Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 19-Oct-2020 | Report No: PIDC29795

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Bangladesh	P173019		Bangladesh Road Safety Program (P173019)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
SOUTH ASIA	Apr 01, 2021	Sep 15, 2021	Transport
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	People's Republic of Bangladesh	Road Transport and Highways Division, Ministry of Road Transport and Bridges, Roads and Highways Division, Directorate General of Health Services, Bangladesh Police, Dhaka Transport Coordination Authority	

Proposed Development Objective(s)

The Program Development Objective (PrDO) is to build road safety management capacity and achieve targeted reduction in traffic fatalities and serious injuries in Bangladesh.

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	360.00
Total Financing	360.00
of which IBRD/IDA	300.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	300.00

IDA Credit	300.00
Non-World Bank Group Financing	
Counterpart Funding	60.00
National Government	60.00

Environmental and Social Risk Classification	Concept Review Decision
Substantial	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. Bangladesh has made rapid social and economic progress in recent decades, reaching lower-middle income status by 2015. Gross domestic product (GDP) growth averaged close to 6 percent annually since 2,000 and, according to official estimates, accelerated to over 8 percent in FY19. Strong labor market gains contributed to a sharp decline in poverty, with the national poverty rate falling from 48.9 to 24.3 percent between 2000 and 2016, while extreme poverty declined from 34.3 to 12.9 percent[1]. However, the pace of poverty reduction slowed in recent years even as growth accelerated, particularly in urban areas and in the west of the country. Similarly, the progress on shared prosperity slowed between 2010 and 2016 after a decade of improvements, with annual consumption growth of the bottom 40 percent trailing that of the overall population (1.2 versus 1.6 percent). Bangladesh entered the COVID-19 crisis with a relatively strong macroeconomic position. Garment exports and remittances narrowed the external deficit in recent years and international reserves were adequate at the end of April 2020 at US$ 32.9 billion, equivalent to six months of imports. While tax collections are amongst the lowest in the world, under-execution of the budget has contained the fiscal deficit, which has been below 5 percent of GDP since FY01. As a result, public debt is low and stood at 33.7 percent of GDP at the end of FY19. A key economic vulnerability is in the banking sector where the non-performing loan (NPL) ratio is high at 9.3 percent of outstanding loans in December 2019, and is underestimated considering significant under-provisioning, regulatory forbearance, and gaps in the legal framework.

2. Growth declined sharply as the COVID-19 pandemic brought about major disruptions to economic activity. In the first half of FY20 (July to December), growth decelerated as slower global trade and deteriorating external competitiveness lowered exports and tighter access to finance constrained private investment growth. With declining ready-made garment (RMG) orders, exports declined by 5.8 percent (y-o-y) during this period. A sharp contraction in capital goods imports (3.4 percent, y-o-y) suggests private investment also declined. Growth during the first half of the year was primarily supported by remittance-fueled private consumption. The initial phase of the pandemic in early 2020 disrupted the supply of intermediate goods from China, reducing manufacturing output. As the pandemic intensified

[1] Household Income and Expenditure Survey, 2000/01 through 2016/17.

abroad, export orders from Europe and the United States declined precipitously and an estimated US$ 3.2 billion in RMG orders were cancelled or suspended[2]. The government implemented a national shutdown from March 26 to May 30, 2020 to control an accelerating domestic outbreak of the virus. Control measures resulted in a sudden stop of many components of the service and industrial sectors. Remittance inflows declined by 23.6 percent year-over-year in April 2020 and exports declined by 82.9 percent in the same period. In FY19, inflation remained modest at an average of 5.5 percent, primarily driven by a rise in non-food prices. Demand for food surged with precautionary purchases ahead of the national lockdown but has eased more recently as government food distribution programs were implemented. Overall inflation reached 5.4 percent y-o-y by the end of May 2020.

3. COVID-19 has darkened the economic outlook through domestic economic disruptions, declining exports and remittances, and rising stress in the financial sector. FY20 GDP growth is projected in a range between 1.6 percent and a downside scenario of 1.0 percent. The downside forecast is based on a situation in which (i) lockdown measures are extended and mobility remains significantly constrained and (ii) the global outlook deteriorates further. In FY21, growth is projected between 1.0 and -3.0 percent. In the downside scenario, a second round of infections and a prolonged global recession would result in the realization of some contingent liabilities, especially from the financial sector. The extended national shutdown is likely to depress economic activity across all sectors in the last quarter of FY20, and varying levels of control measures are likely to continue in FY21. Private consumption, the main engine of growth, is expected to slow and declining remittance inflows reduce household income. The unprecedented uncertainties related to COVID-19 are likely to further dampen private investment. The decline in exports is expected to persist, as developed market recessions depress demand for ready-made garments, Bangladesh's primary export. A shortage of intermediate inputs is expected to lower industrial production, while labor shortages could adversely impact all sectors. Transportation disruptions are expected to dampen agricultural growth, particularly production of perishable products like dairy, poultry, and vegetables. The recovery is expected to be very gradual, with ongoing economic disruptions and increasing fragilities in the banking system. In the medium term, a gradual recovery in growth is expected, with some increase in export demand and higher public spending.

4. As Bangladesh recovers from the health pandemic and restores economic activities across all sectors, addressing the existing challenge of road traffic injuries would be integral to the development growth of the country in the post-COVID times. Prior to the COVID pandemic more than 20,000 people were killed[3] and estimated 200,000 seriously injured or disabled every year due to road crashes in Bangladesh. The situation has been worsening in the past decades - between 1990 and 2017, the increase in the road crash fatality rate[4] was three times higher in Bangladesh than that across the South Asia region. This has impacted the working-age population with road traffic crashes responsible for 11.7 percent of all deaths among men in the 15-49 age bracket[5]. Besides death, injuries resulting from road crashes are the second leading cause of permanent disability in the country. Children, too, face risks: in 2017, road crashes were the fourth leading cause of death among children. This comes at a price to the economy – where annual crash related costs are equivalent to 2-3 percent of GDP. While Bangladesh has relative low rate of motorization[6], but with disproportionately high crash rates, the trend may further worsen when transport activities are restored to normal levels. Across gender profiles, males suffered significantly higher numbers of injuries and deaths than females across all ages.[7] The lopsided fatality ratio shows men suffer more directly from road crashes than women.[8] However, this pattern reflects deeper issues

[2] Bangladesh Garment Manufacturers and Exporters Association (BGMEA), as of May 22, 2020.
[3] Depending on the source, the estimates of annual deaths range from 4,138 (reported fatalities in 2019) to nearly five times that – between 16,874 (Global Burden of Disease, 2017) and 24,954 (WHO, 2016).3 The World Health Organization estimate imply a death rate of 15.3 per 100,000 people in 2016.
[4] Currently 15.3 per 100,000 people, which is more than three times the rate in developed countries
[5] The rate of increase in deaths for this age group in Bangladesh was 15 times higher than that across the South Asia region.
[6] About 10.2 per 1,000 registered vehicles in 2013-2014, compared to ~ 1.0 per 1,000 vehicles in India and Sri Lanka
[7] The morbidity rate being 1551.4 injuries (95% CI 1520–1584) per 100,000 for males versus 264.3 injuries (95% CI 251.7–277.6) per 100,000 for females. The RTI mortality rates being 9.2 deaths (95% CI 6.9–12.01) per 100,000 in males compared to 4.7 deaths (95% CI 3.2–6.7) per 100,000 in females. Md. Kamran Ul Baset et al. (2017) Pattern of Road Traffic Injuries in Rural Bangladesh: Burden Estimates and Risk Factors. Int J Environ Res Public Health. 2017 Nov; 14(11): 1354.
[8] One of the underlying factors beyond infrastructure and regulations can also be norms that lead to risk-taking behavior among men. This aspect will be considered

of limited mobility, access, and opportunity for women. More women, particularly with lower incomes, than men have no mode of transport available besides walking.[9]

5. Improving road safety in Bangladesh is vital to national health, well-being, and economic growth. Economic losses from inaction could be substantial – a World Bank study estimates that halving the mortality and morbidity from road traffic injuries (RTIs) in a developing country like Bangladesh would likely yield an additional 7-22 percent in GDP per capita over a period of 24 years. The effect on national income is just one part of the story. **The road safety situation in Bangladesh is disproportionately and directly impacting the poor, which are most vulnerable road users.** It is estimated that over half of all road deaths (54 percent) victims are poor, with pedestrians accounting for almost half of these deaths, mainly due to lack of adequate pedestrian infrastructure. Road crashes also affect the poor rural families disproportionately with a greater percent of them falling into economic distress than others.[10]- These underscores the economic losses associated with inaction for countries that fail to move beyond the status quo. A long-term commitment and sustained vision from the highest level of Government of Bangladesh (GoB) including investment in effective road crash fatality and injury prevention will contribute to the accumulation of human capital in Bangladesh, which in turn will contribute to sustainable and inclusive economic growth and overall country well-being.

6. Investing in road safety and motorization management would have climate Co-Benefits as Bangladesh is highly vulnerable to the effect of climate change and health hazards. Bangladesh is ranked as the sixth most vulnerable country (of 181 countries), according to the 2018 United Nations Disaster Risk Index. The country's high population density and rapid urbanization make it prone to high rates of morbidity from outbreaks of infectious diseases, such as cholera, dengue fever, and possibly the evolving COVID-19 crisis. Overall, a large section of the population is at risk of health emergencies, including those due to outbreaks of infectious diseases that typically follow natural disasters. The frequency of such disasters is higher in the Southwest region compared to the rest of the country, since the region is more vulnerable to cyclones[11], tidal surges, waterlogging, flood, drought and salinity.

Sectoral and Institutional Context

7. The GoB in recent past has shown commitment and renewed interest to address road safety. While road safety statistics in Bangladesh have been a concern for several decades, citizen's demand through a grassroot movement for stronger political ownership on this agenda and urgent action to improve road safety was evident during a series of public *protests in 2018.* This led to a subsequent inclusion of road safety in the political campaign of 2019 elections by various parties (including the ruling party) and has set up a favorable and positive context for road safety interventions in the country. The resulting media attention and strident advocacy by civil societies on the issue have prompted a demand for broader reforms in the overall management of the transport sector to address road safety. In response, a new Road Transport Act, with substantial focus on road safety, came into effect on November 2019 replacing the old Motor Vehicle Ordinance of 1983. The new Act mandates stricter punishment for traffic offences, greater accountability from the operator and designer for safety performance, and increased enforcement of road safety behavior through deployment of mobile courts. The World Bank has been supporting GoB's initiatives including through a high-level event on road safety, organized in partnership with UN agencies and FIA to advocate for road safety action, which mobilized significant interest from the Government at the highest levels.

in the design of awareness raising campaigns.

[9] Peters D. Gender Issues in Transportation: A Short Introduction. In UNEP Regional Workshop Deals on Wheels: Sustainable Transportation Initiatives in Developing Countries. San Salvador: The Institute for Transportation and Development Policy (ITDP); 1999.

[10] About 70 percent of poor rural families suffering from a road death saw their income decrease compared to 50 percent for nonpoor rural families. In the case of seriously injured victims, fewer rural poor were able to return to their job (56 percent vs. 75 percent of non-poor) and spent on average twice as many days searching for a new job than non-poor. See Aeron-Thomas et al (2004). The involvement and impact of road crashes on the poor: Bangladesh and India case studies. TRL Limited. July 2004.

[11] Between 1960-2015, 19 severe cyclones hit the country's coast.

8. A rudimentary road safety management structure exists in Bangladesh, but it is not yet empowered and accountable to achieve positive outcomes. The responsibility of establishing a strategic vision for road safety in Bangladesh lies with the National Road Safety Council (NRSC) that was established in 1995 under a WBG project with the Roads and Highways Department (RHD). The NRSC, which is now hosted by the Bangladesh Road Transport Authority (BRTA), is responsible for the planning, management, and coordination of road safety in the country. It comprises representatives from all key agencies and stakeholders, including BRTA, police, road authorities, transport owners, workers' associations, and professionals in the field. Since 1997, the NRSC has been preparing two-year National Road Safety Strategic Action Plans (NRSSAP), with the eighth, three-year plan (2017–2020) aiming to reduce fatalities by half. The NRSC in 2019, constituted a high-powered committee on disciplining the road sector and reducing crashes focusing on multi-sectoral implementation and road safety management[12]. However, the plan has some drawbacks: its targets are not scientifically set; funding for proposed activities is lacking or inadequate; the proposed activities are not well aligned with priority needs in terms of maximizing road safety gains, and in some cases the timelines set for their achievement are unrealistic.

9. Nongovernmental voluntary and advisory groups in Bangladesh are very active in road safety at the national level. NGO's, including BRAC (Building Resources Across Communities), Centre for Rehabilitation of the Paralysed, Nirapad Sarak Chai, Work for Better Bangladesh, Safe Community Foundation, Poribesh Bachao Andolon, and the Safe Road Movement, primarily undertake community road safety programs and training; road safety research, publicity, and awareness campaigns; driver training; and treatment and rehabilitation of paralyzed road crash victims. A Safe Roads and Transportation Alliance has also been formed to advocate for road safety issues. In terms of research capacity and technical advisory to the government, the Accident Research Institute (ARI) at Bangladesh University of Engineering and Technology (BUET) was established in 2002 to carry out scientific safety research and ascertain underlying causal factors for roads, railways, and waterway system failures. TraumaLink an NGO provides bystander care to road crash victims through a network of volunteers in three major highways.

10. Poor quality and unreliable data on crash deaths and injuries impede proper road safety management. The current system of recording, analyzing, and reporting crashes in Bangladesh is cumbersome, error-prone, time-consuming, and unfit for analysis and benchmarking. Crash data are recorded by local police on Accident Report Forms and sent to BRTA via police headquarters for recording into the MAPP5 (Microcomputer Accident Analysis Package) database. The MAAP5 software is antiquated with many shortcomings. Currently, the Bangladesh Police database is the only source of crash fatality data. Police data show irregular and unreliable year-on-year changes, indicating incompleteness and a lack of consistent procedures. Poor coordination between the ministries and weak internal organizational capacity result in crashes not being recorded and consequent underreporting of fatalities and injuries. A more comprehensive and flexible system, DRIVER (Data for Road Incident Visualization, Evaluation and Reporting), is being piloted in Dhaka and could provide insights into future improvements. The proposed Asia-Pacific Road Safety Observatory may also provide expert assistance to countries in Asia and the Pacific by facilitating shared crash data collection and analysis practices and promoting the design of effective fatality and injury reduction measures

11. Unsafe and under-invested road infrastructure remains one of the key risk factors for road safety in Bangladesh. Current infrastructure designs in Bangladesh are functionally unsafe given the complex mix of differing vehicle masses and speeds and preponderance of vulnerable road users. A new design focus is required that more specifically addresses not only the demands of through-traffic, but also those of the local communities being served by roads. Current annual death rates on highways are close to one death per km per year which is alarmingly high compared to international standards[13].

[12] The committee recommended 111 actions including: road user safety awareness and education programs using a variety of media; public transport user and driver safety; safer public transport route franchising and driver employment conditions; promotion of motorcycle and cyclist safety helmet use; safer pedestrian infrastructure including safety railings, rumble strips and raised pedestrian platforms at busy intersections; removal of roadside market encroachment to improve pedestrian access and safety; safer road signs, markings and lighting; improved driver licensing procedures; the establishment of a road safety authority and improved safety data collection; and the establishment of a road safety fund to ensure adequate resourcing of proposed actions and their monitoring and evaluation

[13] Annual fatalities per kilometer on two key road corridors – Jessore-Kanchpur and Kanchpur-Akhaura – averaged 0.40 and 0.98, respectively from 2014 to 2017.

International Road Assessment Programme (iRAP) pilot assessments on the N2 and N3 highways, and on the Dhaka-Aricha road (a section of N5) in 2010 revealed that most sections were rated at only one or two stars for pedestrians, bicyclists, and motorcyclists, indicating high safety risks for vulnerable users. iRAP assessments on a further 1,370 kilometers of roads (under an ADB financed project) in 2013 highlighted that more than three quarters of the assessed roads were rated one or two stars for all road users. Risks are elevated by narrow road cross-sections and recurrent roadside hazards, with dangerous concentrations of crash deaths being evident, far in excess of good practice country performance outcomes.[14]

12. Nearly 40% of road crash fatalities in Bangladesh are in urban areas. Almost half of urban crash fatalities occurring in the Dhaka metropolitan area, with other metropolitan cities accounting for another 30% of fatalities.[15] Detailed 2016 – 2018 crash data for the Dhaka metropolitan area compiled from newspaper reports indicates that buses were involved in around 50% of crashes resulting in fatalities.[16] This underlines the need for systematically addressing road safety and broader bus operational issues in urban metropolitan areas. The low but rapidly growing rates of motorization[17] provides the best crude marker of what to expect in future road safety terms, and unless rapid, scaled-up road safety investments are made, the upward trend in fatalities and injuries would continue.

13. As vulnerable road users, considering women's needs for safer roads in terms of prevention of sexual harassment in public transport spaces, and improved infrastructure designs can substantially reduce gender gaps in mobility.[18] Women's experience of mobility and thereby road safety is different from that of men as it includes higher risks of sexual harassment in public transport spaces, and road infrastructure designs or services that do not reflect their needs. Women are under high risks when using public transport and urban roads, 21% of women perceive sexual violence occurs at the places of vehicles/roads/streets as showed in Bangladesh Bureau of Statistics in 2015.19 One survey conducted by Action Aid revealed 84% of Bangladeshi women experienced staring, deliberate touching, groping, and sexual comments while travelling.[20] Therefore, sexual violence on public transportation is a key safety issue that limits women's mobility in Bangladesh.[21,22,23,24] Improving the gender-related road safety in urban area can substantially enhance women's mobility and expand their economic opportunities. **Meanwhile, studies found that the travelling pattern are different between men and women**: (i) more women than men have no mode of transport available besides walking; (ii) more women than men are dependent on public transport; (iii) women are less likely than men to have access to motorized transport modes; and (iv) women are less likely than men to use bicycles or other intermediate transport modes. Focusing on the different needs of the population can tackle the road safety issue more effectively and efficiently.

14. Speed management is a vital safety priority that must be addressed through policy considerations across infrastructure, vehicle, and road user pillars. While average daily speeds for trucks and buses are low (around 30 kmph or less) in Bangladesh, road corridors are far from safe: Risks arise from the large speed differentials between vehicle types and the disparities between the masses of heavy and light vehicles and pedestrians. While average speeds are low, there is a wide difference between the maximum and minimum speeds, which indicates dangerous speeding behavior. Excessive

[14] World Bank Group (2019), 'Investing in Road Safety in South Asia. Priorities in the Eastern Sub-Region: Bangladesh, Bhutan, India and Nepal', Washington DC.
[15] Rahman Md M (2018), 'Urban Road Safety and Traffic Management: Introduction and Issues', Accident Research Institute, Bangladesh University of Engineering & Technology, Dhaka.
[16] Accident Research Institute, Bangladesh University of Engineering & Technology, Dhaka.
[17] 250% increase from 2014 to 2017.
[18] Seen in Footnote 8.
[19] Bangladesh Bureau of Statistics (BBS). (2015). Report on violence against women survey.
[20] Arzua, G., Carroll, K., Colbourne-Hoffman, R., Goslawska, A., Hasan, N. F., Kinoti, W.,...Chibok, T.Sexual Violence on Public Transportation: A Threat to Women's Mobility in Bangladesh.
[21] An overcrowded bus or an empty train might provide the opportunity for the perpetrators to grope, sexual exploit, or rape. Hoimonty Mazumder & Bishant Pokharel. 2018. Sexual Violence on Public Transportation: A Threat to Women's Mobility in Bangladesh.
[22] Ceccato, V. (2017). Women's transit safety: Making connections and defining future directions in research and practice. Crime Prevention and Community Safety,19(3),276–287.
[23] Ceccato V., Wiebe, D. J., Eshraghi, B., & Vrotsou, K. (2017). Women's mobility and the situational conditions of rape: Cases reported to hospitals. Journal of Interpersonal Violence.
[24] Natarajan, M. (2016). Rapid assessment of "eve teasing" (sexual harassment) of young women during the commute to college In India. Crime Science,5(1), 6.

truck and bus speeds on Bangladesh roads, with recorded maximum speeds of up to 90 kilometers per hour or more going far beyond the safety threshold of the infrastructure provided, exacerbate their safety risks. High maximum speeds are also evident for other vehicle types, especially two-wheelers and cars, which explains the high concentrations of corridor road crash fatalities and injuries. Even though the prevalence of higher speeds is low, risks are elevated on roads with narrow cross-sections and recurrent roadside hazards.

15. Enforcement capacity and resources for road safety are limited. In 2005, the Highway Police was established in Bangladesh to patrol highways, enforce traffic rules and regulations, manage traffic, prevent highway crime, and investigate crashes. To achieve these goals, the Highway Police work under two units—the Traffic Unit and the Investigation Unit. Their functions and scope of engagement are limited as the government is yet to pass the Highway Police Bill. As such, the Highway Police has no executive power to prosecute violators. Most of its staff is on deputation from the Bangladesh Police, invariably short of qualified and capable manpower; logistics and equipment, including unavailability of vehicles; and other transport facilities, which affects its mobility[25]. As such, it has been primarily engaged in awareness programs for school children, driver training programs, and the coordination of meetings with public transporters and other stakeholders[26]. Awareness raising campaigns on sexual harassment in transport and setting protocols is urgently needed. Approximately, 60%–80% of sexual assault have never been reported to the police due to fear of subsequent victimization by police or society rather than perpetrators.[27]

16. Vehicle regulations and inspections are inadequate to cater to the rapid growth in vehicle ownership. Nearly all the vehicles in Bangladesh are imported, new ones from China, India and South Korea, and the reconditioned ones from Japan.[28] Current regulation requires that imported used cars be less than four years old and adhere to the emission standards but no performance-based standards on road safety are mandated. Motorcycles, after initial registration are neither required to renew any certificate for 10 years nor to report any change of ownership. All motorized vehicles are liable for annual inspection and road tax except for motorcycles and private cars that are less than 5 years old; such inspections are done visually for about 60 different aspects by Inspectors of Motor Vehicles (IMVs) at 70 manual testing centres. Lack of technological knowhow and trained personnel are key constraints in introduction and operation of automated vehicle inspections[29] - there is just one semi-automated fitness testing centre at Mirpur. GoB plans to have 21 automated centres for testing both fitness and emissions within the next 5 years[30] – this reportedly includes rehabilitation of four of the five original Vehicle Inspection Centres (VICs) established two decades ago.[31] These are sorely needed as about 3,000 new vehicles are registered every day in Dhaka alone, with very few IMVs to examine their fitness. The mismatch of supply and demand in vehicle inspections has reduced the exercise to a mere formality. According to the BRTA, in 2018 more than 55,000 vehicles didn't have the vehicle fitness certificate renewed for more than 10 years; the number of unregistered vehicles in Bangladesh is around 1.5 million[32].

17. Post-crash care systems in Bangladesh are at a nascent stage of development. Post-crash care is a continuum of activities involving efficient pre-hospital care systems, appropriate hospital-based care and adequate rehabilitation services. There is no formal pre-hospital emergency response system for road crash victims in the country. There are no laws or policies in place that protect bystanders who provide care to crash victims, from civil or criminal liability. There are multiple numbers to access emergency care[33], but the effectiveness of these is not known. Ambulances are operating in a disjointed and scattered way and at best provide limited coverage. According to the Bangladesh Health and Injury Survey

[25] Mahmud, S.M. Sohel, Md. Shamsul Hoque, and Abdus Shakur Qazi. 2009. "Road Safety Problems in Bangladesh: Some Major Initiatives, Constraints and Requirements." *Transport & Communications Bulletin for Asia and the Pacific*, UNESCAP
[26] Ahmed, Imtiaz. 2016. "Road Safety Situation in Bangladesh." Presentation by Bangladesh Police, Seoul.
[27] Loukaitou-Sideris, A. (2014). Fear and safety in transit environments from the women's perspective. Security Journal,27(2), 242–256.
[28] Revisions of Vehicular Emission standards for Bangladesh, Draft Final Report, CASE Project, December 2012
[29] EST for Resiliency – Building Safe, Smart, Low-carbon and Resilient Cities in Asia, Bangladesh Country Report, November 2015
[30] Current road safety scenario in Bangladesh, Imitiaz Ahmed, Seoul, July 2016
[31] Project Completion Report, Southwest Road Network Development Project, Asian Development Bank, July 2007
[32] According to a survey of the Bangladesh Passengers' Welfare Association (BPWA)
[33] The national emergency number is 999 and the health center number of the Directorate General of Health Services (DGHS) is 16263

2016, two-thirds of all road crash victims die on the way to hospital and three-fourths do not receive any form of pre-hospital care. Currently, less than 10 percent of all seriously injured crash victims in Bangladesh are transported by ambulance to their first point of emergency care. Essential trauma care is provided in large tertiary care hospitals and medical colleges. Primary and secondary care facilities do not have adequately trained human resources or equipment and supplies for essential trauma care. There is no emergency room-based injury surveillance system, and no system of trauma registries to monitor quality of trauma care.

18. Poor road safety performance in Bangladesh is a symptom of underinvestment in targeted initiatives. General tax revenues provide the only source of sustainable funding for road safety in Bangladesh, allocated to the road safety units at Roads and Highways Department (RHD), Bangladesh Road Transport Authority (BRTA), and the police through their respective ministries. However, this funding is insufficient and not prioritized. Insurance companies do not contribute significantly to road safety. Several private organizations and NGOs support road safety activities through donor and multilateral development bank assistance, but in an uncoordinated manner. Funding sources for road safety action plans have never been institutionalized. A recent WB analysis suggests that Bangladesh will require an estimated additional investment of US$7.8 billion over the coming decade to achieve the Sustainable Development Goal 3.6 target of halving its road crash fatalities.

Relationship to CPF

19. The proposed program is fully aligned with twin goals of ending extreme poverty and boosting shared prosperity as well as the Bangladesh Country Partnership Framework (CPF) FY2016-2020[34]. The program will primarily contribute to the **CPF Focus Area 1[35] Objective 1.2** Improved transport connectivity by rehabilitating the entire national highway (NH) and regional highway (RH) networks, and related mass action treatments, especially on high risk corridors, major and minor junctions, bazaar areas, locations connecting feeder roads to these highways and at railway crossings in Bangladesh. The program will also contribute to **Focus Area 2 Objective 2.2[36] by improving pre-hospital and hospital-based emergency care. This will help avoid preventable death and disability and limit the severity of injury and reduce catastrophic health expenditures for road crash victims, the large majority of whom are from poorer sections of society**[37].

20. The project is well aligned with all four thematic pillars of the World Bank Group crisis response. The project is expected to reduce crash related fatalities and injuries, which will free up beds and provide redundant critical care capacity of health facilities for effective management of COVID-19 cases. It will establish a system of mobile emergency medical services accessible through a toll-free number with dedicated ambulances for transportation of crash victims and COVID patients. It will also strengthen emergency department of district hospitals and Upazila Health Complexes (UHC) with triaging protocols and negative pressure isolation rooms for management of crash victims and suspected COVID patients. All these efforts will help save lives threatened by the virus. The long-term road safety engagement will support strengthening policies, institutions and investments for resilient, inclusive and sustainable recovery by rebuilding better and saving lives.

[34] Report No. 103723-BD, discussed at the Board on April 5, 2016.
[35] CPF Focus Area 1.2: Improved transport connectivity
[36] CPF Focus Area 2.2: Improved access to quality maternal and infant health services (including reduction in injuries and catastrophic health expenditures)
[37] SCD Box 11 Economic and poverty impact of safer roads: In Bangladesh, the poor were involved in over half of all road deaths (54 percent), with pedestrians accounting for almost half of these deaths.

C. Proposed Development Objective(s)

21. The Program Development Objective (PrDO) is to build road safety management capacity and achieve targeted reduction in traffic fatalities and serious injuries in Bangladesh.

Key Results (From PCN)

Proposed MPA Program Development Objective (PrDO)

22. The Program Development Objective (PrDO) is to build road safety management capacity and achieve targeted reduction in traffic fatalities and serious injuries in Bangladesh.

Program Outcomes

23. The PrDO will be achieved over a 10-year period through a two-phase MPA program, starting with Phase 1 ("the project"). Key PrDO indicators are as follows, the base line and end targets will be identified during preparation.

a. National Road Safety Strategy adopted, and budget allocated for a multi-year investment plan by the GoB;

b. Sustained reductions in annual road crash deaths and serious injuries measured on the National Highway network over a duration in 10 years;

c. An inter-ministerial coordination secretariat for the National Road Safety Council established and fully operational;

d. Accident Research Institute (ARI) developed into a national road safety Center of Excellence (CoE) to oversee research and advisory functions to the GoB, including monitoring of results for the National Road Safety Program;

e. A robust national crash data management system established to support evidence-based policy actions and monitoring of existing programs;

f. Improved pre-hospital services and emergency care services in selected jurisdictions indicated through availability of free ambulance services accessible through a toll-free number and hospital-based emergency care in district hospitals and Upazila Health Complexes (UHC) along the national and rural highways;

g. Increased proportion of vehicles complying with vehicle inspection and certification facilitated through scale-up testing facilities.

Program Results Chain

24. The proposed program will address following long-standing road safety challenges in Bangladesh:

a. Weak road safety management and coordination among agencies in terms of planning, implementation, and monitoring road safety interventions;

b. Lack of sustainable financing for ensuring road infrastructure safety, vehicle safety, users' safety & enforcement and Improved post-crash care; and

c. Lack of training and capacity among agencies on road safety.

D. Concept Description

Description

25. The proposed MPA is aimed at supporting the GoB's road safety agenda through a long-term investment strategy that is supported through a functional and empowered institutional structure for road safety management to implement prioritized interventions by key stakeholders under the purview of a national road safety program. The programmatic approach under the MPA will be carried out in two phases – the phase one project aimed building institutional capacity and coordination through a series of multi-sectoral pilot projects, and further leveraging the coordination among the relevant stakeholders to design and prepare a long term strategy and investment plan at the national level. A phase two project is envisioned in the form of a PforR instrument to directly support the GoB's National Road Safety Program expected to be operational and ready to be implemented with the 3 years of the start of the MPA. Further details on the MPA phasing is described in the following section.

26. The first project as mentioned above has three distinct focus: 1) implement multi-sectoral road safety projects on a pilot basis to help build capacity of agencies to work together, demonstrate the effectiveness of institutional management and coordination and further developing this as a basis for a national instructional framework; 2) financing prioritized investments for each of the implementing agencies as per their individual short to medium term action plans;; and 3) providing technical advisory to the government stakeholders in terms of preparation of a national road safety program with adequate support for management, developing investment plans and monitoring of the program. The above objectives form the basis of the three distinct components which will be financed under the first projects as described below:

27. **Component 1: Multi-sectoral Road Safety Pilot Projects:** Safe-system based road safety pilot projects are designed to demonstrate effectiveness of multi-sectoral interventions, coordinated and supervised under the aegis of a dedicated institutional body, on a high-risk, high-visible section of the network, for targeted reduction in road deaths over the project period. These measures will be independently monitored through research institutes (e.g., ARI) over the project period to determine the change in road safety outcomes, so that they can possibly be replicated over wider-geographical area through greater coordination between all stakeholders, and eventually scaled up country-wide. It is proposed to carry out three distinct pilot projects, one for selected corridors from the National Highway network, a second pilot on multi-faceted urban road safety program focusing on vulnerable road users, and a third pilot to develop capacity and implementation of road safety at district level. Further details about the pilot projects as conceptualized are described below.

a. **National Highway Safe Corridor Demonstration Project:** Based on on-going TA work on road safety assessment of the highway network, a strategically important high-risk corridor section (50 km to 70 km) would be identified where recent infrastructure safety improvements based on recent surveys have been carried out. The key engineering interventions would include minor civil works and installation of road safety treatments as needed, including provisions for parking and repair of vehicles and physical traffic calming measures. These would be supplemented by targeted enforcement programs coupled with awareness campaigns on the selected sections. The component will finance equipment to modernize the enforcement capacity of the traffic police and highway patrol to manage speeding, axle-load control and to deter risky road user behavior through a combination of automated enforcement systems (CCTV and control room, and electronic messaging) and physical (traffic calming, weigh stations) measures. The activity will finance formulation and execution of complementary targeted programs to enhance driver/user awareness combined with enforcement drives. Post-crash care will be bolstered by deploying basic life support (BLS) ambulances manned by trained personnel along the selected highway corridor to transport crash victims to the nearest trauma care facility. This service will be available free of cost and accessible through a toll-free hotline. The project will foster community engagement for providing on the spot bystander care to crash victims in collaboration with local NGOs. This component will augment the hospital-based emergency care in district hospitals as applicable in the vicinity of the selected highway corridor. This would include augmenting both human resources and training and physical resources such as infrastructure, equipment and supplies as per

standards laid out in WHO essential trauma care guidelines.

b. **Urban road safety pilot project**: Given the distinct nature of road safety challenges in the urban environment along with the complex institutional arrangements, a separate urban road safety pilot project is proposed for the Dhaka Metropolitan Area. The objective of the urban pilot will be to primarily strengthen the capacity of DTCA in overall planning and coordination of safe urban mobility needs and DNCC/DSCC. For oversight and implementation of the interventions planned under the pilot project, a Road Safety Working Group (RSWG) would be formed comprising representatives from both Dhaka municipalities, Dhaka Metro Police, health authorities and transport service providers. A reasonable area/neighborhood or an urban arterial within DNCC/DSCC jurisdiction will be chosen for demonstration of the safety pilot project. The area/arterial will be screened and analyzed in terms of land use, demography, existing infrastructure, ongoing development works if any, traffic composition, traffic demand, traffic growth, socio-economic trends etc. by the RSWG (aided by a panel of experts and consultants)for identifying type of interventions, and timeline for implementation. The focus/principles of planned treatments to be will be as follows:

(i) Complete streets: This approach will encompass street activities on Dhaka streets. A small network will be taken up for demonstrating the safety, mobility, transport choice and health benefits offered by this design principle, and suitable designs such as road diets and street furniture where applicable to accommodate all road users including provisions for speed calming. Proper emphasis will be given on training, education and resource development for DTCA, DNCC/DSCC and the engineering community to replicate this on other city streets. Consultations with women, people with disabilities and other vulnerable road users will be carried out to contribute to inclusive infrastructure design.
(ii) Pedestrian safety: The program will strive for safe infrastructure, regulation, enforcement, and education of all road users. Major considerations for the pedestrians, particularly women, would be to ensure that the sidewalks are adequate, continuous and segregated from motorized traffic for current and future demand. Cross walks would be designed to ensure high visibility by both drivers and pedestrians through proper signage, use of raised pedestrian crossings, pointed and textured pavements and awareness campaigns Regulatory changes and enforcement mechanisms will be explored to ensure that the new installations are respected by the road users. The lessons will be documented for scaling up pedestrian friendly road improvement in Phase 2. Gender safety will be incorporated in the safe road infrastructure, such as street lighting (as known impact on women's safety) will be installed as part of the safer roads. Moreover, the movement patterns, safe sidewalks, short block lengths will be adopted to meet women's needs, hence, to improve their mobility.
(iii) Bicycle safety: To promote and enhance safety of bicyclists, this pilot involving the creation of exclusive bicycle lanes will be explored and implemented in a few urban clusters selected in consultation with the stakeholders. A set of safety interventions would be implemented to create a network of roads to be developed for the bicycle users possibly around a specific traffic generator (e.g. adjacent roads around a market or school or community recreation center). It may involve widening the paved road, sidewalk installation, painting, sign installation, streetlights provision, intersection modifications, bicycle parking facility etc. Relevant standards, specifications, design manuals etc. will be developed and training will be conducted for the government agencies to scale up the cycle lane pilot in other candidate areas in Phase 2. Required regulatory changes to ensure safety of drivers and bicyclists, and awareness campaign will also be explored and supported.
(iv) Bus safety. Safety improvements will also incorporate safe bus operation, especially through provision of bus stops, bays and adequate space for bus pick-up and drop-off on roads, adequate turning movements at junctions and safety arrangements in the vicinity of ongoing mass transit projects on City roads. Studies may also be conducted to ensure improved bus route planning and operation, to ensure commuter and pedestrian

safety. Such studies will assess the specific needs of women.

(v) Bystander care and bike ambulances. In the demonstration areas chosen within the DNCC/DSCC, on the spot bystander care would be provided to crash victims in collaboration with local NGOs. Given, the traffic congestion in Dhaka city and the delayed ambulance response time, bike ambulances will be deployed at optimal locations in the demonstration to provide medical support within minutes of the crash. These bike ambulances will be manned by trained emergency medical technicians and equipped with kits to stabilize crash victims till ambulances reach the crash spot. The voluntary bystander care training will engage more women to enhance their visibility, increase your social value, and improve their social status, hence, to increase their social influence. The bike ambulances will be provided free of cost and accessible through a toll-free hotline that is linked to a call center. Also, exclusive ambulance lanes will be earmarked in major roads of the demonstration area for rapid movement of ambulances.

(vi) Rickshaw and NMT safety: To enhance the safety of rickshaw and NMTs present in Dhaka, design modifications will be explored and suggested. Additionally, NMT route analysis will be conducted to understand safety impact on the route planning and NMT lane addition where applicable. Exclusive bicycle and NMT network may also be explored around schools, market areas and other local traffic generators.

(vii) Parking Management – Demonstrate better parking management and develop citywide parking policies and capacity building of the DNCC/DSCC.

c. District Road Safety Initiatives: This pilot is aimed at district-level ownership and utilization of funds of road safety interventions often difficult to be managed at the central level. Two or three districts with the highest fatality rates would be selected for intensive road safety treatments. These would include a combination of treatments listed in #a through #c above including corridor enhancements, local area safety improvements and NMT improvements, improved bystander care and first responder training and training for hospital staff. Capacity of District Road Safety Committees would also be developed to enable them to identify, prioritize and implement effective and evidence-based road safety interventions in their jurisdictions.

28. Component 2: Priority Road Safety Investments: This component is envisioned to finance stand-alone priority activities for the individual department based on their mandate as per the provisions of the recently enacted Road Transport Act. The implementation arrangement for these activities will reside with the respective departments with the PIU set-up proposed in the project. The key implementation activities under this component will include:

a) **Vehicle Inspection Facility:** This component will finance: i) establishment of automated vehicle inspection and certification centers in each district (to complement GoB's plan to establish 21 such automated centers in the next 5 years) to improve the framework for vehicle inspection and related compliance; ii) improving driver training, testing and licensing systems and facilities. Public private partnerships in establishment and operation of these facilities may also be explored[38].

b) **Vehicle and Licensing**: This component will finance: i) review of the existing vehicle regulatory framework and standards, ii) revisions to existing manuals (such as the road signal and driving testing manual) and establishing guidelines for BRTA to conduct crash investigation of vehicles; iii) capacity and training for BRTA officials and (iv) integrating the existing isolated online information systems/services (vehicle information, driving license information), into one system that is compatible with the proposed crash database system.

c) **Infrastructure Safety Mass Action Programs**: Road safety mass action treatments on selected highway corridors, including minor civil works and installation of road furniture, signage and markings, especially on high risk corridors, minor junctions, bazaar areas, locations connecting feeder roads to these highways and at railway

[38] Such facilities are being set up increasingly in neighbouring countries such as India, where government typically provides the land, while the private entity develops the facility and operates it in return for a portion of the fitness certification and training fees for a set period.

crossings. This component would finance: (i) systematic road safety surveys and assessments (using iRAP) of the national highway (NH) and regional highway (RH) networks, totaling about 8,000 km, selected based on analysis of existing crash data; (ii) setting up a system of RSA accreditation/certification; iii) development of pre-construction, construction-stage, and post-construction RSA manual and update design standards; iv) strengthening RHD's road safety unit with adequate training and resources to enable it to routinely conduct in-house RSA and evolve road safety interventions periodically..

d) **Crash Data Systems and Traffic Management:** The component will seek to create tools with the primary aim of reducing unlawful traffic behavior on the road and facilitating better deployment of enforcement and post-crash care resources; it will help develop a comprehensive database that will enable determination of spatial and durational distribution of crashes for prioritizing infrastructure safety improvements. Specifically, this component will help: (i) assess technical and other resource requirements for collection, recording, visualization, and detailed analysis of crashes; (ii) channel adequate resources to ensure robust data collection, storage, analysis, usage and management; (iii) establish the minimum crash data set and mechanism for its collection across the entire country; (iv) in capacity building and training in data capture, analysis and crash investigation; (v) enhance inter-agency collaboration and between government agency and research organizations to enhance utilization of data; and (vi) pilot an Intelligent Traffic Monitoring and Incident Detection System.

e) **Trauma Registry and Trauma Quality Improvement:** This component will implement trauma registries and trauma quality improvement programs (TQIP) in district hospitals in four districts with significant road traffic injury burden based on WHO Injury Surveillance and TQIP guidelines. The aim of this component will be to improve injury surveillance and improve quality of hospital-based trauma care.

f) **Enforcement Improvement:** This component will strengthen traffic enforcement capacity of the Highway Police through financing patrol vehicles, equipment and IT systems needed.

g) **Safety of Public Transport:** This component will finance investments needed by Bangladesh Road Transport Corporation to better manage their fleet; imparting targeted training to Bus drivers on road safety; and infrastructure and services required to respond to COVID 19 situation.

29. **Component 3: Technical Assistance:** This component will focus on building technical capacity building for all departments and implementing agencies towards establishing a fully functional National Road Safety Program with targeted vision and concrete investment plans to execute short, medium and long activities across all sections. It is envisioned that the successful achievement of this component would be a trigger for the readiness of the next phase of the MPA as a PforR project based on this national program. The TA components would include:

a) **Strengthening Capacity for the NRSC and key stakeholder departments:** This component will strengthen the existing institutional arrangements, and the role of the NRSC, to coordinate and manage the national level road safety program across relevant ministries. Specifically, it will provide resources for developing a national road safety policy, strategy and comprehensive national road safety program/action plan; setting up the National Program Coordination Unit (NPCU) at the national level and Project implementation units (PIU) at Ministry of Health and Family Welfare and Ministry of Home (Police); technical support for implementing the proposed activities; analysis of existing crash data; and training and capacity building of the NRSC, the NPCU, PIUs and staff at key stakeholder departments (RTHD, BRTA, DTCA, Bangladesh Police and Health Directorate). It is expected that the support would enable the NPCU to flesh out the activities under the road safety program over the succeeding phases. The capacity building for the road safety stakeholder departments will incorporate training on the Environmental and Social Framework as they relate to activities on improving safety outcomes.

b) **Preparation of a National Road Safety Strategy and Investment Plan:** In order to operationalize the National Road Safety Program, it is critical for all relevant departments to build consensus and adopt a long-term strategic plan on road safety. The national strategy would be endorsed at the highest level, preferably by the PMO in coordination with the respective ministries. The project would finance the development of this national strategy and further develop 3-4 years investment plans for prioritized set of actions for each of the implementation agencies. The objective of the investment plans is to consolidate the current fragmented NRSC action plan and also develop the business case for sustainable funding the action as part of the National Road Safety program.

c) **Guidelines for speed setting:** This component will seek to establish and ensure compliance to safe speeds for specific road types. It will: (i) screen a representative sample of roads to inform the safe design speeds and speed limits for various types of roads - expressways, rural highways, urban highways, zilla roads, upazilla roads - under different settings; (ii) stipulate design speeds and safe speed limits for school zones, market areas, horizontal curves etc.; (iii) develop manuals, standards, methodology and provide necessary training to ensure that the stakeholders can set up rational posted speed limits; (iv) review highly visible speed limit signs that are to be used, their spacing, specification, rate of compliance in terms of speed limit and specify changes for enhanced visibility and compliance by users; (v) educate and conduct awareness campaign to let the drivers and all stakeholders know about speed limits; (vi) review relevant laws and enforcement mechanism, resource needs and determine how speed limit compliance can be achieved by combining patrolling with electronic enforcement; (vii) develop national roadmap and timetable to ensure that the key areas of the entire road network is categorized in terms of rational speed limits, and adequate signage is installed gradually.

d) **Guidelines for intersection control**: Based on global best practice, this component will develop design and traffic movement guidelines and signage requirements for at-grade intersections without access control. It will help develop the criteria/warrants for signalized intersections. Associated regulatory changes to define lawful traffic movement, specifications, manuals, handbooks etc. will be developed along with an implementation roadmap for upgrading selected uncontrolled intersections to signalized ones.

30. **Component 4: Contingent Emergency Response:** This component will improve the GoB's ability to respond effectively in the event of an emergency in line with WB procedures on disaster prevention and preparedness. Following an eligible crisis or emergency, the Recipient may request the Bank to re-allocate project funds to support emergency response and reconstruction. This component would draw from other project components to cover emergency response.

MPA Program Phases

31. As outlined in best-practices for road safety management in low-capacity settings[39], the sequencing of road safety investments is critical as road safety management capacity weaknesses present a formidable barrier for country's capacity to reap safety outcomes from investments. Therefore, a long-term investment strategy must be designed to overcome inherent capacity weaknesses by first establishing a core capacity to bring safety outcomes under control, under the *Establishment Phase*, by means of implementing targeted high-risk demonstration projects, in corridors and urban areas, and take up high priority reforms and investments. Subsequently, in the *Growth Phase* of investment, the focus should be on scaling up comprehensive multi-sectoral measures with the goal of realizing national targets. This is the key principled approach based on this the MPA phasing has been designed in the current program

32. The first phase of the MPA, proposed as a five-year IPF project, is aimed at developing institutional and

[39] Bliss, A.B., Breen, J., (2013) Road Safety Management Capacity Reviews and Safe System Project Guidelines, Global Road Safety Facility.

coordination capacity with the short term goal of adopting and roll out of a government-owned road safety program aligned with a long-term strategy and investment plans that strategically prioritize the current action plan formulated by NRSC. The institution and coordination under the first phase project will be supported through a series of pilot demonstration projects allowing different stakeholder to coordinate their efforts on a single project to demonstrate the positive road safety outcomes. Along with the pilot's investments, the capacity strengthening will be supported through a comprehensive Technical Assistance for development of national crash data management system, traffic management systems including bus route planning , crash data systems, trauma registry and trauma quality improvement programs as enablers to the broader road safety program. Finally, the first phase project will also support the GoB with the preparation of the National Road Safety Program, training of officials and necessary technical advisory services to implement the program.

33. The second phase project will build on the outcomes achieved in terms of GoB's readiness to a launch the National Road Safety Program by end of year 3 of the MPA. At this stage it is proposed a results-oriented and targeted implementation is introduced in the MPA, with PforR as a suitable instrument over a period of 6 to 7 years. The objective of the second phase project would be to implement the national road safety program and the strategic action plans across all sectors with the scaling up of pilot initiatives at the provincial or national level. While the first phase of the MPA will have a more significant contribution on the upstream institutional capacity building and technical assistance, the same component will be continued in the second phase but with greater emphasis on supporting the operational aspects of the road safety program. The outcomes of the second phase are expected to reduce significantly on traffic deaths and serious injuries in prioritized high-risk areas selected under the project.

34. Considering the complex road safety challenge and large financing needs for the proposed Program and associated risks, the proposed MPA would serve as a catalyst platform for a multi-sectoral engagement between agencies toward an integrated approach to road safety, incorporating the safe system approach, through the initial program phases. Preparation of succeeding phases will commence subject to satisfactory performance and achievement of key milestones under the preceding phase in addition to readiness of implementing agencies. The degree of overlap between the phases will depend on the readiness and implementation progress of preceding phases. The phasing has been designed to progressively tackle the road safety challenge systematically – for instance, phase 1 would primarily involve program set up, preliminary assessments, studies, formulation of strategies, revision of codes/manuals, designs for roads and vehicle facilities, development of tools, pilot investments in all five pillars and capacity building; phase 2 would then scale up these investments in all these areas in roads and regions prioritized by highest safety risks

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

35. The overall ES risk rating of the program has been determined as Substantial with Environment risk and Social risk both as Substantial.

36. Considering the potential environmental and social risks and likely impacts associated with the project and involvement of a number of implementing agencies and their capacity to manage risks and meet the requirement of the

World Bank ESF, both environmental and social risks of this first phase project of the MPA are rated Substantial. Infrastructural improvement will be identified on review of the existing problems triggering road safety concerns on the national and regional highways and in the metropolitan city of Dhaka, role of hospitals and emergency care services, highway and local police, and local government bodies managing issues with road safety, disciplines on the roads and highways including road crashes. This might entail modification of geometric design of existing roads, enhancing road safety features and other related small to medium scale civil works. Civil works for improvement of road infrastructure may avoid or minimize land acquisition but roadside encroachers and squatters may need to be removed or pushed back. Road safety improvement works include intersection improvement, provision of free road shoulders, pedestrian facilities, treatment of hazardous points, median barriers, traffic islands, safety zones and provision of divided carriageways.

37. Use of skilled and unskilled workers at works sites in urban and rural areas will induce low to moderate labor influx and associated occupational health and safety (OHS) and community health and safety (CHS) due to labor influx. The labor influx will also associate risks of gender discrimination and low level of gender-based violence (GBV) at works sites influencing adjacent communities. The risk of GBV may include sexual exploitation and abuse (SEA) and sexual harassment (SH) to be evaluated through ESA during implementation. Since the activities will all be within the existing road corridors, environmental impacts will be limited to construction related noise, dust, traffic congestions, construction waste and debris and pollution to local waterbodies adjacent to roads and construction camps.

38. While Roads and Highways Department (RHD) develops and maintains the highways, and regulatory enforcement of road safety practices, vehicle fitness, drivers training, and licensing involve wide range of stakeholders like police, BRTA, owners and operators of motor vehicles, passengers of all social and economic groups, transport workers associations, transport owners? associations, roadside vendors and market associations, road safety activist groups, and communities along the highways. Many of these stakeholders are influential on the sector performance. During the operation phase, the potential impacts will be mostly positive. However, the increased traffic and usage of roads may pose risks of increased incidents of accidents during the operation phase. Road safety awareness raising programs will need to be designed and implemented. Environmental and social risks and impacts will be assessed for individual works sites using Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) developed and agreed with the Bank during preparation and disclosed before appraisal. The project will design and establish Grievance Redress Mechanism (GRM) proportionate to the risk and impacts for project related grievances to be lodged by aggrieved persons and entities.

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