



Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 23-Jan-2020 | Report No: PIDA27514



BASIC INFORMATION

A. Basic Project Data

Country India	Project ID P163328	Project Name Himachal Pradesh State Roads Transformation Project	Parent Project ID (if any)
Region SOUTH ASIA	Estimated Appraisal Date 30-Jan-2020	Estimated Board Date 19-Mar-2020	Practice Area (Lead) Transport
Financing Instrument Investment Project Financing	Borrower(s) Government of Himachal Pradesh	Implementing Agency Himachal Pradesh Road & Other Infrastructure Development Corporation	

Proposed Development Objective(s)

The proposed PDO is to enhance the efficiency of the transportation and road safety institutions and improve selected roads in Himachal Pradesh.

Components

- Building HP’s Transport Institutions and Resilience
- Improving select roads stimulating HP’s horticultural and overall economic growth
- Enhancing Road Safety

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	112.00
Total Financing	112.00
of which IBRD/IDA	82.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	82.00
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Non-World Bank Group Financing

Counterpart Funding	30.00
Borrower/Recipient	30.00

Environmental and Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1. India’s growth rate in FY19/20 is expected to be 5.7% as against 6.8 percent in FY18/19 which is lower than 7.2 percent in FY17/18 and 8.2 percent in FY16/17. Despite the deceleration in the last two years, India’s growth rate still remains high by global standards. Although the current account deficit widened to 2.1 percent of gross domestic product (GDP) in FY18/19, robust capital inflows during the second half of the year allowed for a buildup of international reserves to US\$411.9 billion at the end of the fiscal year (equivalent to 10 months of imports). Going forward, subdued import growth and benign oil prices are expected to contain the current account balance. On the fiscal side, the general government deficit is estimated to have widened to 5.9 percent of GDP in FY18/19. It is expected to consolidate to 5.7 percent in FY19/20.

2. Since the 2000s, India has made remarkable progress in reducing absolute poverty. Between FY11/12 and 2015, poverty declined from 21.6 percent to an estimated 13.4 percent at the international poverty line (2011 purchasing power parity US\$1.90 per person per day), continuing the earlier trend of fast poverty reduction. Thanks to robust economic growth, more than 90 million people escaped extreme poverty and improved their living standards during this period. Despite this success, poverty remains widespread. In 2015, 176 million Indians were living in extreme poverty, while 659 million—half the population—were below the higher poverty line commonly used for lower-middle-income countries (2011 purchasing power parity US\$3.20 per person per day). Implementation challenges of indirect tax reforms, stress in the rural economy, and a high youth unemployment rate in urban areas may have moderated the pace of poverty reduction since 2015.

3. **Himachal Pradesh (HP) is a special status state located in the Himalayan mountains, aspiring to be a lead in green growth and become one of the best performing states.** HP is categorized as special



status state due to, inter alia: (i) mountainous terrain; (ii) low population density; (iii) sizable tribal population; (iv) strategic location bordering neighboring countries; (v) economic and infrastructure backwardness; and (vi) non-viable nature of the state finance. Hence, the State receives significant financial support from the central government and development partners. In 2017-18¹, the State Gross Domestic Product at current factor cost was estimated at INR1,67,730 crore (equivalent of US\$23.96 billion).

Sectoral and Institutional Context

4. **HP has high potential to produce strategic horticultural and eco-tourism value chains, which could support the State's green growth vision, if its transport infrastructure and logistics system are well developed.** HP has a land size of 55,673 km² and a population of about 7 million of which about 90 percent lives in rural areas. About 80 percent of the State is mountainous of which 30 percent is covered with forest. The Himalayan mountains and valleys are covered with the state record (SoER, HP) of 3,295 species of plants and 5,721 species of fauna, and magnificent natural scenery, including the Rohtang Pass. Agriculture/horticulture is the main stay of HP's economy as it provides employment to about 62 percent of the total workers in the state, mainly small holding farmers. Given the high potential for horticultural development, GoHP with the support of the World Bank has launched the Horticultural Development Project (HPHDP), inter alia expected to quadruple the production of apple, which is currently a US\$1 billion economy. The 'Himachal Pradesh Industrial Investment Policy 2019' is attempting to create an enabling environment to make HP one of the preferred destinations for investment and attract horticultural downstream value chains producing Small and Medium Scale Enterprises (SMEs). However, post-harvest losses are high due to lack of appropriate storage facilities, packaging, handling and transportation. The handling and transport costs share² for apple ranges from about Indian Rupee (INR) 123 (52.7 percent) to INR 143 (61.3 percent) of the production cost (INR233 per 20 kg box). Wastage during handling and transportation is in the range of 8 to 16 percent. Moreover, due to the long logistics chain, which involves up to five intermediaries, apple farmers get around 21³ percent of the retail price at the terminal markets.

5. **The substandard, narrow and winding mountainous roads in HP hinder connectivity to the fruit belts, tourist destinations and wholesale markets.** As of March 30, 2019, HP has 35,823 km of roads consisting of 1,792 km of national highways, 4,481 km of Major District Roads (MDRs) and 29,550 km of rural roads, which also includes 9,872 Kms unpaved roads. In addition, the Border Roads Organization (BRO) provides road access (about 800km) in difficult terrain or in sensitive locations. **HP does not have "state highways"**, as all such roads have been reclassified and transferred to the National Highways Authority of India (NHAI). In the absence of state highways, the Himachal Pradesh Public Works Department (HPPWD), has reclassified about 2,007km of MDRs, connecting agriculture production clusters to SME/wholesale market clusters, as the State Core Road Network (SCRN). However, the roads in HP, including many of the national highways are single lane roads winding on the Himalayan mountains, hampering the use of high capacity trucks and buses.

¹ Economic Survey of Himachal Pradesh, 2016-17, Economics and Statistics Department

² ICAR-CIPHAT report published in 2015.

³ Assessment of Quantitative Harvest and Post-Harvest Losses of Major Crops and Commodities in India, ICAR-CIPHAT, 2015



6. **The Himalayan mountains also pose high geo-hazard (landslide) risk to the transport infrastructure and services.** Being a Himalayan state, HP is much prone to landslides and flash floods that affects road connectivity. Cloud bursts, more extreme river flows and flooding cause landslide and erosion of embankments and loss of roads or bridges. These events are projected to increase over next few decades as a result of climate change. The existing transport infrastructure is often blocked by slide and washed out causing interruption for significant time and isolating the rural population from basic services, including access to health facilities for women in labor. Road construction and maintenance practices used in the state do not currently systematically consider climate risks as part of the design and implementation. They should be improved, and contractors or labor trained accordingly, considering new techniques and bioengineering solutions addressing these important climate risks while supporting a more cost-efficient use of funds for long-term maintenance and future upgradation works. Furthermore, as there is no early warning system, the landslide causes fatal accident. Evacuation of agricultural products and transportation of tourists should either be terminated or delivered at high cost and risk, during the snow and rainy season. Lastly, in HP, traffic congestion - due to tourism inflows, infrastructure deficiencies, limited traffic capacity - not only increases the fuel consumption and greenhouse gas (GHG) emissions, but consequently leads to air pollution. Although Himalayan northern states have lower levels of pollution compared to the rest of India (India being one of the 10 most polluted countries globally), efforts are still required to decrease air pollution to acceptable levels in urban areas specifically where air quality is poor.

7. **Competitiveness of HP products is constrained due to lack of multimodal logistics system and inefficient transportation services.** Roads are the main mode of transportation, since rail and air transportation services are not well-developed. However, trucking services along the narrow and winding fruit belts are dominated by informal cartels charging high transportation cost. The state has 200 km of railway network of which only 20 km is broad gauge and the remaining is single/ narrow gauge built in the early 1990s. Chandigarh is the closest rail terminal for transloading/transshipment. However, neither Container Corporation of India (CONCOR), a Public Sector Undertaking (PSU) under the Ministry of Railways (MoR), nor the 15-small private operators provide dedicated wagons for long-distance hauling. Currently, there are three airports, managed by the Airports Authority of India (AAI). However, due to the terrain, the airstrips are short and serve small aircrafts. Hence the Chandigarh airport is used as a hub for transporting HP tourism and high value products. In respect of physical and digital logistics platforms, a digital market platform connecting Shimla horticulture wholesale market to the primary markets where farmers and intermediaries deliver horticultural produce is operational. However, the digital platform should be upgraded to integrate a freight management module. In addition, a digital platform connecting the SME/wholesale market clusters and the terminal markets should be developed.

8. **Gender analysis:** The female labor force participation for Himachal Pradesh is about 25% of which percentage of women agriculture workers is as high as 82.7% (Agriculture Census 2011). Women contribute towards majority of the activities in farm-based livelihoods and barring ploughing, women contribute substantially in all other farm related activities, including sowing, irrigation, using fertilizers,



reaping and post-harvest management of the produce⁴. However, there is clear occupational segregation as women are relatively less engaged in off-farm, market-related activities, logistics and technical STEM-related job roles⁵. Changing climatic conditions, an expected decrease in horticulture production and associated impact on agri-based livelihoods is likely to impact women cultivators and their farm-based sources of income more prominently as compared to men⁶. Hence, the proposed gender actions under the project will focus on building the skills sets of women producers' groups/self-help groups and women employed in institutions to enable income diversification and career advancement.

9. **The incidence of road crashes along HP roads is among the highest in India.** In 2016, as reported by the Road Accident Data Management System (RADMS) 7,036 persons were injured in road accidents of which 1,272 suffered fatal injuries. The fatality rate in the State is 18.17 people per 100,000 population, which compares to the national level fatality rate of 11.53 people per 100,000 population. 85 percent of the fatalities involved motorized transport, mainly caused by over-speeding and the poor safety standard of the road network.

10. **Underpinning to the underdevelopment of the transportation system in HP is the weak institutional base of the transport sector.** The Himachal Pradesh Department of Transportation (HPDOT) is responsible for regulating and coordinating the provision of efficient transportation services in HP. HPDOT has prepared transport policy and providing basic services, including vehicle registration, drivers licensing and tax collection. HPDOT has digital vehicle registration system, although customers still use paper forms. Through the Himachal Pradesh Public Transportation Corporation of HPDOT new electric buses have been deployed in Shimla urban public transportation system. The Road Safety Coordination Cell of HPDOT is serving as the lead agency and secretariat to the State Road Safety Council.

11. The mission of HPDOT is to 'provide mobility with choice, comfort, convenience, frequency, safety and minimal environmental effects. However, HPDOT has multiple challenges to achieve its mission, inter alia: (a) knowledge gap in vehicle safety inspection and emission control technology and dependence on arbitrary inspection system; (b) limitation to reach customers spread all over the State; (c) congestion caused by seasonal tourist traffic; (d) absence of route rationalization system; (e) lack of a strategy to liberalize the transportation market; (f) lack of strategy to promote clean transportation services; (g) absence of integrated multimodal transportation system; (h) absence of freight logistics system and strategy.

12. **The first World Bank funded HP State Road Project (HPSRP I) has supported the establishment of the Himachal Pradesh Road and other Infrastructure Development Corporation (HPRIDC) and process reengineering, but the reforms were not transformational.** The development and operationalization of HPRIDC as a corporate entity was not well pursued. The road infrastructure administration capability assessment of HPRIDC (annex 3), using the most widely recognized standard for the optimized management of physical assets - the British Standards Institution's (BSI) Publicly Available Specification

⁴ The Approach Paper to the Eleventh Five Year Plan of Himachal Pradesh

⁵ Based on extensive stakeholder consultations

⁶ The State Action Plan on Climate Change



(PAS 55) indicates that HPRIDC is currently going through awareness stage. Governance, financial and procurement management autonomy, asset management and performance assessment gaps are major concerns identified by the PAS 55 assessment. The Corporate Governance and Financial Accountability Assessment (CGFA) review also confirms the results of the PAS 55 assessment. The CGFA findings indicate that, currently, HPRIDC is functioning like a Project Implementation Unit (PIU). The existing legal structure of HPRIDC as a 'Private' Limited Company would not be appropriate to meet the objectives of a public road asset management entity. HPRIDC's board is not operational. The Company does not have permanent employees on its roll, which means there is no institutional knowledge base/ capacity and makes sustainability questionable. The IT systems of HPRIDC are standalone with a need for upgrading and integration with enterprise systems. HPRIDC's contract administration capability is weak and not yet able to resolve litigations from HPSRP I. Its environmental and social safeguards capacity is weak or non-existent. Right of Ways (ROW) preservation is carried on ad hoc basis and land acquisition for road improvement projects is not acquired timely. Asset management functions are carried out mixed with direct labor operation and the staff at the zonal offices are responsible for both asset management and maintenance execution.

13. HPSRP I, financed the upgrading of 435Km roads to high standard double/intermediate lane and maintenance of 1484.79 Km of roads. The average speed on the upgraded roads increased by 38.4 percent while vehicle operating cost a proxy to transport cost reduced by about 32 percent. Death rate has also reduced. In addition, several state-of the art institutional strengthening and capacity building measures have been implemented, including: (i) the establishment of HPRIDC⁷, (ii) development of a web-based RADMS; (iii) development of an Electronic Project Management System (e-PMS); (iv) introduction of Output and Performance-based Maintenance Contracting (OPBMC- 347.00 Km); and (v) first time use of International Competitive Bidding (ICB) contracts in the state. Alongside the piloting of OPBMC, HPSRP I supported initiatives that attempted to improve the management of maintenance works by increasing productivity and reducing cost, mainly: (i) by equipping the crew with adequate and appropriate tools that will increase productivity; (ii) training; and (iii) rebalancing of workload and manpower.

14. **Cognizant of the inefficiency of the direct labor/own force account maintenance operations GoHP has frozen hiring of new labor for the direct labor operation.** A preliminary cost comparison of the maintenance works executed under the direct labor on the national highways administered by HPPWD and the performance-based maintenance contracts under HPSRPI shows that expenditure by direct labor was higher by about 268⁸ percent. The direct labor has developed specialized skills in constructing and maintaining roads in the Himalayan mountains and is on standby to remove road blockage. However, there is neither a means of monitoring performance and quality nor knowing the true costs of maintenance works. HPPWD has about 27,000 labor, currently carrying out emergency, routine and periodic maintenance, as well as minor road improvement works. The freezing of the hiring of new labor is expected to resolve the labor issue.

⁷ HPRIDC is mandated to build the commercialized states roads network through Public, Private Partnership (PPP) and managing major road development projects.

⁸ As reported by HPPWD, in 2016-17 budget year, expenditure by direct labor was about US\$22,000 per lane km/year while the payment for the maintenance contracts was about US\$8,200 per lane km/year.



15. **Absence of a stable maintenance financing is a major challenge for the sustainability of the state roads network.** Currently, maintenance of state roads is financed through budgetary allocation from central and state governments. Annual maintenance allocation over the last five years (2013-14 to 2017-18) was on the average about US\$60 million per year. However, the allocations only cover about 64 percent of the demand. Budgetary provisions for construction and improvement of roads and bridges are made through State budgetary support, Central Road Fund (CRF), Pradhan Mantri Gram Sadak Yojana (PMGSY) and National Bank for Agriculture and Rural Development (NABARD). The capital expenditure during 2016-17 was about US\$ 226 million.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The proposed PDO is to enhance the efficiency of the transportation and road safety institutions and improve selected roads in Himachal Pradesh.

Key Results

PDO Level Indicators

16. The implementation of the core initiatives of the project is expected to result in:
- (a) Improved efficiency of transport institutions (measured based on the implementation of the core consultancy services and works contract at the planned cost, time and quality, and reduction in motor vehicle administration services delivery time);
 - (b) Reduction in maintenance unit cost;
 - (c) Reduction in transport cost for transporting products from production clusters to SME/wholesale markets along the project roads;
 - (d) Reduction in road accident fatalities per 100,000 population in the pilot areas.

D. Project Description

17. GoHP's program for improving the efficiency of transportation services and provision of safe and resilient road infrastructure to stimulate horticulture and overall economic growth in HP, sets the goal for the institutional transformation envisaged to be implemented under the proposed project. As such, this project will support the launching of GoHP's program, focusing on strengthening the transportation and Road Safety institutions, whilst improving priority MDRs. The scope of the proposed project includes:



18. **Component 1. Building HP's Transport Institutions and Resilience:**

19. **Sub component 1.1: Reestablishing & operationalizing HPRIDC and building resilience.** Support GoHP's initiative to: (a) create a corporate entity responsible for the administration of all roads under the jurisdiction of HPWD and deliver safe, resilient and well performing roads; (b) operationalize the corporate entity (HPRIDC); and (c) make the Himalayan mountain roads in HP climate risk resilient, through:

20. **Sub-component 1.1 (a):** reorganizing and inaugurating the new corporate entity by legally reestablish HPRIDC as a "Public" Limited company for greater transparency, compliance and accountability. The reorganization study will provide the institutional mandate, governance structure, organigram, and administrative manual showing the executive board composition, oversight responsibility, fiduciary authority and code of conduct, as well as Chief Executive Officer's (CEO's) and management team's recruitment, performance assessment and code of conduct.

21. **Sub-component 1.1 (b):** operationalizing HPRIDC, including: (i) based on the organigram to be prepared by the institutional reform study⁹, assigning the managerial, technical, finance and procurement staff and increasing the engagement of women; (ii) rolling out systems and integrating the standalone IT software; and (iii) engaging consultants to address the implementation capacity gaps, including contract management and corporate governance norms.

22. **Sub-component 1.1 (c):** establishing the funds flow mechanism and asset transfer, by: (i) earmarking the annual operating budget for HPRIDC in the budget book (budget published by the Finance Department of GoHP) as a separate budget head or a budget line in HPPWD's budget; (ii) upgrading the Road Asset Management System (RAMS); (iii) preparing Road Asset Management Plan, with three years rolling budgetary requirement; (iv) support to the creation of dedicated road financing mechanism and broadening the financing base; and (v) transferring all roads under the jurisdiction of HPPWD to HPRIDC balance sheet.

23. **Sub-component 1.1 (d):** mainstreaming resilience in the Himalayan mountain roads and protecting the natural and social environment by developing and adopting: (i) disaster risk management policy; (ii) emergency warning and response system; (iii) bioengineering solutions manual; and (iv) Borrower's environmental and social framework.

24. **Sub component 1.2: Commercializing road maintenance and the direct labor operations of HPPWD.** The objective is to support GoHP's initiative to improve the efficiency of maintenance execution and reduce maintenance cost, by: (a) executing maintenance operation based on commercial principles and achieve value for money by undertaking the maintenance of about 50 percent of the state core roads network¹⁰ under performance based maintenance contracting by private contractors; (b) maintaining part of the state core roads network under service level agreement by the separately organized direct labor

⁹ Institutional reform study contract procured and financed by GoHP with technical support from the World Bank.

¹⁰ The state core roads network size is about 2,000km



wing of HPPWD; and (c) undertaking the preservation of bioengineering solution and post construction non-mechanized maintenance by women self-help group, whereby at least 30 percent of the maintenance contracts will be awarded to women-led producer groups/SHG groups. HPRIDC will engage with women-led SHGs along the core network roads to build capacity of these groups on operations and maintenance (O&M) of roads under the regular maintenance program. Provision of skills training will adopt a holistic approach to include intensive technical as well as life skills training in digital, financial and legal literacy. Such trainings will be offered to women-led groups through collaboration with Industrial Training Institutes (government ITIs). This sub-component includes:

25. **Sub-component 1.2 (a):** executing bench mark performance-based maintenance contracts on about 158 km of the state core roads network by private contractors, whilst HPRIDC outsources the maintenance of about 842 km in parallel under the regular maintenance program.

26. **Sub-component 1.2 (b):** reorganizing and inaugurating the direct labor wing of HPPWD.

27. **Sub-component 1.2 (c):** operationalizing the direct labor operation, including: (i) reassigning the technical staff; (ii) piloting internal service level agreement; (iii) developing manuals and systems; (iv) establishing cost centers; and (v) enhancing the efficiency of the direct labor, including: deploying the systems and training.

28. **Sub-component 1.2 (d):** preserving bio-engineering solutions within the ROW under women-self-help group contracting.

29. **Sub component 1.3: Establishing HP Motor Vehicle Administration (HPMVA), Strengthening the Directorate of Transportation of HPDOT and developing logistics system and strategy.** Support to deliver efficient customer services, as well as competitive, safe and clean transportation in HP. This will be achieved by: (a) enhancing governance and improving the vehicle administration system; (b) enhancing the regulatory/coordination framework for transportation services, including creating a platform for coordination of policy formulation and planning of road infrastructure development and transport services regulation; (c) adopting a strategic plan for multimodal transport; (d) integration of climate change scenarios and climate risk assessments into planning process; and (e) developing logistics system and strategy to stimulate horticultural and economic growth in HP.

30. **Sub-component 1.3 (a):** reorganizing and inaugurating the motor vehicle administration services (HPMVA) and the Directorate of Transportation of HPDOT.

31. **Sub-component 1.3 (b):** operationalizing/strengthening HPMVA and the Directorate of Transportation, including: (i) assigning the operational staff and hiring at least 50 percent women while recruiting new staff in the vehicle registration services and about 30 percent in the other services; (ii) upgrading/developing and adopting the vehicle registration, vehicle inspection, emission control and drivers licensing systems and procedure manuals; and developing vehicle emission reduction strategy (promoting electric and solar vehicles and tricycles, fleet renewal, etc); (iii) strengthening the main MVA



center in Shimla area and the Directorate of Transportation, whilst HPDOT takes up the establishment of branch offices and mobile service provision; (iv) preparing and adopting a strategic plan for the development of multimodal transportation system, and integrating climate change scenarios and climate risk assessments; (v) creating a platform for the coordination of policy and planning functions of road infrastructure development and transport services regulation, and (vi) preparing and adopting mobility improvement strategy and action plan for Shimla to relief the seasonal congestion and route rationalization on main corridors.

32. **Sub-component 1.3 (c):** developing and adopting logistics system and strategy for horticultural and overall economic growth of HP. The main tasks of the logistics system and strategy development study are described in annex 2.

33. **Component 2. Improving select roads stimulating HP's horticultural and overall economic growth.** The objective is to enhance the efficiency of HPRIDC to execute road improvement projects at a planned cost, time and quality, whilst improving connectivity. This component will finance the upgrading of approximately 89.2 km of roads (MDRs) connecting small holding farmers production and primary processing clusters to wholesale markets/SME clusters. 30 percent of the maintenance contracts on the project roads will be awarded to women-led SHG groups from close habitations.

34. **Sub-component 2.1** Upgradation of Priority Roads including: Baddi Sai Ramshahar road (34km) and Dadhol Ladrouer road (13.5km). This sub-component will finance the supervision of all the four roads under sub-component 2.1 and 2.2. HPRIDC will put the upgraded roads under performance-based maintenance contract, as part of its regular maintenance program.

35. **Sub-component 2.2.** Upgradation of Mandi Rewalsar Kalkhar road (28km), Raghunathpura-Mandi-Harpura-Bharari (2.7km) and Barotiwala Baddi road (11 km). As these interventions will be associated projects, HPRIDC will apply the Bank's environmental and social framework. Further, GoHP intends to implement the recommendations of the logistics strategy development study.

36. **Component 3: Enhancing Road Safety**, including:

37. **Sub component 3.1: Promoting the 'Safe System':** Support in three pilot districts to reduce road accident fatalities by enhancing enforcement through: (a) strengthening the Road Safety cell under the Directorate of Transportation of HPDOT, mainstreaming the national MVA Act 2019, and enhancing the data management system to establish a system connecting the hospitals providing post-accident care and the State Traffic Police; (b) strengthening the State Traffic Police patrol by providing surveillance equipment (CCTV cameras for speed control, accident recording, etc.), variable messaging system ("VMS"), communication equipment and fiber connection, patrol vehicle, training the traffic police, and establishing emergency response system supported by ambulances, first aid kits, tools, communication system, cranes, tow trucks, etc.; (c) promote community Road Safety programs in the pilot districts by organizing, training and equipping volunteers in high accident-prone areas to support enforcement and emergency response; and (d) Road Safety Advisory Services for preparing an action plan, advising the



State Traffic Police and the Road Safety Cell of HPDOT, and providing training to the traffic police and the volunteers from local communities supporting the enforcement. HPPWD will improve accident spots through its regular maintenance programs. The Directorate of Transportation of HPDOT will be the lead agency and will be responsible for coordination of Road Safety initiatives and stakeholders in HP. The scale up of the Road Safety interventions in the remaining districts will be pursued by GoHP.

38. **Sub component 3.2: Promoting the ‘Safe Corridor initiative’:** The Safe Corridor initiative will support the state highway patrol by providing surveillance equipment, VMS, training the police, and establishing emergency response system. The operation will also establish communication system connecting accident sites and dedicated hospitals for post-crash care and data collection on survival of victims under trauma management. The safe corridor initiative will be piloted along one corridor, which has the highest road accident and fatality rate. The main highway corridors in HP fall under the management of NHAI and the scale-up projects will be financed by MORTH/ NHAI.

Legal Operational Policies

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

Summary of Assessment of Environmental and Social Risks and Impacts

39. Based on ESIA, the potential environmental risks and impacts on sensitive receptors would mainly be due to activities involved during construction. The potential impacts include deteriorate air quality due to emission from vehicle, plant, machinery and fugitive dust generated during hill cutting, excavation earthwork; contamination of soil and water from hazardous (used oil-8592 L, grease - 859L, cotton waste - 250kg) and non-hazardous wastes (MSW - 122kg/day, waste water -18000L/day); extraction of finite natural resources (borrow earth - 227212cu.m, sand - 65,648MT, aggregate - 5,35,204 MT); drying of springs, clogging of streams (30) and altering of drainage patter in project area due to disposal of muck generated from hill cutting, excavation; stressing of community water sources in absence of perennial sources and huge construction water demand (89 million Liters); high noise level near sensitive receptors; vibration induced damage to kutchra structure abutting to road embankment; erosion and slope stability due to disturbing of natural ground; and other impacts related to muck disposal. Social risks identified include: inadequate coordination between concerned agencies on land acquisition and resettlement, lack of dedicated personnel dealing with social aspects within HPRIDC and PIUs; mismatches between road design drawings and revenue maps, changes of alignments, potential delays in negotiations for direct purchase due to poor state of land revenue records. Impacts identified based on the detailed ESIA of the two corridors include: partial impacts on private structures i.e. residential, commercial and residential-cum- commercial – all of them belonging to encroachers and squatters; and partial impacts on common property resources (School, College, religious spots, bus shelter/bus stand,



borewell and Hand pumps) and also in these two corridors there is no requirement for private land. There are also a few vulnerable families who shall be impacted by the project works. The risks and impacts in the other two upgradation corridors and the 158 km of maintenance corridors are not still fully identified. Though these are likely to be similar in nature, magnitude of impacts could vary depending on the available right of way and the final design.

E. Implementation

Institutional and Implementation Arrangements

40. The project implementation involves multiple institutions, namely: HPRIDC of HPPWD, HPDOT and HP State Police. HPRIDC will be responsible for the overall coordination of the project implementation. The reform of HPPWD and road infrastructure improvement will be implemented by HPRIDC. HPDOT will be responsible for the establishment of HPMVA, strengthening the Directorate of Transportation, and development of the logistics system and strategic multimodal transportation plan. HP State Police will implement the Road Safety component.

41. As it was the case for the HPSRP I, the country systems will be used for the project implementation. To ensure that the reform process and the investments are implemented at the planned quality, cost and time, the project will provide targeted support. The project will strengthen safeguards, bioengineering solutions, planning, engineering design, procurement and contract management units of HPRIDC by engaging consultants and training. HPPWD, HPDOT and HP State Police will engage consultancy firms that will advise on the reform process, undertake studies and provision of training.

42. HPRIDC will engage a Project Management Consultant (PMC), which will be responsible for quality assurance and monitoring the DLIs. HPRIDC will engage a Construction Supervision Consultant (CSC) for the road upgrading contracts. As required independent Quality Assurance Consultants (QAC) would be engaged to oversee the quality of the construction and maintenance contracts. The Project will engage an Independent Verification Agent (IVA) – Technical Audit Consultant (TAC) - to confirm the fulfilment of the verification protocols for the DLIs and authorize disbursement.

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APPROVAL

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