

Abbottabad, Pakistan

Partner city

Status of the project: Completed preparation of the Sustainable Urban Mobility Plan



Basic Information

Urban area: 1,967 km²

Population: 981,590 (district scale) | Growth rate: 1.82%

GDP per capita: USD 1,284 (Pakistan, 2019)

Modal split:

Walking: 64%

Formal public transport: 5% (including school and staff buses)

Informal public transport: 16% (minibus)

Private cars: 6%

Private motorbikes or 2-wheelers: 5%

Other: 4%

National GHG emissions per capita: 0.9 (tCO₂eq)

Exposure to climate change: HIGH

Context

Abbottabad is 61 km northeast of Rawalpindi, in the Hazara Division of Khyber Pakhtunkhwa (KP) province, northwest Pakistan. It is a gateway to the picturesque Kagan Valley. It is connected by road with Indus Plain and the Kashmir region, and by rail with Peshawar. The city is a district market and trade centre and stands out for being a communication route with China and northern parts of Pakistan. The population of Tehsil Abbottabad is 981,590, distributed over an area of 1,967 km². The city's administration is under District Administrator Abbottabad.

Currently, the most significant issues related to urban mobility in Abbottabad are:

- High influx of vehicles due to tourism,
- High number of commercial vehicles passing through the city, affecting capacity and safety,
- Lack of infrastructure such as alternative routes/bypasses, underpasses/flyovers, parking areas, intersection improvement, facilities for non-motorised transport,
- Lack of road safety and traffic management,
- Air pollution from vehicles,
- Lack of master plan framework for urbanisation and transportation,
- Lack of formalised institutional setup for addressing mobility issues.

The local counterpart, the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA), has the mandate and responsibility to finance the construction of a mass public transport infrastructure. It does not have the authority to borrow from international finance sources. Systems and procedures are partially in place to monitor, evaluate, and report on urban matters.

The SUMP elaboration aims to provide a comprehensive sustainable mobility plan at the urban scale and propose a conceptual design for priority projects.

Support from the Partnership

Technical Assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 1,200,000 global budget for SUMPs 3 cities within the Khyber Pakhtunkhwa province

Implemented by: AFD and ADB through MobiliseYourCity Asia

Local counterpart: Transport Department Government of Khyber Pakhtunkhwa province and the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA)

Supported activities:

- Support the SUMP process for the city of Abbottabad
- Conceptual design for priority projects to identify

Status of the SUMP process

Project start: Q3 2021

Project completion: Q4 2023 - Administrative approval received; political approval is underway.

Completed outputs:

- Inception report
- Urban mobility diagnosis
- Scenario building
- Action plan

SUMP key measures and cost estimates

The following table highlights the most significant measures identified in the SUMP.

	Measure	Cost Estimate
1. Road network improvements	Main road projects	EUR 29.6 million
1. Road network improvements	Local street projects	EUR 21.2 million
1. Road network improvements	Road design guideline	EUR 0.64 million
1. Road network improvements	Road maintenance plan	EUR 0.74 million
1. Road network improvements	Traffic and mobility management	EUR 0.43 million
1. Road network improvements	Target road and crossroad network	EUR 0.86 million
1. Road network improvements	Circulation plan	EUR 0.63 million
1. Road network improvements	Traffic management unit	EUR 0.95 million
2. Urban transit	BRT development	EUR 304.6 million
2. Urban transit	Paratransit structuration	EUR 3.0 million
2. Urban transit	Transport hubs organisation	EUR 0.34 million
2. Urban transit	Paratransit quality of service	EUR 0.81 million
2. Urban transit	BRT development roadmap	EUR 1.54 million
2. Urban transit	Paratransit transition roadmap	EUR 1.14 million
2. Urban transit	Paratransit drivers training	EUR 1.54 million
3. NMT	NMT projects	EUR 7.5 million
3. NMT	NMT in transport and urban projects	EUR 3.0 million
3. NMT	Bikes for Abbottabad	EUR 0.15 million
3. NMT	NMT guidelines	EUR 0.61 million
3. NMT	NMT development roadmap	EUR 0.46 million
3. NMT	Pedestrian-centred approach	EUR 0.79 million
3. NMT	Walking in Abbottabad	EUR 0.45 million
4. Urban logistics	Urban logistics projects	EUR 9.00 million
4. Urban logistics	Urban logistics roadmap	EUR 0.65 million
5. Integrated mobility policy	Sustainable mobility planning process	EUR 1.0 million
5. Integrated mobility policy	Mobility data management	EUR 0.70 million
5. Integrated mobility policy	SUMP evaluation	EUR 0.71 million
5. Integrated mobility policy	Multimodal strategy	EUR 0.48 million
5. Integrated mobility policy	Energy-wise mobility	EUR 0.51 million
5. Integrated mobility policy	Demand management	EUR 0.37 million
5. Integrated mobility policy	Transport Authority reinforcement	EUR 0.91 million
5. Integrated mobility policy	Integrated mobility financing	EUR 0.54 million
5. Integrated mobility policy	Sustainable mobility project management	EUR 0.67 million
5. Integrated mobility policy	Inclusive, green and gender-aware mobility	EUR 0.57 million
5. Integrated mobility policy	Inclusive, green and gender-aware mobility	EUR 0.57 million
6. Transit oriented dev.	TOD projects opportunities	EUR 4.5 million
6. Transit oriented dev.	TOD guidelines	EUR 97.8 million
6. Transit oriented dev.	TOD development roadmap	EUR 0.31 million

The following table summarises the total capital expenses (CAPEX) estimates for different types of measures identified in the SUMP.

Urban transport investment measures	CAPEX Estimate (€M)
Road Network [including Road projects, Road design guidelines, Road maintenance plan, Traffic and mobility management, etc.]	EUR 50.9 million
Urban transit [including BRT development, paratransit structuration, transport hubs organisation, paratransit quality of service, etc.]	EUR 307.6 million
Non-Motorised Transport [including NMT guidelines and projects; pedestrian-centred approach; walking and biking equipment; etc.]	EUR 10.7 million
Urban logistics [including urban logistics roadmap and projects]	EUR 9 million
Integrated mobility policy [including Transport Authority reinforcement, SUMP evaluation, Mobility data management, etc.]	-
Transit Oriented Development [including TOD projects, roadmap and guidelines]	EUR 4.5 million
TOTAL	EUR 382.6 million

Projected impacts

Indicator	BAU 2022	Scenario 1 Restructured Paratransit	Scenario 2 Trunk BRT and Bus Feeders	Scenario 3 Integrated BRT
Total annual GHG emissions (Mt CO ₂ eq)	111 510 t CO ₂ eq	111 510 t CO ₂ eq	72 870 tCO ₂ eq	72 990 tCO ₂ eq
Annual transport-related GHG emissions per capita (kg CO ₂ eq)	0,123 tCO ₂ eq/ capita	0,129 tCO ₂ eq/ capita	0,084 tCO ₂ eq/ capita	0,084 tCO ₂ eq/ capita
Trips Daily Average Total generated trips	1 466 300	2 719 000	2 717 100	2 717 100
Modal share Related to the carbon footprint	Motorcycle: 66% Car: 25% Paratransit: 9%	Motorcycle: 41% Car: 30% Paratransit: 29%	Motorcycle: 30% Car: 52% Paratransit: 6% BRT: 12%	Motorcycle: 30% Car: 50% Paratransit: 6% BRT: 14%

Perspectives for implementation

Governance structure for SUMP implementation

The implementation of the SUMP of Abbottabad relies on two distinct bodies: (i) the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA), responsible for transport and mobility topics over the KP Province, and (ii) the SUMP taskforce, responsible for the SUMP implementation, follow-up, and evaluation, under the authority of the KPUMA. The Mobility Committee under KPUMA will bring the different KP Province Departments together to manage and inform on the transport and mobility cases. It will allow local key stakeholders to have open discussions and review the investment priorities of each Department in a concerted manner. Additionally, the development of the potential Bus Rapid Transit (BRT) line will require creating a dedicated operator. Based on TransPeshawar, which is operating BRT in Peshawar, the new BRT operator will be called TransAbbottabad.

Composition and capacity-building of the SUMP taskforce

Furthermore, the foreseen organisation of the SUMP task force is expected to gather professionals currently in charge of mobility planning, transport operation, urban planning, or land use in current KP Province Departments, as well as new external resources hired for the purpose. The resources shall be dedicated to Abbottabad but will be mobilised within a broader team that will also intervene in the other cities of KP Province. Capacity strengthening will be a continuous process within the SUMP team. Partnerships with the federal government or peer cities from the wider Asian region could also be encouraged to favour capacity building and exchange within the MobiliseYourCity Community of Practice.

Proposed approach for public transport development

Following the completion of the SUMP, while public transport remains a priority for Abbottabad, the preferred approach would be to implement a light version of a BRT without dedicated infrastructure. Additional feasibility studies are required and expected to be conducted at the KP province's scale, covering Abbottabad and other cities.

Future urban mobility initiatives:

The city is expected to draw further inspiration from the SUMP's strategic directions, including implementing green corridors.

Insights from practice: lessons learned from the SUMP process

The SUMP process enables the involvement of local counterparts from the city of Abbottabad under the provincial-level orientation. The SUMP development requires interaction between public bodies. In this context, it fostered dialogue between local stakeholders on topics that are usually not covered (such as the development of a BRT system or the paratransit reforms). Local authorities often have to deal with problems and solve them in emergency situations rather than having time to plan mobility with an innovative approach.

Highlights in the past years

One SUMP process for three cities

Abbottabad's SUMP has been developed with the participation of both the provincial and local authorities, under the leadership of the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA). This public authority was created with support from the Asian Development Bank (ADB) to plan and regulate transportation within the province. This coordination process has been facilitated by establishing three technical SUMP committees for each city of the KP province, namely Abbottabad, Mingora, and Peshawar.

The last phases of the SUMP elaboration allowed the technical committee of Abbottabad to identify priority operational projects to improve mobility and engage the city on the path of sustainable mobility. Three main specific projects have been identified. First, there is a need to improve some road sections. For roads, projects are focused on the central areas of Abbottabad and the existing urbanised area. Road projects address missing links, network densification, and road upgrades. Micro road projects will be undertaken in different districts (e.g. Bilal Town). Secondly, the main identified infrastructure is creating a Bus Rapid Transit line. This priority project should lead to the elaboration of design studies as well as operational exploitation of the future BRT line. Thirdly, in order to improve the public transport service offer, priority is given to reforming paratransit. The paratransit restructuring is linked to the BRT development and will start while BRT phase 1 is being built on Karakorum highway (the main identified corridor).