



Completion Report

Project Number: 48356-001
Technical Assistance Number: 8765
July 2017

India: Supporting Sustainable Urban Transport in Aizawl City

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| TA Number, Country, and Name: | | | Amount Approved:US\$225,000 | |
| TA 8765-IND: Supporting Sustainable Urban Transport in Aizawl City | | | Revised Amount: Not Applicable | |
| Executing Agency: Public Works Department (PWD), State of Mizoram | | Source of Funding: Technical Assistance Special Fund -Others | Amount Undisbursed: US\$29,750 | Amount Utilized: US\$195,250 |
| TA Approval Date: 25 Nov 2014 | TA Signing Date: Not applicable | Fielding of First Consultants: 24 Jun 2015 | TA Completion Date Original: 31 Mar 2016 Actual: 4 May 2016 | |
| | | | Account Closing Date Original: 31 Mar 2016 Actual: 31 Aug 2016 | |
| Description | | | | |
| <p>In September 2014, the Government of India requested the Asian Development Bank (ADB) to provide a technical assistance (TA) to support the development of a sustainable urban transport plan in Aizawl, the capital city of Mizoram state. Mizoram is in a hilly terrain in the northeastern part of India with a population of 1,091,014. Aizawl covers 129 square kilometers and hosts 291,822 people. This represents 26.56% of the total population of Mizoram and 52% of its total urban population. Aizawl population has increased steadily-about 3% annually since 2001 when 228,280 people lived in the city. The city's population in 2031 is projected to reach 377,000. The increase in population has created complex problems in urban development and management. Without implementation of effective measures to tackle these problems, the city residents will suffer from the increasingly deteriorating living environment.</p> <p>Under the circumstances, the traffic congestion in Aizawl has been worsening over the years. Road transport is the only option for mobility in the city, relying heavily on the 8 kilometer (km) main road running through the city center from the southern to the northern part. However, the unstable hilly terrains limit road network development in Aizawl. Public buses is the only mode of public transport, but it is perceived as unsafe and unreliable, encouraging the use of private vehicles for those who can afford it. The number of private vehicles has been increasing, worsening the traffic congestion and affecting the urban environment. Despite the state government efforts to develop a concrete urban transport plan for Aizawl city with small-scale studies using local resources, there has been no progress made. This is partly due to technical deficiency and lack of know-how to implement the recommendations, and the city's unique geographical location. ADB support was envisaged by the Mizoram government to bring in international practices as there were none in India that can be applied to Aizawl.</p> <p>The TA aimed to propose urban transport system development projects to address the medium- and long-term needs of Aizawl. The TA was also to provide advice to the Mizoram government on the possible financing options to implement the relatively large investment projects with indicative milestones. The PWD of the Government of Mizoram is the executing agency, in coordination with the Urban Development Poverty Alleviation Department (UDPAD) and the Aizawl Municipal Council.</p> | | | | |
| Expected Impact, Outcome, and Outputs | | | | |
| <p>The expected impact of the TA was to equip Aizawl City with safe and sustainable urban transport infrastructure. The outcome was improved urban development planning for urban transport in Aizawl city. The outputs were urban transport studies completed through the preparation of at least 2 short-term traffic management projects and at least 2 medium- to long-term projects.</p> | | | | |
| Delivery of Inputs and Conduct of Activities | | | | |
| <p>CDM Smith Inc., United States in association with CDM Smith India Private Limited, India were engaged in June 2015. A minor change in implementation arrangements was approved on 21 October 2015 to include an urban planner to (i) review the masterplan and other planning documents, (ii) assess the future demand for public transport, (iii) assess the potential of new public transport, and (iv) investigate existing building control regulations, practices, and policies, and develop policy proposals for off-street parking. The person-month requirement in the original plan was 16.5 comprising of 3.5 international and 13 national inputs; actual recruitment at completion is 19.33 person-months comprising of 4.3 international and 15.03 national inputs. The terms of reference required intensive consultations with stakeholders including the government and private sectors, which the consultant has satisfactorily conducted during the assignment. The consultant coordinated and worked well with the Mizoram government. The TA completion date was adjusted to 4 May 2016 during the contract negotiations for the consulting services. The consultant completed the assigned works within the contract period without extension. Performance of the consultant is assessed as satisfactory in delivering the expected outputs in a timely manner and to the satisfaction of the executing agency.</p> | | | | |
| <p>ADB fielded two missions during the implementation of the TA: (i) 1–6 July 2015, to join the kick-off meeting between the consultant and the Mizoram government and clarified the details of the TA schedule, outputs and required cooperation</p> | | | | |

from the Mizoram government stakeholders, and (ii) 18–19 January 2016 to attend a workshop on the draft final report. The workshop was attended by the Chief Secretary, senior officials from PWD, Transport Department, UDPAD, Traffic Police of the Government of Mizoram and representatives of Aizawl Municipal Council.

Performance of the executing agency was satisfactory in facilitating timely inputs to the consultant from appropriate stakeholders. ADB's performance was satisfactory, fielding missions to facilitate the discussions in key workshops during the TA implementation and processing variation orders in a timely manner.

Evaluation of Outputs and Achievement of Outcome

The two outputs were achieved: (i) at least 2 short-term measures and (ii) at least 2 medium- to long-term projects proposed. For the short-term management projects, the consultant proposed low-cost design improvements of over 20 important junctions in Aizawl with existing public rights of way. The estimated investment cost for the short-term measures was approximately Rs1.8 crore (about \$275,000) which was considered as affordable within the fiscal budget of the Mizoram government. As for the medium- to long-term public transport improvements, the feasibility of five different modes of transport were briefly assessed, i.e. light monorail, cable liner, ultra-light tram, aerial ropeway, and high quality bus system. The light monorail and cable liner were assessed as not feasible mainly due to their high costs and unavailability of space for the construction of the required infrastructure. The ultra-light tram was also assessed as not viable since it will reduce the existing road capacity. Thus, the consultant recommended a high-quality bus system to replace the existing unorganized bus system, and development of an aerial ropeway. The suggested alignments for the bus system included the North-South bus corridor (about 10 km), backbone corridor of Aizawl city and others as tertiary network to increase city mobility. A 5.5 km east-west aerial ropeway with a capacity of 3,000 passengers per direction per hour is recommended with a possible extension to include the north-south alignment on Aizawl's central corridor. Investment proposals for the development of the bus package would total Rs237 crore (about US\$36.5 million) and Rs668 crore (about \$102.8 million) for the ropeway package. The consultant's rough assessment showed both investments would be viable economically but not financially. Thus, the consultant recommended public investment for these infrastructures. The executing agency will need to conduct full feasibility studies and detailed designs for the investment projects to finalize the project proposals.

The recommendations of the consultant were favorably accepted by the Mizoram government. During the presentation of the draft final report in January 2016, the Mizoram government designated UDPAD as the executing agency to implement the recommendations. UDPAD will examine the possibility of financing the short-term proposals mainly on road and junction improvements under the SMART City or Atal Mission for Rejuvenation and Urban Transformation initiatives. The Mizoram government has contacted the Ministry of Urban Development for financial support to implement the recommendation including the detailed designs of the investment proposals. These actions show the achievement of both outcome indicators of the TA: (i) projects proposed under the TA are accepted by the government and (ii) the government finalizes the proposals for medium-term projects for possible financing.

Overall Assessment and Rating

The TA is rated as *successful*. The TA is *relevant* as it is fully in line with government priorities and ADB's Sustainable Transport Initiative. It is *effective* since the original outcome and outputs were achieved, adequately attending to the imminent needs of Aizawl and contributing to the improvement of urban development planning for urban transport. It is *efficient* since targets were achieved within the planned timeline using the original TA amount. It is *likely sustainable* since government stakeholders favorably accepted the recommendations under the TA. The Mizoram government is expected to implement the recommended investments prepared under the TA.

Major lesson

The original TA duration was 9 months, but it was adjusted to 11 months at contract negotiations. The implementation period of the TA could have been estimated more realistically, considering the geographic location of the assignment.

Recommendations and Follow-Up Actions

The consultant's recommendations on the long-term investment projects are in line with ADB's Sustainable Transport Initiatives. Continued consultations with the government stakeholders are recommended as follow-up actions.

ADB = Asian Development Bank, km = kilometer, PWD = Public Works Department, TA = technical assistance, UDPAD = Urban Development Poverty Alleviation Department.

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