adverse environment and social impacts of the proposed subproject(s).

Site Information	State	
	District/ City/ Town	
	Name of the Sub-project	
	Type of the Activity under the Sub-project	
	Department	

Sl. #	**Key Question**	**Answer**		**Due diligence/ Actions**
		Yes	**No**	
1	Is there any risk/ impact/ disturbance to forests and/ or protected areas because of subproject activities?			If yes, all interventions should be avoided.
2	Is the construction site within 100 meters of any cultural, historic, religious site/ buildings?			If yes, all interventions should be avoided[32].
3	Is the construction site between 100 - 200 meters of any cultural, historic, religious site/ buildings?			If yes, due permission to be taken from ASI for any construction. Where there is no impact, chance finds procedures would be applicable and ASI norms would need to be followed.
4	Does the subproject involve additional land through land acquisition or restrictions on land use?			If yes, it is not supported by the project. Alternate options to be explored.
5	Does the subproject involve additional land through transfer from another government department?			If yes, follow government norms for transfer. Construction activities can be initiated only after transfer is completed.
6	Does the subproject require any informal/ illegal occupants' removal from the civil work site/ construction site			If yes, all interventions should be avoided. Alternate options to be explored. However, if completely unavoidable, approval from World Bank to be taken and necessary assessment and safeguard tools to be prepared as per ESS 5.
7	Does the proposed activity involve displacing or relocating vendors/ hawkers?			If yes, all interventions should be avoided. However, if completely unavoidable, assistance to be provided complying to and

[32]Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010 there is ban on construction within 100 metres of a centrally protected monument and regulated construction within 100-200 metres construction. Any construction activity within 100-200 meters of the monument requires ASI permission.

Sl. #	Key Question	Answer		Due diligence/ Actions
		Yes	No	
				in line with Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.
8	Does the subproject have had Free and Prior informed consultation with the beneficiary community groups?			If no. Consultation with local beneficiary community/ road users will help create awareness and garner community support of the activities proposed.
9	What are the environmental risks envisaged from the civil works/construction?[33]			
9a	Increase in dust and noise from demolition and/or construction			If yes, need to have dust suppression practices in place such as dust curtains and water sprinklers in the work sites to reduce dust. If noisy machinery and vehicles are expected to be used, need to ensure that these are fitted with appropriate mufflers in their exhausts. If noise generating tools such as jack hammers, drills or other such tools are expected to be used, these need to be operated only during the workday (10 am – 6 pm) and all possible measures to be taken to reduce the disturbance of neighbouring communities.
9b	Generation of construction waste and their disposal			If yes, all construction debris and wastes need to be disposed as per the Construction & Demolition Waste Management Rules, 2016.
9c	Impacts on accessibility to the facility/site of intervention			If yes, alternate road accessibility for the road user needs to be planned so that access is not severely impacted. If unavoidable, this needs to be communicated beforehand and efforts made to keep the inaccessible period as short as possible.
9d	Excavation impacts and soil erosion including disposal of excavated soil			If yes, the excavated soil must be put back in the same place after the intervention wherever possible. If not feasible, these need to be disposed at pre-identified government sites in a manner that avoids inconvenience to others as well as avoids soil erosion.
9e	Increased sediment loads/wastewater discharges in receiving water bodies			If yes, interventions must be planned to avoid any increase in sediment loads and measures must be in place so that any materials from the sites should not enter the adjacent water bodies.

[33] It is expected that the HCFs to be renovated/refurbished will pass the screening criteria with no problem and will be found suitable for improvements and any small civil works required. In such cases the standard mitigation measures would be all that is needed to minimize any risk of negative environmental and social impact. The generic Environmental and Social Management Plan (ESMP) of this ESMF would apply in these cases.

Sl. #	Key Question	Answer		Due diligence/ Actions
		Yes	No	
9f	Removal and disposal of toxic and/or hazardous substances[34]			Use of toxic or hazardous substances must be avoided. If unavoidable, these must be stored and handled with extreme care to avoid any fire, leakage or seepage and contamination of soil and water. Measures must be put in place to avoid air pollution.
10	Increase in soil erosion or changes in local drainage pattern			If yes, interventions must be planned to avoid any increase of soil erosion. Planning must ensure that drainage patterns are not altered in a manner that are adverse for the environment.
11	Does the subproject have appropriate OHS procedures in place, and an adequate supply of PPE (where necessary)?			All workers at work sites must have adequate access to relevant safety jackets, hard hats and other PPEs and their use must be strictly enforced. If any work at height is involved, workers must be trained and use all safety gear.

District In-charge/ Site In-charge of the proposed sub-project

Name……

Designation: ……

Department: ……

Phone No. ……

Signature …….

Date: ……

[34]Toxic / hazardous material includes and is not limited to asbestos, toxic paints, removal of lead paint, etc.