Concept Note

The Green Climate Fund (GCF) is seeking high-quality projects or programmes.

Accredited entities may choose to submit a concept note, in consultation with the relevant national designated authority, to present the proposed project or programme idea in order to receive early feedback and recommendation.

Project/Programme Title: Green Transport Program for Thimphu

Country/Region: Kingdom of Bhutan (South Asia Region)

Accredited Entity: International Development Association (World Bank)

National Designated Authority: Gross National Happiness Commission
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### A. Project / Programme Information

<table>
<thead>
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<th>A.1. Project / programme title</th>
<th>Green Transport Program for Thimphu</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.2. Project or programme</td>
<td>Programme</td>
</tr>
<tr>
<td>A.3. Country (ies) / region</td>
<td>Kingdom of Bhutan</td>
</tr>
<tr>
<td>A.4. National designated authority(ies)</td>
<td>Gross National Happiness Commission</td>
</tr>
<tr>
<td>A.5. Accredited entity</td>
<td>The World Bank - International Development Association (IDA)</td>
</tr>
<tr>
<td>A.6. Executing entity / beneficiary</td>
<td>Executing Entities:</td>
</tr>
<tr>
<td></td>
<td>▪ Ministry of Information and Communications (MoIC) / Road Safety &amp; Transport Authority (RSTA; under MOIC)</td>
</tr>
<tr>
<td></td>
<td>▪ Thimphu Thromde (i.e. the municipal government of Thimphu)</td>
</tr>
<tr>
<td></td>
<td>▪ City Bus Services (a publically owned municipal bus service provider)</td>
</tr>
<tr>
<td>A.7. Access modality</td>
<td>Direct ☐ International ☒</td>
</tr>
<tr>
<td>A.8. Project size category (total investment, million USD)</td>
<td>Micro (≤10) ☐ Small (10&lt;x≤50) ☒ Medium (50&lt;x≤250) ☐ Large (&gt;250) ☐</td>
</tr>
<tr>
<td>A.9. Mitigation / adaptation focus</td>
<td>Mitigation ☒ Adaptation ☐ Cross-cutting ☐</td>
</tr>
<tr>
<td>A.10. Public or private</td>
<td>public</td>
</tr>
</tbody>
</table>

#### A.11. Results areas (mark all that apply)

**Reduced emissions from:**
- ☒ Energy access and power generation  
  (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)
- ☐ Low emission transport  
  (E.g. high-speed rail, rapid bus system, etc.)
- ☐ Buildings, cities, industries and appliances  
  (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)
- ☐ Forestry and land use  
  (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)

**Increased resilience of:**
- ☒ Most vulnerable people and communities  
  (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)
- ☐ Health and well-being, and food and water security  
  (E.g. climate-resilient crops, efficient irrigation systems, etc.)
- ☒ Infrastructure and built environment  
  (E.g. sea walls, resilient road networks, etc.)
- ☐ Ecosystems and ecosystem services  
  (E.g. ecosystem conservation and management, ecotourism, etc.)

| A.12. Project / programme life span | 5 years |
A.13. Estimated implementation start and end date
- Start: July 1, 2018
- End: June 30, 2023

B. Project/Programme Details

The Fund requires the following preliminary information in order to promptly assess the eligibility of project/programme investment. These requirements may vary depending on the nature of the project/programme.

I. PROGRAM OBJECTIVE AND DESCRIPTION

1. The objective of the Green Transport Program for Thimphu is to improve mobility for Thimphu’s population while reducing dependence on fossil fuels. The Royal Government of Bhutan (RGoB) has set out its policy relating to this objective in a guiding document known as “Bhutan Transport 2040 Integrated Strategic Vision” as summarized below:

“The urban transport strategy should focus on providing attractive public transport services and facilities for pedestrians, so that walking becomes the dominant mode in the central area and for short trips. The strategy must also seek to control the impact of private cars through careful management of vehicle numbers and use. The overall objective is to create vibrant, functional, and liveable “green” cities, thus minimizing the adverse effects of traffic growth.”

– Bhutan Transport 2040 Integrated Strategic Vision

A. Program overview

Can a rapidly developing city in a lower-middle income country avoid motorization and dependence on private transport modes as incomes rise?

2. Elsewhere in the South Asia region rising incomes have brought explosive growth in private motor vehicle use with severe consequences on the urban environment and the global climate. Double digit year-on-year increases in motor vehicle ownership over the past decade have been common in many South Asian cities. RGoB is out to take a different path – one that puts people, their environment, and the overall quality of life ahead of private vehicles. The approach to achieving this aim will entail (i) expanding access to higher quality public bus services; (ii) improving non-motorized transport access; and (iii) expanding and transitioning Thimphu’s bus fleet to advanced emissions performance buses that include access features for disabled commuters. If successful, this model would demonstrate a new path for urban development in South Asia – one that could drive productivity growth from urban agglomeration in parallel with environmental benefits.

3. The concept for Thimphu’s Green Transport Program entails a US$ 48.6 million multi-partner approach. Each development partner will support a scope of activities under an integrated program that the Ministry of Information and Communications (MoIC) will direct. At present, the World Bank and the United Nations Development Program (UNDP) are preparing two complementary operations relating to Thimphu’s urban public bus services, urban transport policy development, and institutional capacity. World Bank-managed funds would come from Bank-administered donor trust funds including the Global Partnership on Output-Based Aid. UNDP-managed funds would form part of a Nationally Appropriate Mitigation Action (NAMA) aimed at emissions mitigation. Both World Bank and UNDP sources are finite. The Royal
Government of Bhutan is also fiscally constrained as a result of large investments in renewable energy technologies (namely hydropower). These constraints limit the extent of work possible under the Program without GCF support. Additional contribution from the GCF would enable transformational and highly complementary investments in non-motorized transport infrastructure, and Bus Rapid Transit (BRT) services that enhance the level of impacts achieved.

**B. Accessing the core without the car via Bus Rapid Transit**

“The center of the city is what gives it life and character. It is essential that this zone of the city generate exuberance and a variety of activities. It must be dense, safe, clean and easy to move in.”

– Thimphu Structural Plan

4. Thimphu’s structural plan envisages a future for an urban core that is significantly different from a traditional development path involving motorization and dependence on private vehicles. This vision depends on providing a high level of mobility that can serve a catchment area reaching well beyond the urban core. Thimphu’s spatial layout along a constrained valley means that housing growth will continue to concentrate in northern and southern extremes of the city. There is a pressing need for a transport solution to link these areas into the urban core such that people can access the economic opportunities that the core provides without needing to use private vehicles.

**Figure 1 Envisaged growth nodes in Thimphu’s urban core**

Source: Thimphu Structural Plan

5. In 2012 the RGoB obtained support from the World Bank Group’s International Finance Corporation for a feasibility study of Bus Rapid Transport. This work assessed the viability of different transport solutions and identified a Bus Rapid Transit (BRT) corridor that would run from Barbesa (Thimphu’s southern extreme) to Taba and possibly Dechencholing / Kabesa (near
Thimphu’s northern extreme). This study confirmed the economic viability of a BRT type solution. Other key findings from this study were the following:

- Upfront capital cost and subsequent operations and maintenance solutions favoured a bus-based solution versus rail-based alternatives that would be highly capital intensive and perhaps economically unaffordable;
- Highest levels of modal shift to public transport are likely to be achievable from a corridor that runs along Thimphu’s north south axis with measures to improve bus priority in route and service headways of less than 10 minutes; and
- Conventional advanced-emissions performance buses were the most appropriate solution to provide services given the relatively nascent state of electric buses. The World Bank’s analysis of electric bus options in 2015 confirmed that this recommendation remains valid.

Figure 2  Recommended corridor from 2012 BRT/pre-BRT feasibility study

6. Since the time of the 2012 feasibility study, demand for urban bus services in Thimphu has increased as has the supply of public bus services. This follows on from a doubling of the city bus fleet in 2012 to expand services and supplied capacity. Considering increasing demand and further land development throughout Thimphu, there is a need to review the configuration of Thimphu’s proposed BRT infrastructure, particularly regarding the technical scope of busways. These may include dedicated single direction lanes, single lane dual direction lanes, or a combination thereof with different degrees of segregation from other traffic at different points along the route. The World Bank and RGoB are seeking to expand on the 2012 analysis with further engineering due diligence following this initial GCF concept stage in order to fully define the scope of civil works.

C. Components and descriptions

7. There are three broad components to the Program. These include (i) investments in physical infrastructure; (ii) investments in advanced emissions performance buses and other operating assets for bus services; and (iii) technical assistance and institutional development. Table 1 (below) summarizes the indicative amounts for each component in addition to the source of funds.

8. Component A- investments in physical Infrastructure. This includes the development of bus stops, pedestrian linkages, cycle paths, bus interchange terminals, and bus priority enhancements along existing roads. A key aim of Component A is to address physical barriers to access that inhibit or otherwise reduce the attractiveness of using bus services. The World Bank
is preparing to support construction of approximately 140 new / improved bus shelters with linkages to the pedestrian network in support of the Program. GCF funding for this component would support the following:

- Pedestrianization of Norzin Lam which is the main 1.3 kilometre road through Thimphu’s central business area;
- Development of a North-South cycle path network along the key travel corridors that commuters take in Thimphu;
- Safe road crossings for pedestrians and cyclists; and
- Investments in a BRT related civil works and vehicles for Thimphu along the city’s primary 16 km (approximately) north-south corridor.

9. The International Finance Corporation (the World Bank’s private sector arm) has recently supported a PPP transaction for two paid-parking facilities near the northern and southern ends of Norzin Lam (signed in Sept. 2014). These facilities have mobilized approximately US$ 8 million in private finance and will provide 550 off-street parking spaces that will enable Thimphu to reallocate physical space on Norzin Lam to pedestrians. Terms of the concession contract for Thimphu’s multi-level car parking facilities will also require private parking operators to provide a revenue share to Thimphu Thromde. Initial estimates at the time of tendering suggested that this would amount to approximately US$ 230,000 per year.

10. **Component B- Investments in operating assets:** Specifically, this includes higher quality bus rolling stock with improved emissions performance (Euro V or VI) and disability access features, passenger information systems, cashless ticketing systems, and a bus control systems. The aim of these investments is to enhance service quality, to improve reliability, to expand the amount of physical capacity on the bus network, and to increase the number of people that buses can carry – especially during peak hours. The intended impact of investments in operating assets is to reduce the economic cost and emissions intensity of urban transport in Thimphu. The primary means of achieving this is to shift trips onto public transport from private modes. UNDP is currently supporting a pilot on cashless “e-ticketing” for buses and will aim to support development of a bus control system, CCTV for buses, and other intelligent transport systems. In addition, Bhutan’s proposed NAMA is aiming to pilot 4 electric buses. GCF funding for this component would support the following:

- Procurement of approximately 15 advanced emissions performance buses (e.g. Euro 6) to serve Thimphu’s BRT route and other high demand routes; and
- Procurement of spare parts to facilitate maintenance of advanced emissions buses.

11. **Component C - technical assistance and institutional development:** This component will fund analytics, policy advice, marketing assistance, support to improve operational performance of City Bus Services, implementation support, and project management. The aim of this component is to strengthen Program delivery and the underlying institutions that manage urban transport in Bhutan. Both UNDP and the World Bank are preparing concepts for technical assistance and institutional support that will run alongside other activities.
Table 1  Program funding summary (US$ equivalent)

<table>
<thead>
<tr>
<th>Component</th>
<th>World Bank</th>
<th>GCF</th>
<th>NAMA</th>
<th>Private</th>
<th>RGoB</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component A: physical infrastructure</td>
<td>2,040,000</td>
<td>18,972,000</td>
<td>2,020,000</td>
<td>8,000,000</td>
<td>5,740,500</td>
<td>36,772,500</td>
</tr>
<tr>
<td>GCF.1: pedestrianization of Norzin Lam</td>
<td>-</td>
<td>1,724,000</td>
<td>-</td>
<td>-</td>
<td>431,000</td>
<td>2,155,000</td>
</tr>
<tr>
<td>GCF.2: non-motorized transport civil works</td>
<td>-</td>
<td>2,808,000</td>
<td>-</td>
<td>-</td>
<td>702,000</td>
<td>3,510,000</td>
</tr>
<tr>
<td>GCF.4: BRT &amp; associated bus infrastructure</td>
<td>-</td>
<td>14,440,000</td>
<td>-</td>
<td>-</td>
<td>3,610,000</td>
<td>18,050,000</td>
</tr>
<tr>
<td>WB.1 bus stops and pedestrian infra.</td>
<td>2,040,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>997,500</td>
<td>3,037,500</td>
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<td>PR.1: Thimphu parking facilities</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8,000,000</td>
<td>-</td>
<td>8,000,000</td>
</tr>
<tr>
<td>NAMA.1: bus terminal &amp; chargers</td>
<td>-</td>
<td>-</td>
<td>2,020,000</td>
<td>-</td>
<td>-</td>
<td>2,020,000</td>
</tr>
<tr>
<td>Component B: Adv. emissions bus &amp; other</td>
<td>3,145,000</td>
<td>3,030,000</td>
<td>2,019,200</td>
<td>-</td>
<td>850,073</td>
<td>9,044,273</td>
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<tr>
<td>WB.2: rolling stock and maintenance systems</td>
<td>3,145,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,145,000</td>
</tr>
<tr>
<td>GCF.3: Euro 6 trunk route buses &amp; parts</td>
<td>-</td>
<td>3,030,000</td>
<td>-</td>
<td>-</td>
<td>757,500</td>
<td>3,787,500</td>
</tr>
<tr>
<td>NAMA.2: e-buses for pilot</td>
<td>-</td>
<td>-</td>
<td>2,019,200</td>
<td>-</td>
<td>92,573</td>
<td>2,111,773</td>
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<tr>
<td>Component C: TA &amp; institutional development</td>
<td>640,000</td>
<td>-</td>
<td>2,112,800</td>
<td>-</td>
<td>-</td>
<td>2,752,800</td>
</tr>
<tr>
<td>WB.3: TA for marketing &amp; results-based appr.</td>
<td>640,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>640,000</td>
</tr>
<tr>
<td>NAMA.3: implementation support for e-bus pilot</td>
<td>-</td>
<td>-</td>
<td>1,100,000</td>
<td>-</td>
<td>-</td>
<td>1,100,000</td>
</tr>
<tr>
<td>NAMA.4: audits &amp; results assessment</td>
<td>-</td>
<td>-</td>
<td>712,500</td>
<td>-</td>
<td>-</td>
<td>712,500</td>
</tr>
<tr>
<td>NAMA 5: Other (contingency &amp; admin)</td>
<td>-</td>
<td>-</td>
<td>300,300</td>
<td>-</td>
<td>-</td>
<td>300,300</td>
</tr>
<tr>
<td>Totals</td>
<td>5,825,000</td>
<td>22,002,000</td>
<td>6,152,000</td>
<td>8,000,000</td>
<td>6,590,573</td>
<td>48,569,573</td>
</tr>
</tbody>
</table>

% of total | 12.0% | 45.3% | 12.7% | 16.5% | 13.6% | 100% |

B.2. Background information on project/programme sponsor

Describe project/programme sponsor’s operating experience in the host country or other developing countries.

Describe financial status and how the project/programme sponsor will support the project/programme in terms of equity, management, operations, production and marketing.

II. BACKGROUND AND CONTEXT

12. Bhutan has a national population of approximately 757,979 people. Approximately 122,242 people live in the capital city of Thimphu. Despite a relatively small national population, Bhutan’s urban areas are undergoing a significant transition. Between 1990 and 2010, the number

2 National Statistics Board
of Bhutanese living in urban areas nearly tripled. Increasing rates of motor vehicle ownership and use have accompanied this trend bringing impacts on the urban environment (e.g. changes to land use, emissions, congestion, noise, health, etc.).

13. In response, RGoB has both limited the import of private vehicles at times and increased taxes on upfront vehicle purchases but have proved insufficient and difficult to sustain. These measures are likely to become less effective with time as vehicle restrictions have also resulted in unmet needs for urban mobility. There is a pressing need for Bhutan to accelerate the availability of alternative modes of transport that provide greater sustainability. The Royal Government of Bhutan has therefore sought to promote “greener” modes including low or zero emissions vehicles, public transport, and non-motorized transport. The World Bank and the United Nations Development Program have been engaged with the Royal Government of Bhutan to support this initiative with analytical work. Both UNDP and the World Bank are also now preparing complementary grant-funded investment operations to develop infrastructure and public transport operations that can support the Royal Government of Bhutan’s vision for green transport.

A. Historical trends

14. Living Standards Surveys collected by Bhutan’s national statistics office illustrate a disturbing trend that is entirely opposite from RGoB’s policy objectives relating to urban transport. Most notably, each successive living standards survey between 2003 and 2012 has shown an increasing trend toward private vehicle ownership and use along with reductions in non-motorized transport use.

<table>
<thead>
<tr>
<th>Year</th>
<th>VEHICLE OWNERSHIP</th>
<th>WALKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2.84% of urban HH owned a motorbike or scooter</td>
<td>64.04% of urban HH walk to Post Office</td>
</tr>
<tr>
<td></td>
<td>4.47% of urban HH owned a motor vehicle</td>
<td>61.7% of urban HH walk to hospital or health centre</td>
</tr>
<tr>
<td>2007</td>
<td>24% of urban HH owned a car</td>
<td>27.2% of urban HH walk to access Dzongkhag (i.e. regional government) headquarters</td>
</tr>
<tr>
<td>2012</td>
<td>36% of urban HHs in Bhutan own a car (42.6% in Thimphu)</td>
<td>20.5% of urban HH walk to access Dzongkhag (i.e. regional government) headquarters</td>
</tr>
<tr>
<td></td>
<td>5% own a motorbike or scooter (5.2% in Thimphu)</td>
<td></td>
</tr>
</tbody>
</table>


15. The trends noted above are indicative of rising incomes, behavioral factors, and under developed alternatives. Most notably, Bhutan’s non-motorized transport infrastructure and urban public transport systems have not kept pace with increasing demand and customer expectations for higher quality of service. Available data on public transport use confirms this. Less than one third of urban households in Bhutan reported using public transport in a given month in 2012.

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3 Most recently, RGoB lifted a ban on vehicle imports in July 2015. Two wheeled vehicles remain under restrictions however.
16. Improving the availability and quality of urban transport services in Thimphu offers an opportunity to meet the expanding demand for urban mobility through services that both align with the needs of lower income households and offer environmental benefits relative to private transport. However, capturing these benefits will require a steep change in both infrastructure and the operating capacity of the City Bus Service.

B. Policy context

17. Bhutan has a national transport vision known as “Bhutan Transport 2040 Integrated Strategic Vision” which was adopted in June of 2013. This document envisages that “…The urban transport strategy should focus on providing attractive public transport services and facilities for pedestrians, so that walking becomes the dominant mode in the central area and for short trips... The overall objective is to create vibrant, functional, and liveable ‘green’ cities, thus minimizing the adverse effects of traffic growth.” Specific interventions identified in Bhutan Transport 2040 include: (i) development of public transport, including identifying measures to boost ridership based on several options, both for the short- and long term; and (ii) improvement of facilities for pedestrians, including a safe and secure network of routes and priorities within the central area.

III. Public and para transit in Thimphu

18. Public transport and para-transit services in Thimphu are varied and include the following: (i) urban public buses provided by City Bus Services and, private operators on selected inter-city routes; (ii) bus services offered by individual schools; (ii) “institutional” buses (government and private paratransit); and (iii) taxis (approximately 3,500) that operate both individual passenger services and shared ride services as market conditions warrant. The largest operator of bus services is the City Bus Services which is a division of Bhutan Postal Corporation which is in turn a government owned entity. Their 32 buses carry approximately 6,000 passengers per day representing roughly 6% of all trips in Thimphu. Taxis carry about 30% of trips per day, often in the form of shared ride services whereby multiple independent passengers share a taxi (see Figure 4).

19. The current modal split of urban transport in Thimphu reflects a constrained supply of public bus services. The World Bank recently conducted a 1,000 household survey of transport preferences and travel behaviors in Thimphu. Roughly 30% of non-bus users reported that long an irregular waiting times for buses was the primary reason for their choice of alternative modes. A further 30% of non-users reported that they did not use buses because the routing was tedious and took longer to reach the destination or the stop was too far from their origin or destination. In contrast, approximately 77% of regular taxi users who responded to the World Bank’s household survey on travel behaviors cited that the primary reason that they use taxis is because they are “quick & convenient.” However, it is important to note that taxi fares can range from twice to 15 times more than the average bus fares (depending on distance). Persons with impaired mobility can often pay much more than this as well when they cannot share rides or require pickup from their homes. This creates an affordability issue for lower income households. Roughly 46% of respondents to the World Bank’s survey who do not use taxis cited affordability as a key concern. In contrast, 76% of regular city bus users cited the affordability of bus fares as a primary reason for their choice of mode.
A. Improving the City Bus Service

20. Relative to other IDA countries in South Asia, Bhutan’s public transport related institutions are strong. For example, the City Bus Service has a functioning grievance redress mechanism for passengers. This currently consists of the City Bus Service manager’s personal mobile number posted conspicuously on the inside of each bus and on ticket receipts. Despite its simplicity, this system reportedly handles approximately 6-10 complaints per day. In 2013, MoIC, Thimphu Thromde (the municipal government of Thimphu), and the City Bus Service have developed preliminary plans for investments in stops and pedestrian infrastructure than can improve the attractiveness of bus services. These plans have remained unfunded to date. The proposed intervention under the Program would help enable portions of these plans to move forward.

21. There is much that can be done to improve City Bus Services – especially for low income segments of Thimphu’s population. Most notably, there is an immediate need to overcome barriers to accessing bus services. These barriers include: (i) current urban bus services offer insufficient capacity at peak hours that force potential customers to pay more for taxis; (ii) services are too infrequent and unreliable; (iii) underdeveloped stop infrastructure and pedestrian linkages result in barriers to safe access – particularly for mobility impaired segments of the population; (iv) limited passenger information on bus routes, timetables, and interchanges impede the ability of new users to switch to bus. Addressing these barriers to access is critical for improving mobility and the affordability of that mobility for low income segments of Thimphu’s population and individuals with impaired physical mobility who may not have access to private modes.

Figure 4 Example – taxis operating shared ride services

Photo source: World Bank task team

22. The City Bus Service currently serves 10 bus routes in Thimphu with service headways ranging between 15 and 30 minutes. Individual buses show route numbers in their windshields, and there are individual route maps available on the RSTA website. Figure 5 shows the route map for the highest demand corridor along Thimphu’s North-South axis. It is important to note that there is no up-to-date map showing City Bus Service’s integrated route network. There is also no online customer interface for bus services such as a ‘ride guide’ or ‘trip planner’ application. These are proposed to be developed under the World Bank and UNDP supported interventions under the Program.
IV. REGULATION, INSURANCE, AND TAXES

A. Regulation of bus services (safety, routes, fares, etc.)

23. Regulation and enforcement of urban transport vehicles falls on the Bhutan’s Road Safety and Transport Authority (RSTA) under the MoIC. RSTA has a mandate for managing vehicle registration (including buses), licensing drivers, and regulating vehicle safety. This entails 6 roadworthiness inspections of City Bus Service’s buses to ensure compliance with relevant standards. The current regime for safety regulation will also apply to buses and their operation under the Program.

24. RSTA also has jurisdiction over setting bus and taxi fare, and bus routes (which have historically originated from City Bus Service, Thimphu Thromde, and MoIC). Shortfalls between fares and operating / capital expenditures for the City Bus Service come directly from the Ministry of Finance as a budgetary transfer. The existing process for both routes and fares would apply under the Program. Importantly however, the process for accommodating shortfalls would be governed by a Public Service Contract as described in section V.

25. Traffic Division of the Royal Bhutan Police is responsible for enforcing traffic rules, and vehicle capacity limits on Thimphu’s roads. Most notably, this includes restrictions on bus overloading. The rigor of enforcement for such rules has increased in the past financial year which has had both positive and negative impacts on bus services. While reduced loading has improved the comfort and safety of bus services, it has also cut capacity at peak hours. Overloading restrictions would continue to apply to City Bus Service’s fleet under the Program.

B. Taxes on vehicles (including buses)

26. Bhutan taxes upfront vehicle purchase based on engine capacity and technology across three dimensions: (i) sales tax; (ii) customs duty; and (iii) and a “green tax” which primarily affects conventional fuel vehicles and vehicles with larger engine capacity. Hybrid and electric vehicles...
are already exempt from taxation across all three taxes that pertain to upfront vehicle purchases. Below is a summary of Bhutan’s most recent vehicle tax rates:

Table 2  Vehicle taxes in Bhutan (as on July 1, 2015)

<table>
<thead>
<tr>
<th>Vehicle class</th>
<th>Sales Tax</th>
<th>Customs Duty†</th>
<th>Green Tax</th>
<th>Total tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1500cc</td>
<td>45%</td>
<td>45%</td>
<td>10%</td>
<td>100%</td>
</tr>
<tr>
<td>Hybrid less than 1500cc</td>
<td>45%</td>
<td>25%</td>
<td>5%</td>
<td>75%</td>
</tr>
<tr>
<td>1500 cc to 1799 cc</td>
<td>50%</td>
<td>50%</td>
<td>15%</td>
<td>115%</td>
</tr>
<tr>
<td>1799 cc - 2500 cc</td>
<td>50%</td>
<td>50%</td>
<td>20%</td>
<td>120%</td>
</tr>
<tr>
<td>2500 cc to 3000 cc</td>
<td>50%</td>
<td>50%</td>
<td>25%</td>
<td>125%</td>
</tr>
<tr>
<td>more than 3000 cc</td>
<td>100%</td>
<td>50%</td>
<td>30%</td>
<td>180%</td>
</tr>
<tr>
<td>Electric</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Notes: † Customs duty does not apply to Indian vehicles

27. It is important to note that Bhutan has a free trade agreement with India that exempts Indian made vehicles from the customs duty noted above. This effectively provides conventional Indian vehicles with a 25%-50% upfront cost advantage in the local market.

28. Buses purchased under the program would likely be subject to taxation under all or part of the regime noted above. The proposed approach to accommodating this would be for RGoB to fund all taxes as part of its co-financing commitment to the Program. (Note: this is not showing in Table 1 in order to avoid confusion).

C. Insurance for buses

29. Passenger buses that operate in Bhutan are required to have comprehensive insurance coverage. The City Bus Service maintains insurance policies on its buses that cover damage or loss to the vehicle itself along with third party liability. At present, insurance policies for existing buses are with either Bhutan Insurance Ltd. or the Royal Insurance Corporation of Bhutan Ltd. A similar approach would apply to buses procured under the Program.

V. ROLES AND RESPONSIBILITIES FOR IMPLEMENTATION

30. There are four RGoB institutions that will be working together directly on project implementation as follows:

- **Ministry of Information and Communications** which has the mandate for transport services under the Road Safety & Transport Act 1999, is the coordinating ministry for overall Program implementation and will coordinate the efforts of different RGoB entities. MoIC will lead the Program’s technical assistance component (Component C).

- **Ministry of Finance / Gross National Happiness Commission (GCF NDA)** will serve as the counterparties for all foreign assistance given to the Program. MoF will handle budgeting, reporting, and disbursement requests during implementation;

- **City Bus Service** under Bhutan Post will serve as the service delivery arm of the Program that will be responsible for providing bus services, ticketing and revenue collection, and implementing customer-focused systems aimed at stimulating demand for public transport.
City Bus Service will also compile data as needed to report on operating metrics and will receive budget from MoF to discharge its Program related functions; and

- **Thimphu Thromde** will serve as the infrastructure development arm of the Program for non-motorized transport infrastructure, all road/bridge works, bus terminals bus stops, and bus bays under Component A (physical infrastructure). This will include the construction of bus stop infrastructure, pedestrian linkages, safe crossings, procurement of electric connections for bus stop lighting, and the upgrading of the city bus terminal. Thimphu Thromde will provide all municipally owned land required for Program implementation. MoF will supply Thimphu Thromde with appropriate budget resources for discharging its program related functions.

31. In addition to the Program-specific implementation arrangements noted above, the Road Safety and Transport Authority (RSTA) of the Ministry of Information and Communications (MoIC) will continue to function in its current role as the regulator of bus fares, routes, vehicle registration, and safety standards. Similarly, MoIC will continue in its existing role as RGoB’s lead policy institution for public transport including urban transport in Bhutan whilst coordinating overall Program implementation.

A. **The Public Service Agreement**

32. The Program will support RGoB to deploy a Public Service Agreement (PSA) between MoF, MOIC/RSTA, Thimphu Thromde, and the City Bus Service. Terms of this agreement will define the following: (i) basic service standards and performance metrics; (ii) specific obligations of different parties to support service delivery; (iii) formal coordination mechanisms between institutions; and (iv) a framework for short and medium term business planning; and (v) a methodology for agreeing annual subsidies as required to achieve agreed service standards and performance targets. The World Bank has supported MoIC to draft an initial PSA which the Program will use that is based on the JASPERS model\(^4\) which has achieved positive results internationally.

B. **Detailed concept description**

33. Figure 6 (below) summarizes a basic schematic of Program funds flow and the key agreements that will support implementation. GCF and World Bank administered money would use the national budget system and rely on recipient led procurement and financial management processes. These are well developed in Bhutan and adequate for the Program’s purpose. UNDP administered actives would entail direct procurement of goods and services and direct payment.

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\(^4\) JASPERS (‘Joint Assistance to Support Projects in European Regions’) is a technical assistance partnership between the European Commission, the European Investment Bank, and the European Bank for Reconstruction and Development. Its purpose is to promote the efficient use of EU Structural Funds, thereby stimulating future investment. The European Bank for Reconstruction and Development has deployed similar agreements based on the JASPERS model to frame the institutional roles and responsibilities for publically owned bus companies in developing nations throughout Eastern Europe, Central Asia, and the Caucuses with proven positive results.
34. It is important to note that many of the roles / responsibilities required for Program implementation are already in place and functioning on both formal and informal levels. For example, Thimphu Thromde, City Bus Service and MoIC have already been working together on bus network development plans that include rough concepts for upgraded bus stop infrastructure. Similarly, MoIC already leads on sector policy and RSTA (under MoIC) also already regulates bus fares, routes, registration, and vehicle safety standards.
C. Financing / Cost Information

Please provide:
- a breakdown of cost estimates analysed according to major cost categories.
- a financial model that includes projection covering the period from financial closing through final maturity of the proposed GCF financing with detailed assumptions and rationale;
- a description of how the choice of financial instrument(s) will overcome barriers and achieve project objectives, and leverage public and/or private finance.

Please see Table 1 and the attached spreadsheet file for summary of financial elements.

<table>
<thead>
<tr>
<th>Financial Instrument</th>
<th>Amount</th>
<th>Currency</th>
<th>Tenor</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total project financing (a) = (b) + (c)</td>
<td>48.6</td>
<td>million USD ($)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Requested GCF amount

| (i) Senior Loans | Options | ( ) years | ( ) % |
| (ii) Subordinated Loans | Options | ( ) years | ( ) % |
| (iii) Equity | Options | ( ) years | ( ) % |
| (iv) Guarantees | Options | ( ) years | ( ) % |
| (v) Reimbursable grants * | million USD ($) | ( ) % IRR | |
| (vi) Grants * | 22 | million USD ($) | |

* Please provide detailed economic and financial justification in the case of grants.

| Total Requested (i+i+ii+iii+iv+v+vi) | 22 | million USD ($) | |

(c) Co-financing

<table>
<thead>
<tr>
<th>Financial Instrument</th>
<th>Amount</th>
<th>Currency</th>
<th>Name of Institution</th>
<th>Seniority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant</td>
<td>5.8</td>
<td>million USD ($)</td>
<td>GPOBA/others</td>
<td>pari passu</td>
</tr>
<tr>
<td>Equity</td>
<td>6.6</td>
<td>million USD ($)</td>
<td>RGoB</td>
<td>pari passu</td>
</tr>
<tr>
<td>Senior Loans</td>
<td>8.0</td>
<td>million USD ($)</td>
<td>Private finance</td>
<td>N/A</td>
</tr>
<tr>
<td>Grant</td>
<td>6.2</td>
<td>million USD ($)</td>
<td>UNDP</td>
<td>senior</td>
</tr>
</tbody>
</table>

Lead financing institution: The World Bank
NOTE: UNDP contribution to the Program would be under parallel finance modality (e.g. not co-financing); Private finance to program implemented via standalone concession (i.e. financially remote from WB and other financing)

(d) Covenants

- The Recipient shall execute a Public Service Agreements, satisfactory to the Association, between the Ministry of Finance, Thimphu Thromde, and the City Bus Service. The Public Service Contract will include: (i) defined obligations and rights for each entity relating to the provision of bus services;
(ii) performance metrics and targets for the City Bus Company; (iii) a methodology for allocating capital and operating subsidies to the City Bus Company from the Ministry of Finance; and (iv) an agreed framework for governing City Bus Services.

- The Ministry of Finance will make annual budgetary allocations available to Thimphu Thromde and the City Bus Services for the maintenance of capital works developed under the Program. This will include an amount adequate to support routine cleaning and upkeep in addition to periodic repairs of a capital nature.

- The Recipient, through the Ministry of Information and Communications, shall within 1 year of the Program’s Effective Date produce a multi-year investment plan, satisfactory to the Association, for enhancements and renewals to pedestrian infrastructure and bus-service related assets.

*Note 1: “Effective date” is the date on which the legal agreement with IDA comes into force.

*Note 2: “the Association” means the International Development Association which will be the World Bank’s managing entity for the proposed GPOBA grant.

<table>
<thead>
<tr>
<th>(e) Conditions precedent to disbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The Recipient shall adopt a Program Operations Manual, satisfactory to the Association, to guide the role of all parties in Program Implementation.</td>
</tr>
</tbody>
</table>

D. Expected Performance against Investment Criteria

Please explain the potential of the Project/Programme to achieve the Fund’s six investment criteria as listed below.

<table>
<thead>
<tr>
<th>Specify the climate mitigation and/or adaptation impact. Provide specific values for the below indicators and any other relevant indicators and values, including those from the Fund’s Performance Measurement Frameworks.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Total tonnes of CO₂ eq to be avoided or reduced per annum</td>
</tr>
<tr>
<td>• Expected total number of direct and indirect beneficiaries and number of beneficiaries relative to total population (e.g. total lives to be saved from disruption due to climate-related disasters)</td>
</tr>
</tbody>
</table>

VI. CLIMATE IMPACT POTENTIAL AND PROGRAM EFFICIENCY

36. The Program has the potential to impact all of Thimphu’s population (approximately 122,242 people) due to reductions in local emissions, improved mobility, and potential reductions in traffic congestion. Beneficiaries who receive the most direct impacts are likely to be bus users who are projected to undertake approximately 16,153 trips per day in 2020. Table 3, below, summarizes projections relating to the Program’s climate impact potential and overall efficiency of funding based on the World Bank’s preliminary economic assessment. The carbon mitigation potential of the Program by 2020 is approximately 11,782 metric tonnes per annum which is about 1.94% of Bhutan’s current total carbon emissions per year across all sectors of the economy. The projected modal shift due to the Program would save Bhutan approximately 6.15 million liters of petrol imports in 2020 for the cost of an additional 256,887 liters of imported diesel to (to fuel additional bus kilometers).
Table 3  Summary of climate benefit & efficiency measures

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liters of petrol saved / annum (yr 2020)</td>
<td>6,147,753</td>
<td></td>
</tr>
<tr>
<td>Liters of diesel saved / annum (2020)</td>
<td>(256,887)</td>
<td></td>
</tr>
<tr>
<td>Metric Tonnes of carbon saved / annum (2020)</td>
<td>11,782</td>
<td></td>
</tr>
<tr>
<td>PV of all investment per annual # of bus trips (2020)</td>
<td>$ 7.90</td>
<td></td>
</tr>
<tr>
<td>PV of investment per metric tonne of carbon abated</td>
<td>$ 171.28</td>
<td></td>
</tr>
<tr>
<td>PV of all investment per population of Thimphu</td>
<td>$ 380.80</td>
<td></td>
</tr>
</tbody>
</table>

Provide the estimates and details of the below and specify other relevant factors.

- Potential for scaling-up and replication (e.g. multiples of initial impact size)
- Potential for knowledge and learning
- Contribution to the creation of an enabling environment
- Contribution to the regulatory framework and policies

VII. OPPORTUNITIES FOR REPLACEMENT IN SOUTH ASIA OR ELSEWHERE

37. Many of the challenges to improving bus services and non-motorized transport in Thimphu are common throughout the South Asia region. Specifically, the combined need for increased physical capacity on the bus network, institutional reforms, stronger service delivery approaches, and infrastructure development is prevalent in cities throughout the region. The proposed project therefore offers opportunities for both demonstration impact and potential replication in a region where emissions from urban transport are a globally significant issue. Most notably, Thimphu’s scale offers the potential to demonstrate a transformational step change in urban transport in an environment where cause and effect are readily identifiable and governance risks to the Program are relatively low.

38. Some larger cities in South Asia have sought to develop urban rail services (e.g. Delhi, Mumbai, Bangalore, Colombo, Chennai). However, the majority of urban transport in the region is either non-motorized or bus-based. For example, even in a ‘mega city’ like Dhaka buses account for 30% of trips, cycle rickshaws account for a further 38%, and walking accounts for 20%. In a medium sized city like Kathmandu, bus accounts for 28% of trips with walking accounting for another 40%. Even in more developed cities throughout Latin America and East Asia, bus still plays a critical role along trunk corridors or as feeder system for other modes (e.g. mass rapid transit). What makes modal shares in South Asia particularly interesting is that bus services across throughout the region generally offer very poor quality of service. Similarly, pedestrian infrastructure is underdeveloped in most cities. For example, the Asian Development Bank ranked Kathmandu amongst the least walkable cities in Asia despite the statistics mentioned above.

39. Across South Asia, non-motorized transport and buses are commonly underdeveloped yet predominant in terms of modal share due to very low incomes. This offers governments a key opportunity to achieve development objectives by improving what these modes offer to people who do not use private transport. One objective of this Program is therefore to demonstrate the benefits on offer by avoiding a typical path towards high rates of private vehicle ownership and use so that neighboring governments in the South Asia region begin to see the value of alternative policy approaches.
**D.3. Sustainable development potential [Potential to provide wider development co-benefits]**

Provide the estimates of economic, social and environmental co-benefits. Examples include the following:

- **Economic co-benefits**
  - Total number of jobs created
  - Amount of foreign currency savings
  - Amount of government’s budget deficits reduced

- **Social co-benefits**
  - Improved access to education
  - Improved regulation or cultural preservation
  - Improved health and safety

- **Environmental co-benefits**
  - Improved air quality
  - Improved soil quality
  - Improved biodiversity

- **Gender-sensitive development impact**
  - Proportion of men and women in jobs created

**VIII. SUSTAINABLE DEVELOPMENT IMPACTS**

**A. Benefits to poor & low income households**

40. The proposed Program targets beneficiaries by mode of transport which effectively targets poor and other low income segments of Thimphu’s population. The World Bank’s household survey on travel behaviors in Thimphu suggests that 15% of regular bus users come from households with reported incomes below BTN 100,000 per year (US$ 1,500 or approximately US$ 1.03 per capita per day). A further 41% of city bus users come from households with incomes between BTN 100,000 and BTN 200,000 per year (US$ 3,000 per year or US$ 2.06 per capita per day). Affordability of bus services is a key concern for the majority of regular bus users. Roughly 76% of regular bus users who responded to the World Bank’s household survey cited fare affordability as the primary reason that they choose bus over other modes.

**B. Gender**

41. Improving bus services and non-motorized transport infrastructure in Thimphu also targets women. Few women in Bhutan are licensed drivers. Data from RSTA in 2012/13 suggests that the vast majority of licensed drivers in Bhutan (over 90%) are male. Barriers to accessing bus services are also one reason why women are currently underrepresented in the overall trips that are made within Thimphu based on the World Bank’s household survey on travel behaviors. For example, 62% of male heads-of-household make two or more trips per day. In contrast, only 17% of female heads of household make two trips per day. Reduced trip making is particularly true for women in lower income households whose ability to afford private transport or taxis is limited. Increasing the density of supply of bus services can offer a more attractive, affordable alternative to meet the latent trip demand of Thimphu’s female population.

**D.4. Needs of recipient [Vulnerability to climate change and financing needs of the recipients]**

Describe the scale and intensity of vulnerability of the country and beneficiary groups and elaborate how the project/programme addresses the issues. Examples of the issues include the following:

- Level of exposure to climate risks for beneficiary country and groups
- Does the country have a fiscal or balance of payment gap that prevents from addressing the needs?
- Does the local capital market lack depth or history?
- Needs for strengthening institutions and implementation capacity

**IX. NEEDS OF THE RECIPIENT**

42. There are few public transport services in the world that cover their cost while also delivering a high quality of service to customers. The Royal Government of Bhutan, like many governments, subsidizes public bus transport explicitly (and with transparency in the
budget) as a matter of policy. The Ministry of Finance has informed the World Bank’s team that this policy will continue for the foreseeable future. As of 2015 RGoB subsidies to City Bus Service operating costs totaled approximately US$358,300 which is fiscally affordable considering it represents only .002% of the national expenditure budget for FY14/15. RGoB’s policy aims at providing a mode of travel for those who cannot afford private vehicles and offering a “greener” alternative to private motor vehicle use for motorized segments of the population. The explicit nature of this policy commitment and RGoB’s positive fiscal outlook provide strong security that continued financial subsidies for public transport are sustainable.

43. In contrast, RGoB’s ability to afford upfront capital investments that are required to improve public bus services is limited. Bhutan has recently invested heavily in hydropower development which offers the potential for future fiscal benefits accruing from energy export. However, the massive size of these projects relatively to the Bhutanese economy implies significant macroeconomic challenges over the medium term. The three hydropower projects under construction have together a cost of 190 percent of Bhutan’s GDP (2013). The International Monetary Fund’s Article IV consultation accordingly indicates that Bhutan has a moderate risk of debt distress on account of volatile hydropower-related debt repayments. While RGoB has demonstrated a strong commitment to improving urban transport, there is a need to deploy grant resources in support of this development aim in order to facilitate prudent and sustainable debt management.

### D.5. Country ownership

[Beneficiary country ownership of project or programme and capacity to implement the proposed activities]

Provide details of the below and specify other relevant factors.

- Coherence and alignment with the country’s national climate strategy and priorities in mitigation or adaptation
- Brief description of executing entities (e.g. local developers, partners and service providers) along with the roles they will play
- Stakeholder engagement process and feedback received from civil society organizations and other relevant stakeholders

### X. COUNTRY OWNERSHIP

44. The proposed Program aligns directly with RGoB’s policy aims as articulated in “Bhutan Transport 2040 Integrated Strategic Vision” which was published in June of 2013. This strategy frames a government-owned way forward for addressing transport sector challenges across various sub-sectors (roads, air, urban transport, etc.). Specifically elements of RGoB’s policy which align with the Program include:

(i) Improvement of the traffic engineering and management system, including better use of existing road space, provision of safety enhancements, and revision of traffic circulation;

(ii) Development of public transport, including identifying measures to boost ridership based on several options, both for the short- and long term; and

(iii) Improvement of facilities for pedestrians, including a safe and secure network of routes and priorities within the central area.
Provide details of the below and specify other relevant factors (i.e. debt service coverage ratio), if available.

- Estimated cost per t CO2 eq (total investment cost/expected lifetime emission reductions)
- Co-financing ratio (total amount of the Fund’s investment as percentage of project)
- Economic and financial rate of return
  - With the Fund’s support
  - Without the Fund’s support

### XI. Effectiveness & Efficiency

45. The World Bank has conducted an initial conservative economic assessment of the proposed Program over a 20 year time horizon that considered: (i) time savings; (ii) fuel savings; and (iii) carbon savings. This analysis included the additional costs of rolling stock renewal in approximately 10 years but did not endeavor to estimate avoided private or taxi vehicle purchase or accident reductions due to uncertainties around appraisal assumptions. Results suggest that the project would yield an Economic Net Present Value of US$ 19.0 million at a 6% discount rate with an Economic Rate of Return of 13.0%.

Table 4 below contains a summary of the costs and economic benefits of the proposed Program. Table 3 contains a summary of efficiency measures for investment relative to beneficiaries, emissions reductions and other factors.

<table>
<thead>
<tr>
<th>Present value of benefit (cost)</th>
<th>Net Present Value of costs / benefits [US$]</th>
<th>% of NPV of benefits</th>
<th>% of NPV of costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Savings</td>
<td>$62,220,246</td>
<td>92%</td>
<td></td>
</tr>
<tr>
<td>Emissions Savings</td>
<td>$5,104,719</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Time Savings</td>
<td>($1,775,365)</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Capital investment</td>
<td>($43,328,487)</td>
<td>89%</td>
<td></td>
</tr>
<tr>
<td>Operational &amp; other expenses</td>
<td>($3,220,754)</td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>

**NPV of project @6% discount** $19,000,358

**IRR of project** 13.0%

### E. Brief Rationale for GCF Involvement and Exit Strategy

Please specify why the GCF contribution is critical for the project/programme.

#### XII. Rationale for GCF Involvement

46. Bhutan’s fiscal position and borrowing capacity is constrained due to high rates of investment in renewable hydroelectricity projects. This would otherwise limit the RGoB’s ability to invest in Thimphu’s public bus services and non-motorized transport infrastructure. GCF contribution to the Program is critical to addressing these constraints. Specifically, GCF funds allow for the following: (i) accelerated transition to advanced emissions performance buses and bus priority measures along Thimphu’s main transport corridor; and (ii) large scale contemporaneous investments in non-motorized transport access. The ability of RGoB to hold back motorization and increased private vehicle use in the presence of rising incomes is limited without higher quality alternatives. There is a strong case to accelerate Thimphu’s transition to more sustainable modes of transport before households become effectively “locked in” to other transport modes as they look to meet their mobility needs. The delay that would otherwise result from not receiving GCF support may reduce the effectiveness of future investments aimed at getting households to switch back to more sustainable forms of transport.

47. The Program envisages that GCF support would entail “one time” grants to fund capital investments. RGoB’s medium term fiscal position is positive and able to support operations / maintenance of these assets. However, upfront cost are greater than what RGoB could finance while providing for prudent debt management. GCF would exit the Program after its initial asset development phase according to the proposed approach.
Please explain how the project/programme sustainability will be ensured in the long run, after the project/programme is implemented with support from the GCF and other sources.

XIII. SUSTAINABILITY

48. The Public Service Agreement that will accompany Program implementation frames a sustainable institutional approach for the management of public bus services in Thimphu. The World Bank has supported MOIC to draft an initial PSA which the project will use. Over the medium term future is unlikely that public bus services in Thimphu would cover the entirety of their operating costs which implies that some form of continuing subsidy will be required. The current and projected magnitude of these subsidies is well within RGoB’s fiscal capacity. However, the World Bank’s proposed technical assistance that would accompany Program investments would also provide advice to RGoB on approaches for reducing the fiscal impact of operating subsidies to City Bus Services in order to further enhance sustainability. For example, this could include additional taxation policies relating to fuel or private vehicles.

F. Risk Analysis

Please describe the financial and operational risks and discuss mitigating measures.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation Strategy</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The staff of City Bus Service may leave for other positions within Bhutan Post. Much of the knowledge that enables City Bus Services to function comes from ‘on the job’ learning that would be difficult to replace. The manager of City Bus Service in particular is key to the success of the proposed Program.</td>
<td>The World Bank will seek RGoB’s assurances via the legal agreement to maintain adequate staffing of City Bus Service as much as possible throughout implementation.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Customer charges do not currently cover the cost of bus services. The sustainability of City Bus Service depends on continued operating subsidy from the Ministry of Finance. Subsidies are not guaranteed to continue into the future.</td>
<td>The Bank has consulted with MoF regarding their intention to continue operating subsidies to City Bus Service. At present, there are no plans to discontinue this approach as bus services are seen as a critical social service. The project Grant Agreement will also include a formal covenant to reaffirm this commitment.</td>
<td>Low</td>
</tr>
<tr>
<td>Implementation will rely on close collaboration between MoF, MoIC/RSTA Thimphu Thromde, and City Bus Service. While these institutions have worked well together in the past, continued effectiveness in collaborating is not a guarantee and could impede results.</td>
<td>The proposed Public Service Agreement would help to set ‘rules of the game’ for the future relationship between the key institutions involved in Thimphu’s bus services. Terms of this agreement will set transparent mechanisms for governing service provision and adequate resourcing needed to achieve agreed targets. Adequate annual budgeting for both Thimphu Thromde and City Bus Service will be a covenant in the World Bank’s Grant Agreement with RGoB. This will help ensure that each has the resources needed to discharge their respective functions.</td>
<td>Moderate</td>
</tr>
<tr>
<td>The Program will require land. Thimphu Thromde already owns most of this land. However, a need for land acquisition may arise which could expose the Program to safeguards related risks.</td>
<td>Voluntary land donation will be the preferred means for acquiring incremental land required for the Program. Where a proposed stop infrastructure would require other methods of land acquisition, the implementing institutions will first pursue other technical options such as designs that require less land or alternative sites.</td>
<td>Moderate</td>
</tr>
<tr>
<td>RGoB currently taxes private conventional vehicles significantly. If these policies were to suddenly change, demand for bus services could suffer.</td>
<td>The RGoB’s current transport policy as articulated in “Bhutan Transport 2040 Integrated Strategic Vision” does not portent a wholesale change in policies towards private vehicles. The likelihood of such a change is low. However, the Program may need restructuring if any such change did occur.</td>
<td>Low</td>
</tr>
</tbody>
</table>

Please briefly specify the substantial environmental and social risks that the project/programme may face and the proposed risk mitigating measures.
A. Managing social and environmental risks

49. City Bus Service, Thimphu Thromde (the city government), and MoIC have identified a long list of locations for Program works relating to bus stop infrastructure. RGoB, with World Bank specialist support, has conducted an environmental and social screening of these sites to assess potential safeguards risks. In the case of bus shelters, sites are all along existing road right of ways, within the vicinity of the Thimphu urban area. The proposed sites are all currently in use as bus stops, but lack shelter infrastructure. The bus terminal to be upgraded is an existing facility in the urban core of Thimphu. Proposed upgrading activities at the bus terminal include a shelter or passenger waiting, bus bays, shop and retail space, etc. Based on site screening carried out, all potential investment locations are in modified habitat or urban environments (e.g., along existing road right of ways or in built-up areas, etc.). No forests will be affected. No natural habitats will be impacted. However, there may be adverse environmental or social impacts associated with the civil works, and the potential decommissioning of some old buses as required by government safety regulations. In addition, the proposed Program will result in higher frequencies of bus services, which may also carry adverse social and environmental impacts. For the development of BRT infrastructure, the need for road widening cannot be ruled out in order to provide for dedicated busways. This would be determined upon further engineering investigation and the appropriate safeguards instruments would accordingly be prepared. Impacts such as these are being assessed in greater detail and will be included in an Environmental and Social Management Plan (ESMP) that will guide measures to mitigate impacts according to the World Bank’s safeguards policies.

G. Multi-Stakeholder Engagement

Please specify the plan for multi-stakeholder engagement, and what has been done so far in this regard.

XIV. MULTI-STAKEHOLDER ENGAGEMENT

50. The Royal Government of Bhutan has taken measures to coordinate the action of different stakeholders in urban transport. Most recently, this has included the establishment of a multi-sectoral taskforce via Executive Order C2/172 dated January 5th, 2016. The Task Force’s mandate is to study and come up with immediate measures to ease the traffic situation in Thimphu, under the coordination of the Ministry of Information and Communication. Stakeholders within the donor community is also coordinating interventions relating to urban transport via cross-reviews of proposed project concepts and regular communications during preparation and supervision missions.

H. Status of Project/Programme

1) A pre-feasibility study is expected to be completed at this stage. Please provide the report in section J.

51. Please see technical assistance reports for City Bus Company which details near-term, medium term, and longer term interventions to improve public transport in Thimphu.

2) Please indicate whether a feasibility study and/or environmental and social impact assessment has been conducted for the proposed project/programme: Yes ☒ No ☐

(If “Yes”, please provide them in section J.)

52. Environmental and social screening has been carried out for potential bus stop locations and alternates. Detailed environmental assessment will not be required for all stops based on findings from this initial screening.

53. In 2012, the IFC-supported study of a potential BRT for Thimphu conducted a social and environmental screening along with the feasibility study of the proposed BRT corridor.
3) Will the proposed project/programme be developed as an extension of a previous project (e.g. subsequent phase), or based on a previous project/programme (e.g. scale up or replication)? Yes ☐ No ☒

(If yes, please provide an evaluation report of the previous project in section J, if available.)

I. Remarks

J. Supporting Documents for Concept Note

☐ Map indicating the location of the project/programme
☐ Financial Model
☒ Pre-feasibility Study *(specifically TA report on City Bus Services & preliminary economic assessment)*
☒ Feasibility Study (if applicable) *(specifically, IFC study on BRT PPP)*
☐ Environmental and Social Impact Assessment (if applicable)
☐ Evaluation Report (if applicable)