



# Project Information Document (PID)

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Concept Stage | Date Prepared/Updated: 14-May-2021 | Report No: PIDC31521

**BASIC INFORMATION****A. Basic Project Data**

Country Mozambique	Project ID P174639	Parent Project ID (if any)	Project Name Safer Roads for Socio-Economic Integration in Mozambique (SRSEI) (P174639)
Region AFRICA EAST	Estimated Appraisal Date Jan 31, 2022	Estimated Board Date May 19, 2022	Practice Area (Lead) Transport
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Economy and Finance	Implementing Agency NATIONAL ROADS ADMINISTRATION (ANE – ADMINISTRAÇÃO NACIONAL DE ESTRADAS), National Institute of Land Transport (INATTER – Instituto Nacional de Transportes Terrestres), Ministry of Health, ROAD FUND (FUNDO DE ESTRADAS), Ministry of Transport & Communications	

**Proposed Development Objective(s)**

The MPA Program Development Objective (PrDO) is to improve safety, resilience, and accessibility [or connectivity] in the Program areas.

**PROJECT FINANCING DATA (US\$, Millions)****SUMMARY**

<b>Total Project Cost</b>	180.00
<b>Total Financing</b>	180.00
<b>of which IBRD/IDA</b>	150.00
<b>Financing Gap</b>	0.00

**DETAILS**



**World Bank Group Financing**

International Development Association (IDA)	150.00
IDA Grant	150.00

**Non-World Bank Group Financing**

Counterpart Funding	30.00
Borrower/Recipient	30.00

Environmental and Social Risk Classification

Substantial

Concept Review Decision

Track II-The review did authorize the preparation to continue

**B. Introduction and Context**

**Country Context**

**Mozambique has had, until recently, a strong and sustained economic growth, which averaged 7.7 percent over 2000-2015.** This growth has been driven by an expansion in services and capital-intensive megaprojects in the extractive industries. Expansionary macro policies also supported growth. However, economic activity decelerated sharply following the hidden debt crisis in 2016. In the first quarter of 2016, the revelation of previously undeclared loans plunged Mozambique into an economic crisis and macroeconomic instability, derailing its track record for high growth. Growth halved to 3.3 percent in 2016–2019. The economic fallout from the debt crisis has been exacerbated by the impact of the tropical cyclones in 2019, and the COVID-19 pandemic in 2020. Mozambique experienced its first economic contraction in nearly three decades. Recurrent shocks have exposed the vulnerability of the economic structure stemming from heavy overreliance on the exports of primary commodities and capital-intensive mega-investments with limited local linkages. The share of agriculture in total output barely declined, from 28.7 percent in 1997 to 24 percent in 2019, but the sector has seen growth fluctuations between 2 to 10 percent.

**This sustained economic growth has led to a decline in poverty, but at an uneven pace, widening regional inequality in the country, particularly between the northern and the southern provinces.** The share of Mozambicans living below the poverty line is 48.4 percent (2014/15) compared to 60.3 percent in 2002/03. Although rapid growth helped reduce poverty, people in the bottom 40 percent of the income distribution have been largely left behind—their share in private consumption declined over the same period (World Bank, 2020). The weak link between growth and poverty reduction can be partly explained by deep-seated structural challenges as well as transitory economic factors (World Bank, 2020). The pattern of growth has become progressively less inclusive over the last two decades as Mozambique has increased its dependence on export-oriented, capital-intensive megaprojects, with limited linkages with the rest of the economy. Poverty is particularly high in the northern and central regions where private sector investments have been relatively modest. One of the reasons for the increasing inequality is the skewed distribution of benefits from the emerging non-subsistence sectors, such as mining (Gradin and Tarp, 2019). Another may be misallocation of public infrastructure



investment biased toward urban areas (World Bank 2019).<sup>1</sup> Many rural farmers in remote areas tend to be left behind, for example, in central and northern Mozambique.<sup>2</sup> It is of particular importance to connect them to markets where formal businesses are concentrated because other job opportunities than agriculture are limited in rural areas.

**A rebound in critical sectors, including agriculture, transport, trade and communications** has supported the economic expansion of the last two decades. Transport coverage and access to these critical sectors are crucial to sustain employment, a crucial driver of poverty reduction. The poor who are meant to reap the benefits of economic growth remain disconnected to employment opportunities and vital services including education, health, markets and government administrative services. Isolation due to inadequate access and transport cost also serve as a major barrier to inputs and commercialization of agricultural outputs. Rural households in provinces with highest poverty rates, such as Nampula and Zambezia, also have the highest travel time (85 minutes on foot) to reach nearest markets and basic services. Given the fact that Mozambique has one of the youngest populations in the world, with a rapidly increasing youth population, more inclusive growth with good-paying local jobs created is called for particularly in the current COVID context.

**Weak human capital undermines the prospects for long-term growth in Mozambique.** Although the country has one of the highest social spending rates in SSA, human capital formation remains weak. Mozambique ranks 148 out of 157 in the World Bank's 2020 *Human Capital Index*, below most of its peers in SSA. A child born in Mozambique today will be 36 percent as productive when she grows up as she could be if she enjoyed complete education and full health. The country also has one of the lowest low level of learning compared to those of peers, which is a critical obstacle to faster and more inclusive growth in Mozambique. Enabling Mozambicans, particularly the poor and vulnerable, to contribute to and benefit from economic progress requires investing in their human capital. Human capital formation will be essential to ensure that jobs in more productive sectors can be created and filled. Starting in infancy, many Mozambicans—especially those in rural areas and in the Central and Northern regions—lack access to the services and investments that are essential for productive lives by adulthood. Households in these provinces may be unable to benefit from growth due to a lack of productive assets (including human capital), which limits their access to economic opportunities. Mozambique ranked 127th out of 162 countries in the 2019 UNDP Gender Inequality Index. Extreme poverty and the HIV/AIDS epidemic have contributed to the precarious status of women and girls in the country.

**Mozambique is highly vulnerable to climate change risks and successive, increasingly frequent, extreme climate-related events have disrupted economic activity.** Mozambique experiences high risk of river, urban and coastal flooding, cyclones, extreme heat and wildfire, and medium level risk of earthquake, tsunami, and water scarcity.<sup>3</sup> Southern Mozambique has experienced more persistent droughts, while coastal regions have experienced more episodic floods. Mozambique is expected to continue experiencing high risks from natural disaster with projected climate change indicating an increase in heavy rainfall events and in the number of hot days and nights.<sup>4,5</sup> Mozambique is located

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<sup>1</sup> World Bank. (2019). Mozambique Economic Update: Mind the rural investment gaps.

<sup>2</sup> There are different small-area estimates of poverty rates. See the following section for further details.

<sup>3</sup> Think Hazard. Consulted on 21 April 2021. URL: <https://thinkhazard.org/en/report/170-mozambique>

<sup>4</sup> World Bank Climate Change Knowledge Portal, Consulted on 21 April 2021. URL: <https://climateknowledgeportal.worldbank.org/country/mozambique/climate-data-projections>

<sup>5</sup> Mozambique has a tropical to sub-tropical climate with more rainfall occurring along the coast and in the north and central regions of the country. Mean rainfall has decreased since 1960 and is projected to continue decreasing, with regional variations. The number of heavy rainfall events, on the other hand, is projected to increase by 2060. Temperatures are warmest near the coast and colder in high-altitude areas. Mean annual temperatures have increased since 1960 by an average of 0.9C and the number of hot days has increased as well. Temperatures are projected to continue increasing, by 1.4-3.7C by 2060, with warming happening more rapidly in the south and coastal areas. The number of days and nights are projected to increase throughout the country.



downstream of shared watersheds and has a long coastline (2,470 km). More than 60 percent of the population lives in low-lying coastal areas. The Mozambique economy was devastated by Cyclones Idai and Kenneth in March and April 2019. Cyclone Idai brought strong winds and heavy rain, causing river overflows, storm surge and floods over an estimated 3,000 km<sup>2</sup> of land and 715,378 hectares of cultivated land.<sup>6</sup> Public infrastructure was also severely damaged. In transport, a total of 3,600 km of roads were affected by the two cyclones, causing substantial disruptions in the transport system and therefore through the entire economy. With increased emergency spending and slowed economic activities, an already difficult fiscal position could become even tighter without proper consolidation measures.<sup>7</sup> Climate change may lead to an increase in cyclone intensity. Sea level rise in the region is projected to range from 0.18-0.59m by the 2090s. Intense storms from the Indian Ocean and sea level rise put infrastructure and livelihoods at risk from erosion, submergence, and saltwater intrusion.

**Efficient and reliable transport connectivity is among the most important necessary conditions for sustainable inclusive growth.** The literature suggests that transport infrastructure is fundamental to provide better economic and social opportunities to people and firms. Improved transport connectivity can lower transport costs and time, facilitating efficient mobility, creating more jobs, better access to basic services, and therefore, alleviating poverty and resulting improved human capital outcomes.

### Sectoral and Institutional Context

**Mozambique is an important transport gateway for the neighboring land-locked nations, especially Zimbabwe, Zambia and Malawi.** There are three multi-modal transport clusters in Mozambique; (i) the northern corridor connecting Tete Province and Malawi to Nacala Port, (ii) the central network linking Port of Beira to Zimbabwe and partially to Malawi and Zambia and (iii) the southern transport network linking the port of Maputo to Eswatini, Zimbabwe and northeastern part of South Africa. The Maputo Development Corridor is one of the few successful regional corridors, involving efficient border crossing and road user charging through tolls. The corridor connects Maputo Port to Gauteng province, one of the most productive and highly industrialized regions of South Africa. Multimodality nature of the transport infrastructure and improvement in trade logistics has resulted in Mozambique having one of the lowest costs in cross border trading. The cost of export and import are 60 percent less than the sub-Saharan average; and export and import lead times are 70 percent less than the sub-Saharan average.

**Road transport is of critical importance not only for trade facilitation and regional integration but also to ensure efficient mobility of goods and people in Mozambique.**

MOZAMBIQUE ROAD NETWORK			
Classification	PAVED	UNPAVED	TOTAL
	(Km)	(Km)	(Km)
Primary	5706	643	6349
Secondary	1437	3448	4885
<b>National</b>	<b>7143</b>	<b>4091</b>	<b>11234</b>
Tertiary	1020	11650	12670
Vicinal	105	6608	6713
<b>Regional</b>	<b>1125</b>	<b>18258</b>	<b>19383</b>

<sup>6</sup> UNDP. (2019). Mozambique Cyclone Idai: Post-Disaster Needs Assessment.

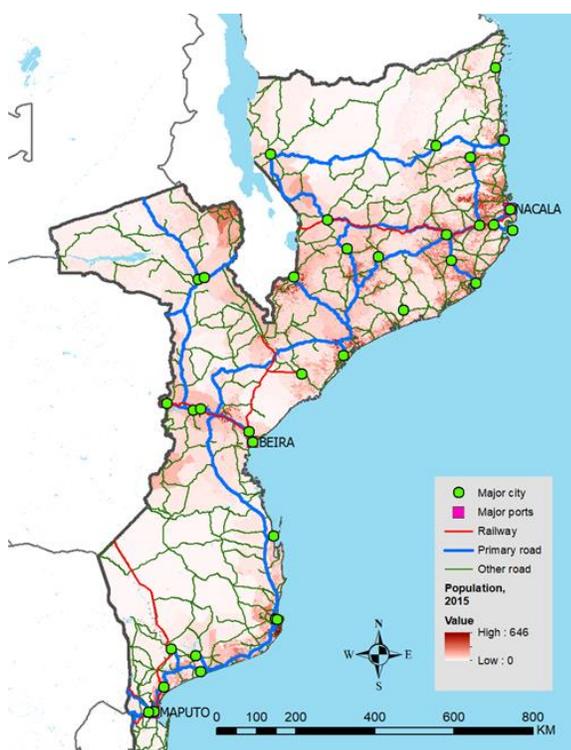
<sup>7</sup> IMF. (2019). Mozambique 2019 Article IV Consultation. IMF Country Report No. 19/166.



<b>Total</b>	<b>8268</b>	<b>22349</b>	<b>30617</b>
<b>27% PAVED AND 73% UNPAVED</b>			
<b>Primary: Link to Provincial Capitals, Ports, Borders</b>			
<b>Secondary: Link to Primary network and important economic centers</b>			
<b>Tertiary: Links to Secondary network and districts centers</b>			
<b>Vicinal: Links to Tertiary network, and localities</b>			

Half of freight traffic and 98 percent of passenger trips are undertaken through road transport. During the late 2000s to the early 2010s, there was marked improvement in road rehabilitation, increased network expansion and establishment of a second-generation road fund. However, Mozambique still faces transport connectivity challenges. Road density is 3.8 km per 100 km<sup>2</sup> of land, among the lowest in Africa.

**Rural connectivity is a major constrain in the country.** Although the regional corridors provide improved connectivity between major cities and traditional economic clusters, such as the extractive industry, to the global market (i.e., regional hub ports), within-country connectivity remains limited and unreliable between rural areas and local markets, and between secondary cities and the primary city, Maputo.



*Road network and population distribution*

**Domestic market accessibility is important for mitigation of regional inequalities and promotion of more inclusive growth.** There is marked variation in domestic market accessibility in Mozambique. Along the major corridors to the main three ports, market accessibility is relatively good, however, some inland areas in Manica, Niassa, and Tete provinces, where transport costs exceed USD30 per ton, are disadvantaged in terms of domestic market accessibility. The north–



south corridor (N1) is playing an increasingly important role in improving domestic market accessibility, connecting the northern and southern parts of the country. When comparing the north-south corridor with the three east-west corridors, the development dividend in improving the North-South corridor could be 4 times higher. While 56 percent of the total population could benefit from the north-south corridor, the east-west corridors benefits only 14 percent mainly in the northern provinces.<sup>8</sup> Improved market accessibility is expected to foster more economic agglomerations, promoting local business development and generating new jobs in the country.

**With Mozambique's large agricultural base, securing access for farmers to the market remains a key challenge.** The agriculture sector employs approximately 80 percent of the country's workforce, generating 30 percent of GDP. Mozambique produces approximately USD3 billion of agricultural crops. Given the country's rapid urbanization, domestic food crops, such as cassava, bananas and maize, are important for food security purposes. In addition, Mozambique is a traditional exporter of cash crops such as tobacco, sugar, and cotton.<sup>9</sup> However, productivity is low, largely because production is based on subsistence farming, with few advanced inputs such as fertilizer, irrigation, and improved seeds used. Rural accessibility is among the most important constraints. An estimated 16 million people did not have access to a road network in good condition in 2017, which results in a rural access index (RAI) of 19.3 percent. Accessibility is particularly limited in the northern and inland provinces, seemingly widening regional inequality.

**Substantial financial resources are needed to close the remaining gap in transport connectivity.** Approximately USD940 million are needed to repair and rehabilitate the existing road network and another USD10 billion to reclassify currently unclassified roads to achieve universal access in rural areas.<sup>10</sup>

**Mozambique has gone through numerous institutional reforms since the early 2000s, however, the 2016 debt crisis halved available resources in the road sector, posing renewed institutional challenges.** These included creation of a dedicated Road Fund, introduction of policy to commercialize road-network management and reform of the national road agency (Administracao Nacional de Estradas, or ANE). The Road Fund (RF) has the function to centralize funds for both road investment and maintenance. Its funding comes 60 percent from external development partners and 40 percent from government resources. During the period of 2010-18, the RF spent on average USD380 million or 2.5 percent of GDP annually to implement road programs, including capital expenditure. This was among the highest in the region. After the crisis, however, the road sector budget was nearly halved and the Government needs to consider strategically, the tradeoffs between road investment and maintenance. Furthermore, the Government could explore opportunities to increase and diversify road sector revenues, primarily from fuel levy, to fully address road maintenance needs. While the Mozambique's RF resources (per GDP) are among the highest in the region, the current fuel levy (about 5 U.S. cents) remains below the Sub-Saharan African average, which is 8.9 USD cents, and further below the recommended level of 17 USD cents per liter. Beyond increased funding and strategic prioritization in the sector, it's important to improve the budget execution efficiency, which is currently 40-60 percent, and strengthen governance of public investment decision-making, including PPP projects, to avoid economically unviable projects and another debt crisis.

**To meet these needs for transport connectivity with limited available resources, the capacity of road asset management needs to be improved further.** Investment in road maintenance is currently mostly directed to the paved primary roads while secondary and tertiary roads remain in poor condition- 42 percent of the 21,600km of unpaved roads are in poor condition. While the primary network is the first priority, secondary roads also need to be considered as a network.

<sup>8</sup> World Bank. (2021). Mozambique Public Expenditure Review: Investing in Mozambique's Connectivity: Toward Efficient, Sustainable Road Spending. World Bank Group.

<sup>9</sup> Based on FAOSTAT.

<sup>10</sup> World Bank. (2021). Mozambique Public Expenditure Review: Investing in Mozambique's Connectivity: Toward Efficient, Sustainable Road Spending. World Bank Group.



Regional disparity is also an issue when it comes to the condition of primary roads, with challenges in Cabo Delgado, Nampula, Niassa and Zambezia. For example, the share of primary roads in poor condition is at 42 percent in Niassa, 21 percent in Zambezia and 19 percent in Cabo Delgado. The current distribution of public resources based on the even distribution among districts may not necessarily be consistent with the underlying needs for road connectivity and maintenance. Although the current distribution mechanism is transparent, the method of allocating resources may need to be based more on need, for which a more comprehensive road inventory database including classified and unclassified roads must be developed and updated regularly.

**Moving towards more efficient asset management strategies that support the gradual convergence of the road network to a steady state condition and prioritizes maintenance is essential to lower the costs to the Government.** By focusing on the maintenance of the network the Government will be able to give adequate attention to preserving existing assets in good condition and to ensure safety and resilience of the network, and helping ANE to break the vicious cycle of rehabilitating roads, not doing anything for 10 years and then having to rehabilitate or reconstruct them again. The introduction of performance-based contracts to manage the road network has proven to be a cost-effective solution as these are long term contracts that bundle the initial works needed to bring the roads to a determined level of service with the routine maintenance needed over several years and where contractors are paid for the delivery of results ensuring the condition of the road over the contract period

**ANE under the Ministry of Public Works, Housing and Water Resources in Mozambique has experience implementing Output and Performance Based Road contracts (PBMC/OPRC) in projects in Gaza Province and in Tete Province for primary roads as well as for secondary and feeder roads.** For the recent Additional Financing for Integrated Feeder Road Development Project (P171093) PBMC is being implemented for a contract covering 70 km of roads for a duration of 10 years, which included 2 years for the rehabilitation, and 8 years for periodic maintenance. Using microenterprises for routine maintenance for feeder roads is also under consideration that has been successfully administered in other regions such as Latin America that involves grass cutting and culvert cleaning, performed at a minimal cost. This approach can increase entrepreneurship, community involvement, increase employment opportunities and ownership of roads, and can potentially engage women.

**Road Safety.** Mozambique has one of the worst road safety records in Africa, and in the world. The country suffers 30.1 deaths per 100,000 population. This can be compared with the countries that have the best rates (2-3 road deaths per 100,000 people in Denmark, Norway, Sweden, and Singapore); and with the worst-performing countries of Liberia and Burundi with 35.9 and 34.7 deaths per 100,000 respectively<sup>11</sup>. In absolute numbers, it is estimated that each year between 7,000 and 10,000 people in the country die on Mozambique's roads. The vast majority of these deaths occur when vehicles collide with vulnerable road users, particularly pedestrians. Deaths involving vulnerable road users represent around 70 percent of deaths, well above the average for the region. In addition to these deaths, there are a considerable number of serious injuries, estimated at around 120,000 per year. Many of these result in life-altering outcomes that prevent a return to a normal, productive life. About 73 percent of fatalities and injuries in Mozambique are in the economically productive age groups (from 15-64 years). In addition to the human cost and suffering caused by these deaths and injuries, they also impose real economic costs on the nation. The World Bank has calculated that road crash deaths and injuries are costing Mozambique 10 percent of its GDP each year. These costs are retarding the economic growth of the country (World Bank 2017).

The countries that have been able to change the trajectory in road traffic fatalities have been particularly successful at tackling road safety with a holistic, multisectoral approach, over a sustained period. This involves introducing a series of

<sup>11</sup> 2018. WHO. Global Status Report on Road Safety



policies, legislation, and regulations around the five pillars of the UN Decade of Action, as well as the management of vehicular speed.<sup>12</sup> However, many African countries are lagging behind, with no significant progress achieved in the first Decade of Action from 2010 to 2020, and Mozambique is no different. A dedicated road safety program in Mozambique is well warranted and would be able to yield cost/benefit ratios of up to \$15, meaning that for each dollar invested, \$15 would be saved in the costs of road crash deaths and injuries.

The government of Mozambique realizes the dire need to reverse the country's road safety trends and is committed to improving its road safety record. Since 2019, it has been engaging with the World Bank on a number of road safety activities, including a recently completed Bank ASA entitled *Mozambique: Preserving Human Capital through Improving Road Safety: Road Safety Overview, Considerations, and Opportunities for Improvement*; as well as specific investment activities supported through the World Bank-financed Integrated Feeder Road Development Project (IFRDP), and the recently approved Southern Africa Trade Connectivity Project. However, to make significant impact on improving the overall road safety and decreasing the number of road death in Mozambique a longer-term engagement and dedicated holistic approach is necessary.

**Climate resilience of the road infrastructure needs to be strengthened.** Mozambique is particularly vulnerable to climate shocks, with poorly maintained roads amplifying the impacts. Gaza, Sofala, Zambezia and Nampula are the most impacted regions with vulnerability to heavy rainfall and flooding. According to recent projections based on 20-year recurrence interval, about 11 percent of the road network is located in flood-prone areas. Recent Cyclone Idai and Kenneth caused severe damage to 3,600km of the road network causing significant disruption to the transport system and the entire economy. While building resilience into the network will cost more in the short to medium term, it entails significant cost savings on maintenance and reduced network disruptions in the long term, maximizing wider economic benefits from reliable connectivity.

**Mozambique's transport infrastructure is vulnerable to the negative impacts of natural disasters and climate change.** Transport infrastructure has a long lifetime and damage from flooding and droughts can increase maintenance and rehabilitation requirements and/or shorten infrastructure operational life. Mozambique lacks an effective national early warning system, and this impacts negatively in particular remote rural communities where there is a lack of climate information and infrastructure for sharing information about extreme events. There is also a need to strengthen institutional preparedness and capacity to respond to climate risks, including mapping of vulnerable areas and conducting relief operations during and after shocks (relocation and protection of people and property and the supply of resources and equipment).

### Relationship to CPF

**The program is fully aligned with the Mozambique Country Partnership Framework (CPF) FY17-FY21.** Poor access to transport infrastructure has been identified as a binding constraint to agricultural sector, a key sector contributing to poverty reduction. Farmers are affected through impeded access to markets making it more likely that they will receive lower pieces for crops and pay high input cost. In Nampula and Zambezia, where households are more isolated, income from farm activities was three times lower compared with the rest of country. Access to the transport network for the rural population is also indicated as a priority and the need to improve on the Rural Accessibility index (RAI)<sup>13</sup> currently at 19.3 is also emphasized.

<sup>12</sup> This was highlighted in the WHO Save LIVES Package, in order to correct its omission from the UN Decade Plan.

<sup>13</sup> The Rural Access Index (RAI) is defined as the share of the rural population who live within 2 km of the nearest road that is in good condition.



**Through improved transport access, the program will support increased economic and social activities particularly in rural areas where the poverty rate is high.** As noted, most rural farmers are isolated and poorly connected to the road network or markets. There is clear negative correlation between agricultural productivity and market access, measured by transport costs to the nearest city with a population of 50,000. For example, average productivity of maize is estimated at about 1.2 tons per hectare in the districts that have close access to markets, that is, a transport cost of less than US\$2 per ton. But where transport costs exceed US\$20 per ton, maize productivity is nearly 20 percent lower. A 10 percent reduction in transport costs can increase agriculture production value by 2.7 percent. Agriculture and natural resources management operations will be supported by transport investments with a greater focus on secondary and tertiary roads as well as support for reducing barriers to trade with a view to increasing agriculture exports to national and regional markets.

**This project is aligned with Mozambique's National Climate Change Strategy<sup>1</sup>, Nationally Determined Contribution (NDC)<sup>1</sup>, and the World Bank Group's Next Generation Africa Climate Business Plan<sup>1</sup> as it aims to enhance the climate resilience of the transport sector in Mozambique, of the communities served, local and national economy.** The National Climate Change Strategy highlights the importance of enhancing climate resilience of investments in infrastructure including the construction and maintenance of roads, bridges, viaducts, drainage facilities, among others. Mozambique's NDC highlights the importance of developing climate resilience mechanisms for infrastructure, strengthening institutional capacity to implement policies, strategies, and plans; and strengthening early warning systems and the capacity to prepare and respond to climate risks.

**The program also aligns with the Mozambique's CPF goals in improving climate resilience of the transport network,** with cyclones and flooding causing major disruptions to the network, and in supporting the diversification of income generating activities for rural communities along the road corridor. The CPF indicates that climate-related impacts such as droughts, floods, and cyclones present a substantial risk to agriculture and sustainable livelihoods, contributing to food insecurity among the poor. The program supports the creation of microenterprises for the participation of local communities in road maintenance activities. The creation of microenterprises diversifies income to local communities and facilitates access to markets this enhancing resilience to climate change impacts. The CPF also highlights the importance of ensuring that infrastructure is developed to climate resilient standards and this program will upgrade and rehabilitate road infrastructure to climate resilient standards. Mozambique's CPF also highlights the importance of making use of instruments to improve the readiness and response to natural disasters and the program incorporates these provisions through the inclusion of Contingent Emergency Response Component (CERC).

**Through support to women's access to formal jobs and to education in engineering, the program will reduce the following gender disparities identified by the CPF.** Mozambican women are less likely than men to work in the small formal sector and are paid less: only 12 percent of all workers receive a wage and 80 percent of these are men, while the female to male wage ratio is just 63 percent. There are still gender gaps in access to education, with gender parity ratios of 0.91 at primary and secondary level and 0.69 at the tertiary level. Female adolescents in Mozambique drop out of school by age 10–12, often due to early marriage and/or pregnancy. This limits their economic empowerment and feeds the intergenerational cycle of poverty.

### **C. Proposed Development Objective(s)**

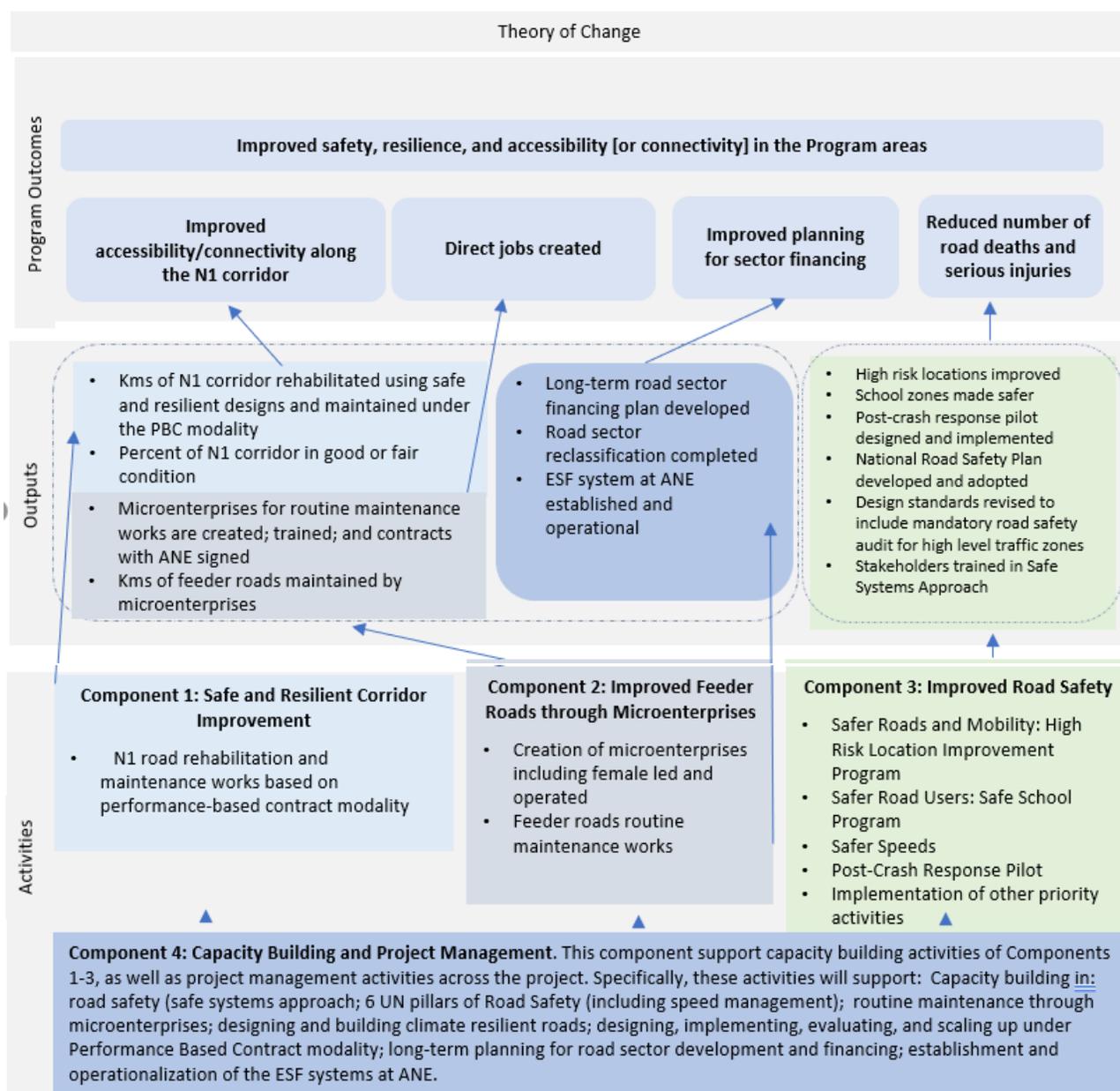
The MPA Program Development Objective (PrDO) is proposed to be: to improve safety, resilience, and accessibility [or connectivity] in the Program areas.



### Key Results (From PCN)

The expected PrDO level results include:

1. Improve Safety: Number of road fatalities and serious injuries (reduction by 50 percent by 2030 in absolute terms).
2. Improve Resilience: Kilometers of N1 corridor project roads rehabilitated/improved with an engineering designs that includes climate resilience technical specifications and are prioritized using the Climate Resilience Tool (baseline: 0 km; target: 1200km)
3. Improve accessibility: Percent of the N1 Corridor in good or fair condition (baseline: 0%; target: 50%).





#### D. Concept Description

**North- South N1 corridor (Connecting to the fragile North)** is the most important transport corridor for Mozambique in order to unlock development potential (in all sectors) in central and North Mozambique, which is the country's most fragile and critical region. The resilient (all weather access) and safe upgrading of N1 has been identified as the most important infrastructure need by the GOM. Historically, most of the investments have been directed towards multiple east-west corridors that focused on moving extractives from land lock countries to the Indian ocean ports in Mozambique. The investment in the most critical North-South connection in comparison has been lacking. Currently more than half of the N1 corridor is in poor state of upkeep.

The GOM requested the Bank to help develop a long- term program of socio-economic integration through resilient and safe upgrading of N1 corridor. It was agreed that the Bank will prepare a US\$600 million Multi-Phase Approach (MPA) operation over 3 IDA cycles, with a first phase for \$150 million to be delivered in FY22. Phases 2 and 3 are planned for delivery in FY24 and FY26.

The MPA will support resilient and safe upgrading of about 1200 km of priority sections out of the total 2477 km length of N1, using Performance Based Contract modalities. This program will benefit about 5 million people living in the corridor and create an estimated 176,600 jobs over a 10-year period. It is expected that 25% of these jobs will be reserved for women through labor intensive microenterprises. This project has a tremendous potential to additionally achieve significant climate benefits.

Following up on the recommendations of the recently competed ASA Preserving Human Capital through Improving Road Safety in Mozambique, the MPA will have an ambitious program of improving road safety. Road safety record in Mozambique is one of the worst in the world with roads killing between 5,000 and 9,000 people each year. To help the Government achieve SDG 3.6 on halving the number of deaths by 2030, the MPA will focus on both preventative measures and post-crash response. The post-crash response in Mozambique is one of the weakest links in the overall road safety delivery and the MPA is proposed to address that through a coordinated effort of Transport and Health Global Practices.

The MPA will address specific barriers for women's employment in the sector. Data shows that women's employment participation was 69 percent in 2016 while men's 81 percent on low income populations. In the middle-income population, the gap increases to 30 percent (46 percent for women and 76 percent for men). The female workforce participation rate in construction is about 3 percent in Mozambique. Data from the completed World Bank financed Roads and Bridges Management and Maintenance Program Phase II in Mozambique illustrates that women constitute only about 10 percent of the total workforce of the contractor and very few are employed as skilled workers.

**The project is proposed to have the following five components:**

**Component 1: Safe and Resilient Corridor Improvement.** This component will focus on rehabilitation, improvement, maintenance and road safety activities in the most critical sections of N1 (1,227km). Priority road sections will be improved through the implementation of performance-based contracts, which will be implemented over 10 years (2 years for rehabilitation and improvement followed by 8 years of maintenance and periodic maintenance in year 8). The project will implement Output and Performance-based Road Contracts (OPRC) that represent a new approach for contracting road works based on payments based on outputs (agreed service levels), compared to the traditional approach of payments based on input quantities and unit prices. OPRC contracts provide advantages to the road agency, road users and the consultants, and contractors, such as: (i) helps to assures long-term maintenance funding; (ii) provides better transparency and accountability; (iii) reduces maintenance costs; (iv) avoids frequent claims and contract amendments to increase



quantities of work by the contractor; (v) provides better and safer roads with consistent conditions; (vi) guarantees workload over longer period and opens opportunities for business growth for consultants and contracts. OPRC contracts are expected to contribute to not only containing public procurement costs but also generating local jobs and facilitating local business development. In addition, the unit rates of road works may be able to be lowered further by strengthening market competition as well as encouraging local contractors to participate more in public road procurement opportunities.

**Component 2: Improved Feeder Roads through Microenterprises.** This component will support local communities organized into microenterprises to provide labor intensive routine maintenance services on clusters of feeder roads adjacent to N1 corridor. These microenterprises are teams of maintenance workers from local communities, which have acquired a certain legal status enabling them to enter into a contract with the public entities responsible for maintaining the road. The microenterprises are generally responsible for basic maintenance activities such as removing obstacles and material from the road, clearing the drainage system and cutting vegetation, thus enhancing the resilience of road and drainage infrastructure, increasing its operational life, and providing connectivity to communities along the corridor, year-round. The experiences with road maintenance microenterprises in the different countries have resulted in improved road conditions, lower overall maintenance costs, and the creation of employment, incomes, and skills in local communities. The creation of microenterprises enhances the resilience of local rural communities through diversification of income sources.

**Component 3: Improved Road Safety.** This component will support the Government aspirations towards SDG 3.6 on decreasing the number of road crashes by 50 percent by 2030. This is a very ambitious target, which will require coordinated, sustained efforts from multiple ministries and agencies and a dedicated long-term commitment to address road safety challenges in a comprehensive way. The MPA approach allows the Government to set and pursue such ambitious goals, which is not achievable under a standard investment project of 4 years. This component will finance: prioritization, design, civil works, and supervision of high crash risk location and speed management improvement programs along the entire N1 corridor; implementation of a safe school program along the entire corridor; improvements in post-crash response; capacity building to improve long-term road safety expertise; and other priority activities focusing on improving road safety as designed through road safety sub-components on-going Integrated Feeder Roads Development Project (IFRDP) and the proposed Southern Africa Trade and Connectivity Project (including on vehicle inspections; speed management, driver licensing, others).

**Component 4: Capacity Building and Project Management.** The project is proposed to include the following capacity building activities: routine maintenance through microenterprises - capacity building for ANE, RF and local communities; road safety management focused on safe system approach; road safety audits, speed management; post-crash response; preparation of future projects, and other areas to be defined during the course of project preparation.

**Component 5: Contingency Emergency Response Component (CERC):** This component will facilitate access to rapid financing by allowing reallocation of uncommitted project funds in the event of a natural disaster either by formal declaration of a national or regional state of emergency or upon a formal request from the Government of Mozambique (GoM). This component will use project specific CERC mechanism.



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

**The environmental risk classification of the proposed project is rated Substantial** due to the project’s likely environmental risks and impacts and the implementing agency first-time implementation of projects under the ESF. While anticipated environmental impacts and risks will be confined along the selected corridors, they are expected to range from moderate to substantial and will occur mainly during construction phases. Key environmental risks and impacts are mainly related to: i) occupational health and safety concerns to contracted as well as community health and safety risks; ii) loss of vegetation, soil erosion and degradation due to land clearance for road works; iii) soil and surface water pollution from construction works and campsites; iv) dust and noise emissions from construction vehicles leading to impacts on water and air quality that could pose significant public health risks, v) generation of hazardous and non-hazardous waste; vi) road traffic safety; and vii) labor working conditions. In addition, proposed interventions, mainly under components 1 and 3 related to road rehabilitations and improvement of road safety respectively, may generate substantial indirect and cumulative impacts, that may lead to: (i) changes on ambient conditions such as the incremental contribution of pollutant emissions in an airshed; (ii) pressure on hydrological and water resources; (iii) urban expansion into agricultural areas; (iv) increased migration that may lead to increased pressure on the ecosystem functions and its carrying capacity; (v) interference with migratory routes or wildlife movement; (vi) wildlife population reduction caused by increased hunting, road kills, and forestry operations; and (vii) depletion of a forest as a result of multiple logging concessions.

**The social risk classification of the proposed project is rated as “Substantial”.** In addition to the risks of first time implementation of ESF as described above, the scale of the project is national, which will put an additional pressure on the implementing agency’s (ANE/RF) capacity to manage environmental and social safeguards in a complex country wide multi-phase approach project. The exact geographic location of proposed road sections to be rehabilitated under the proposed project are well known. Interventions and subprojects under Components 1-3 will likely have major to medium scale civil works due to the road rehabilitation and routine maintenance works. Project activities are not expected to involve physical or economic displacement of people or their livelihoods activities, since it will only focus on rehabilitation of existing right of way within the N1 corridor. Nonetheless, there may be some land acquisition due to minor diversions. This will create new Partial Protection Zones (PPZs) under Mozambique’s Land Law and will require that any households living within the PPZ are provided user rights. Civil works may also result in a potential loss of agricultural plots and sources of livelihoods for roadside vendors, shops, and businesses. Further, the sequence in which an exact stretch of the N1 will be rehabilitated is yet to be determined. Another potential social risk is related to potential conflict in selection of microenterprises and local communities who will benefit from these job opportunities. Selection criteria should be clearly defined in close collaboration with stakeholders and potential project beneficiaries to avoid risks of social conflict and marginalization. Aspects of vulnerability and poverty should be considered as critical in the selection process. Other common social risks across all project components include health risks due to COVID-19 pandemic that are expected in crowded situations such as delivery of services of community-based microenterprises and awareness campaigns on road safety. The management of COVID-19 will be addressed by the Recipient through the development of a COVID-19 protocol in accordance with ESS4.



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