



Report and Recommendation of the President to the Board of Directors

INTERNAL

Project Number: 57230-001
August 2025

Proposed Loan India: Sikkim Integrated Urban Development Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 6 August 2025)

Currency unit	–	Indian rupee/s (₹)
₹1.00	=	\$0.01
\$1.00	=	₹87.78

ABBREVIATIONS

ADB	–	Asian Development Bank
AMRUT	–	Atal Mission for Rejuvenation and Urban Transformation
EMP	–	environmental management plan
GIS	–	geographic information system
GSDP	–	gross state domestic product
IEE	–	initial environmental examination
km	–	kilometer
m ²	–	square meter
MLD	–	million liters per day
NRW	–	nonrevenue water
O&M	–	operation and maintenance
PHED	–	Public Health Engineering Department
PIU	–	project implementation unit
PMU	–	project management unit
RIPDDR	–	resettlement and Indigenous Peoples due diligence reports
RIPP	–	resettlement and Indigenous Peoples plans
SHG	–	self-help group
THCC	–	transit hub-cum-community complex
UDD	–	Urban Development Department
ULB	–	urban local body
WASH	–	water, sanitation, and hygiene

NOTES

- (i) The fiscal year (FY) of the Government of India and its agencies ends on 31 March. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2026 ends on 31 March 2026.
- (ii) In this report, “\$” refers to United States dollars.

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CONTENTS

	Page
PROJECT AT A GLANCE	
MAP	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Project Description	4
C. ADB Value Addition	6
D. Summary Cost Estimates and Financing Plan	7
E. Implementation Arrangements	8
III. DUE DILIGENCE	9
A. Technical	9
B. Safeguards	9
C. Economic and Financial Viability	11
D. Gender Equality	11
E. Poverty and Social Dimensions	12
F. Procurement, Financial Management, and Integrity	13
G. Sustainability	13
H. Summary of Risk Assessment	14
IV. ASSURANCES	15
V. RECOMMENDATION	15
APPENDIX	
Design and Monitoring Framework	16
ANNEXES	
1. Legal Agreements	
2. Safeguard Documents and Plans	
3. Economic and Financial Analysis	
4. Climate Change Assessment	
5. Gender Assessment and Action Plan	

PROJECT AT A GLANCE

1. Project Data			
Project number	57230-001	Project name	Sikkim Integrated Urban Development Project
Country	India	Executing or implementing agency	Urban Development Department, Government of Sikkim
Borrower	India	Geographical location	Country
Sector office	Water and Urban Development Sector Office	Subsector(s)	Urban water supply, sanitation, and urban transport
Sector(s)	Water and other urban infrastructure and services	Portfolio at a glance	http://www.adb.org/Documents/LinkedDocs/?id=57230-001-CEI
Country economic indicators	http://www.adb.org/Documents/LinkedDocs/?id=57230-001-CEI		http://www.adb.org/Documents/LinkedDocs/?id=57230-001-PortAtaGlance
Strategic Focus Area	Resilience and empowerment (Primary), and Climate action	Sustainable Development Goals	SDG 1 SDG 5 SDG 6 SDG 11 SDG 13
Lending modality	Project loan		
2. Financing			
ADB Financing		Amount (\$ million)	
Regular ordinary capital resources loan		179.07	
Concessional ordinary capital resources loan		0.00	
Special Funds resources (ADF grant)		0.00	
Cofinancing		Amount (\$ million)	
ADB-administered		0.00	
Not ADB-administered		0.00	
Counterpart		Amount (\$ million)	
Government		47.62	
Total		226.68	
ADB Climate Financing			
ADB			
Adaptation		89.20	
Mitigation		27.70	
Total		116.90	
3. Climate Action			
Absolute GHG emissions (tCO₂e per year)		5505	
Relative GHG emissions (tCO₂e per year)		-6341	
Climate change risk on the project without adaptation measures		Medium	
Disaster Risk Management, Environment and Nature	Disaster Risk Reduction, Air Quality, Nature-Based Solutions		
4. Private Sector Development			
Private capital mobilized (\$)			
PSD classification	No-PSD		
5. Safeguards			
Category	Environment:	<input type="checkbox"/> A	<input checked="" type="checkbox"/> B
	Involuntary resettlement:	<input type="checkbox"/> C	<input type="checkbox"/> FI
		<input type="checkbox"/> A	<input checked="" type="checkbox"/> B
		<input type="checkbox"/> C	<input type="checkbox"/> FI

	Indigenous Peoples: <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI
6. Gender Equality	
<u>Category</u>	<input type="checkbox"/> Gender equality objective (GEN) <input checked="" type="checkbox"/> Effective gender mainstreaming (EGM) <input type="checkbox"/> Some gender elements (SGE) <input type="checkbox"/> Indirect gender benefits (IGB)
7. Regional Cooperation and Public Goods	
<u>Category</u>	<input type="checkbox"/> Pillar 1 <input type="checkbox"/> Pillar 2 <input type="checkbox"/> Pillar 3 <input checked="" type="checkbox"/> Not applicable
8. Digital Transformation	
<u>Category</u>	<input checked="" type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Not applicable

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INDIA

SIKKIM INTEGRATED URBAN DEVELOPMENT PROJECT

Project Areas



I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to India for the Sikkim Integrated Urban Development Project.

2. The project aims to (i) improve sustainable and resilient urban transport and municipal infrastructure and (ii) build climate and disaster resilience across Sikkim. It will strengthen service delivery and the institutional capacity of the state government and local stakeholders to support integrated planning in seven towns.¹ The project will provide continuous and climate-resilient water supply in Gangtok (Tadong), Pakyong, Rangpo, and Singtam by upgrading water treatment and distribution systems, benefiting 92% of the population in these towns.² Sanitation investments will support citywide inclusive sanitation, including integrated wastewater treatment systems, sewerage networks, and fecal sludge management facilities, serving 100% of the populations in Pakyong, Rangpo, Singtam, and Soreng. Urban mobility will be improved through (i) constructing transit hub-cum-community complexes (THCCs) with smart parking, commercial areas, and inclusive community spaces, which will also serve as emergency disaster relief centers; and (ii) upgrading urban roads, stormwater drains, and pedestrian infrastructure in all seven towns. Integrated urban planning will be enhanced through updating the state's strategic urban plan,³ preparing town geographic information system (GIS)-based master plans, urban mobility and public transport plans, climate action plans, sustainable operation and maintenance (O&M) frameworks, municipal revenue enhancement strategies, and modernized financial management and accounting systems.

II. THE PROJECT

A. Rationale

3. **Sikkim state socioeconomic profile.** Sikkim is India's second smallest state, covering 7,096 square kilometers (km), with a rapidly growing economy. At constant prices (FY2012 base year), Sikkim's gross state domestic product (GSDP) grew by 8.0% in FY2023 and 8.5% in FY2024, slightly higher than the national average of 8.2% in FY2024.⁴ At current prices, the GSDP for FY2025 was projected to increase by 11% over FY2024. From FY2019 to FY2024, the state's economy expanded at a compound annual growth rate of 10.75%, driven by urbanization, industry (particularly pharmaceuticals), agriculture, the services sector, and tourism.⁵ Sikkim's multidimensional poverty rate was only 2.6% in 2021, one of the lowest in India.⁶ It had a Human Development Index of 0.712 in 2022, the ninth highest in the country.⁷

¹ These towns are Gangtok (Tadong and Ranipool areas), Gyalshing, Mangan, Pakyong, Rangpo, Singtam, and Soreng. They were prioritized using gap analysis during detailed project report preparation, and synergies with ongoing initiatives funded by state and national budgets. Ranipool and Tadong are suburban and census towns in Gangtok.

² The remaining 8%, residing in remote or scattered peripheral areas, continue to rely on traditional sources such as private or spring-based systems, which are being considered for future service enhancements through complementary initiatives.

³ Government of Sikkim. 2008. [Strategic Urban Plan \(2008\)](#).

⁴ Government of Sikkim. Finance Department. 2025. [Half-Yearly Review Report 2024–25](#); and PRS Legislative Research. 2025. [Sikkim Budget Analysis 2024–25](#).

⁵ Government of India, Department of Commerce, India Brand Equity Foundation. 2024. [Sikkim](#) (accessed 15 November 2024); and K. Singha and M. Amarajeet Singh. 2022. [Political stability and its effect on economy: some lessons from Sikkim Himalaya](#). *Journal of Social and Economic Development* 24. pp. 340–354.

⁶ Government of India. 2023. [National Multidimensional Poverty Index: A Progress Review 2023](#).

⁷ Global Data Lab. 2024. [Human Development Index](#) (accessed 13 October 2024).

4. **Urbanization in Sikkim.** Sikkim's population is expected to grow modestly from 691,000 (about 49.5% urbanization) in 2023 to 760,000 (about 60.0% urbanization) by 2036, reflecting a decadal growth of about 7.5%.⁸ Urban development is concentrated along major roads, particularly in towns above 2,100 meters in elevation and in the eastern region surrounding the capital, Gangtok. Sikkim's altitude spans 280 meters–8,586 meters, and only about 35% of the land area is considered habitable. Its Himalayan location and natural beauty have driven a strong tourism recovery post-coronavirus disease (COVID-19), with visitor numbers exceeding 1.6 million in both 2022 and 2023, compared to 0.5 million in 2021, and surpassing prepandemic levels of 1.4 million visitors in 2019.⁹ The increasing tourism inflows will put additional pressure on already constrained urban services, such as water supply and transport.

5. **Climate and disaster risk exacerbate municipal service challenges.** Sikkim is highly vulnerable to climate risks, including rising temperatures, heavy rainfall, and glacial lake outburst floods.¹⁰ This results in more frequent droughts, landslides, and flash floods.¹¹ Temperature increases exceed global and national averages, accelerating glacial melt and straining urban infrastructure and services.¹² Project towns, located at elevations between 330 meters and 1,900 meters, have high exposure to multiple climate-related hazards that disrupt access to urban services like water, sanitation, and hygiene (WASH), and overwhelm stormwater drainage. Frequent heavy rains and floods worsen urban traffic congestion, damage road infrastructure, and obstruct drainage systems. Shifts in rainfall and spring depletion cause water scarcity, straining water supply and sanitation systems. Fragmented planning and weak infrastructure in the state also reduce resilience and livability.¹³

6. **Water supply and sanitation challenges.** Water supply coverage is limited to 2–3 hours per day for most towns, with 51% of urban households experiencing intermittent access.¹⁴ The average supply is about 65 liters per capita per day with nonrevenue water (NRW) at 50% and no NRW reduction plan in place. Flat tariffs and poor collection efficiency hinder cost recovery.¹⁵ Although Sikkim is officially open-defecation free, most sanitation systems rely on on-site septic tanks, without proper sludge management.¹⁶ The state lacks proper fecal sludge management facilities, and wastewater treatment plants need significant investment, especially after the 2023 floods. Water and sanitation safety plans are not fully operational, and there are no water security plans. Stormwater drains cover only 12% of urban roads and overflow during heavy rain because of limited capacity and poor maintenance. O&M budgets are inadequate, compromising long-term resilience.¹⁷

⁸ Government of India, Ministry of Health and Family Welfare, National Commission on Population. 2020. [Census of India 2011: Population Projections for India and States, 2011–2036](#).

⁹ CEIC Data. 2022. [Visitor Arrivals, Local, Sikkim](#) (accessed 20 November 2024).

¹⁰ In 2023, heavy rainfall and a glacial lake outburst flood caused severe flooding in Gangtok, Mangan, Namchi, and Pakyong, affecting 80,000 people and claiming 55 lives. Damage to water and transport infrastructure reached \$47.0 million, and reconstruction costs were \$3.5 million. Government of India, National Disaster Management Authority; and Government of Sikkim. 2023. [Post Disaster Needs Assessment: Glacial Lake Outburst Flood Sikkim – 2023](#).

¹¹ Government of Sikkim. 2014. [The Sikkim State Action Plan on Climate Change 2014](#).

¹² Government of India, Ministry of Science and Technology, Department of Science and Technology. 2020. [Glaciers in Sikkim are losing mass faster than other parts of the Himalaya](#).

¹³ Climate Change Assessment (Annex 4).

¹⁴ Government of India. 2022. [North Eastern Region Index and Dashboard: Baseline Report 2021–22](#).

¹⁵ Government of Sikkim, Urban Development Department (UDD). 2018. [State Annual Action Plan \(SAAP\): FY2017–18](#).

¹⁶ A. A. Zewde, Z. Li, and Z. Xiaoqin. 2021. [Improved and promising fecal sludge sanitizing methods: treatment of fecal sludge using resource recovery technologies](#). *Journal of Water, Sanitation, and Hygiene for Development* 11 (3). pp. 335–349.

¹⁷ Government of Sikkim. 2023. [Report of the Sixth State Finance Commission](#).

7. **Urban mobility challenges.** The project towns face chronic traffic congestion from rapid vehicle growth, parking shortages, and outdated planning. The state's steep terrain and mountainous slopes restrict road expansion, complicating the development of parking and pedestrian infrastructure. Public transport is limited to shared taxis, and car ownership is high in the state.¹⁸ Sikkim lacks a mobility plan, except for Gangtok where the plan was last updated in 2010. The other project towns need transport, mobility, and traffic management plans to address urban mobility challenges. Traffic congestion, lack of parking, and inadequate footpaths are safety concerns, especially for women, children, the disabled, and elderly people. Lack of public transport also affects women's mobility and economic opportunities. The Transport Department and Traffic Police face workforce and budget constraints to manage and improve mobility.

8. **Emergency infrastructure.** Sikkim's high seismic risk and history of flash floods underscore the urgent need for disaster relief centers.¹⁹ While the state has Emergency Operations Centers equipped with basic equipment, there are currently no permanent, dedicated emergency disaster relief centers in Sikkim. Existing temporary relief centers, such as those in Rangpo and Singtam, are inadequate with limited sanitation, water supply, and medical support. The Sikkim State Disaster Management Authority oversees emergency response but lacks permanent, well-equipped, and structurally resilient relief centers to provide vital services and safe shelters during extreme events.

9. **Institutional capacity and integrated planning for resilience.** Gangtok is the only town with a GIS-based master plan. The state has enacted the Sikkim Land Tenancy Act (2008), Sikkim Aerial Ropeways Act (2023), and Town and Country Planning Act (2024), and plans to establish a directorate of town and country planning to improve urban planning coordination.²⁰ Despite the Sikkim State Action Plan on Climate Change (footnote 11), local-level planning remains constrained because of limited technical capacity, overlapping interagency coordination, and nascent integrated urban planning frameworks. The state needs modern financial, accounting, and asset management systems to enhance sustainability. The State Climate Change Cell aids vulnerability assessment and adaptation but requires capacity building to effectively coordinate risk-informed planning, decision-making, and integrated development across departments.²¹ Fragmented infrastructure investment continues to hinder efficient service delivery and undermine urban resilience across towns in the state.

10. **Lessons.** Experience from the Asian Development Bank (ADB)-supported projects in the Northeastern Region and Sikkim highlights the importance of (i) ensuring efficient fund flow mechanisms, (ii) securing rights-of-way for civil works in advance, (iii) accommodating the challenges of hilly terrain in cost estimates and timelines, (iv) preparing the detailed engineering designs in a timely manner, (v) identifying contingencies for extreme weather and disruptions, (vi) addressing delays in project financial statement audits, (vii) planning for resource and skill shortages, and (viii) assessing the financial performance of urban local bodies (ULBs) and key

¹⁸ Government of India, Ministry of Electronics and Information Technology, National Informatics Centre, Open Government Data Platform India. 2022. [National Family Health Survey \(NFHS\) 5](#) (accessed 22 November 2024).

¹⁹ Government of Sikkim. 2022. [Sikkim State Disaster Management Plan \(2022\)](#). The plan highlights investing in structural measures and multihazard shelters for disaster risk reduction by identifying safe buildings and locations.

²⁰ Government of Sikkim. 2008. [Sikkim Land Tenancy Act \(2008\)](#); Government of Sikkim. 2023. [Sikkim Aerial Ropeways Act, 2023](#); and Government of Sikkim. 2024. [Town and Country Planning Act \(2024\)](#).

²¹ The State Climate Change Cell was established in 2014 under the Sikkim State Council of Science and Technology, an autonomous body of the Department of Science and Technology, Government of Sikkim. It serves as the nodal agency for climate change coordination in the state, supporting the implementation of the Sikkim State Action Plan on Climate Change.

operators to ensuring project asset sustainability upon completion.²² Incorporating these lessons, the project design includes a fully staffed project management unit (PMU) and project implementation units (PIUs), early action on budgeting and right-of-way clearances, and tailored capacity building for financial management and support to ULBs, implementation of cross-subsidies and revenue transfers, and improved tax collections (para. 14). The 7-year implementation period includes 3–4 years of infrastructure development, followed by subsequent years for capacity building and O&M transition support, including performance-based O&M provisions for water supply and sanitation contracts, revenue-generating mechanisms for key assets such as THCCs, and state government commitment to increased budget allocations to ensure long-term sustainability and operational readiness.²³

B. Project Description

11. The project is aligned with the following impact: the urban livability of project towns improved with better service delivery and climate and disaster resilience (footnotes 3 and 11). The project will have the following outcome: mobility and urban services in the project towns improved.²⁴

12. **Output 1: Water supply and sanitation infrastructure improved with climate- and disaster-resilient and sustainability features.** By 2032, output 1 will (i) rehabilitate 24.5 km of the existing water supply distribution network and build 126.5 km of new water supply distribution networks in Pakyong, Rangpo, Singtam, and selected zones of Gangtok; develop a new water supply source and related infrastructure in Gangtok; and construct three water treatment plants with total capacity of 21 million liters per day (MLD) in Pakyong, Rangpo, and Tadong in Gangtok, benefiting 108,972 people or 92% of the population in these towns; (ii) construct 45.7 km of street sewers in high-density core areas, fecal sludge management systems in low-density noncore areas, and six integrated sewage and fecal sludge treatment plants (totaling 12 MLD) in Pakyong, Rangpo, Singtam, and Soreng, serving 100% of the population (102,420 people) in these towns; (iii) improve fecal sludge collection by updating the fecal sludge management plans of the Public Health Engineering Department (PHED), engaging with communities and cesspool vehicle operators, and building their capacities;²⁵ and (iv) establish community-based water and sanitation infrastructure and services led and managed by women.²⁶ Sewerage treatment plants will be designed to operate odor free with a plan for using sewage sludge as organic fertilizer. The output includes 5-year, performance-based O&M contracts to enhance the PHED's capacity and system sustainability as it will own and operate the assets.

13. **Output 2: Urban transport infrastructure improved.** By 2032, output 2 will (i) upgrade 25 km of urban roads through junction improvements, new surface pavements, drainage, footpaths and walkways, and energy-efficient street lights with gender-responsive and inclusive features in all project towns;²⁷ (ii) construct nine THCCs with community and skill development

²² ADB. 2023. [Completion Report: North Eastern Region Capital Cities Development Investment Program in India](#); and Independent Evaluation Department. 2024. [Validation Report: North Eastern Region Capital Cities Development Investment Program, Tranche 2 in India](#). ADB.

²³ Up to 2 years or until loan closure, whichever comes first, will be funded by the loan, with the remaining balance covered by the state government's budget allocation.

²⁴ The design and monitoring framework is in the Appendix.

²⁵ The project will also coordinate with and receive support from ADB. 2019. *Technical Assistance for Accelerating Sanitation for All in Asia and the Pacific*. The project will also support studies and designs for future Gangtok city water supply and management improvements under outputs 1 and 3.

²⁶ Initiatives include water and sanitation management by self-help groups (SHGs) led by women; jobs for women in construction, O&M, billing, and collection; and community-led efforts like water testing training.

²⁷ Gender Assessment and Action Plan (Annex 5).

areas convertible to emergency disaster relief centers, sports and recreational areas, commercial and tourist areas, public transport and transit facilities, electric vehicle and ambulance infrastructure, and smart car parks with grid-tied rooftop solar power and gender-responsive features (footnote 27); (iii) develop seven downtown urban adaptive corridors with smart street lighting, bus bays, air pollution monitoring systems, transport information displays, and closed-circuit television; and upgrade Gangtok's integrated command center for traffic management and disaster response; and (iv) build one crematorium in Rangpo. It will also strengthen the institutional mechanism of the Urban Development Department (UDD) and ULBs to own and operate THCCs, including their use as disaster relief centers during emergencies. It will also improve asset management of transport and related infrastructure by the Sikkim Transport Department through development of asset management policies and plans, use of digital and information technology, and capacity building. This output will enhance transport system resilience, reduce asset deterioration, decrease travel time and congestion, and improve socioeconomic conditions of the state by addressing transport bottlenecks between key interconnected towns. THCCs will support both social and commercial activities and increase resilience during disasters. The THCC in Ranipool will include the basic structure for the state government's proposed ropeway station. The output will support O&M services led by women for THCCs, such as parking management, shops, and facility management. The project will strengthen the institutional framework for owning and operating THCCs, managing transport infrastructure, and developing public transport regulation plans for the state transport department and other agencies such as ULBs.

14. Output 3: Capacity for urban planning, mobility, sustainable services, and community awareness strengthened. By 2032, output 3 will support (i) updating the Sikkim Strategic Urban Plan (footnote 3) with gender-responsive, inclusive, and resilient elements; developing GIS-based master plans for six towns,²⁸ a state urban mobility plan, city mobility plans for selected towns (including planning for adaptive corridors with car-free and pedestrian-only zones), and public transport and traffic management plans using digital tools; and updating parking regulations and developing implementation road maps; (ii) strengthening sustainable WASH O&M through town asset management, water, and sanitation safety plans; early warning systems; NRW reduction; volumetric tariff road maps; and annual budgeting; (iii) building capacity of the State Climate Change Cell under the Department of Science and Technology, and preparing city climate action plans for ULBs; (iv) developing resilient water security plans for four project towns; (v) preparing O&M and revenue generation plans for THCCs and municipal resource mobilization strategies, and modernizing accounting and taxation systems; (vi) developing a UDD gender strategy and establishing and making operational a GIS-based urban data center in the UDD supported by training, smart city integration, and secure infrastructure; and (vii) building capacity of state officials (at least 30% female staff) from the UDD, Department of Science and Technology, Sikkim Transport Department, and other relevant departments in integrated planning, resilience, and gender mainstreaming; strengthening certified skills for young women in urban WASH, hospitality, tourism, IT, and green jobs; launching paid internships for women in urban development; and making the UDD urban training center operational to support capacity building and produce knowledge products. The updated strategic urban plan will improve coordination between the UDD and other departments, supporting sustainable urban and industrial growth, climate and disaster resilience, and better connectivity and livability. The project will promote integrated public transport and urban land use planning based on transit-oriented development principles.

²⁸ The capital city, Gangtok, already has a GIS-based master plan.

15. **Strategic alignment.** The Government of Sikkim adopted the Strategic Urban Plan in 2008 outlining urban development strategies up to 2040, to be led by the UDD (footnote 3). In 2022, the state embraced the national Vision 2047 to develop well-connected and adequate urban centers through holistic planning, governance, and investments.²⁹ The project aligns with key actions from both the Strategic Urban Plan and Vision 2047, supporting integrated planning and resilience improvements. It also aligns with (i) Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0, India’s national program for universal water, sanitation, and drainage services to be led by the PHED;³⁰ (ii) the Sikkim State Action Plan on Climate Change (footnote 11); and (iii) the Sikkim Sustainable Development Goals.³¹ Project towns were selected based on their alignment with national and state planning frameworks, particularly under AMRUT 2.0. The project is consistent with strategic pillars 2 (promote climate-resilient green growth) and 3 (deepen social and economic inclusiveness) of ADB’s country partnership strategy for India, 2023–2027.³² The project also aligns with ADB’s North East Economic Corridor Study for India.³³ The project is aligned with ADB’s Strategy 2030 midterm review and contributes to two of its focus areas: primarily resilience and empowerment, and secondarily climate action.³⁴ It enhances resilience and empowerment by delivering inclusive and disaster-resilient urban services, strengthening institutional capacities, and promoting service delivery models led by women that improve community well-being and municipal governance. As a secondary focus, the project supports climate action through integrated adaptation and mitigation measures, such as flood proofing, green infrastructure, and low-emission mobility systems that reduce vulnerability to climate-related hazards and promote long-term environmental sustainability.

C. ADB Value Addition

16. The project supports India’s digitalization agenda by establishing GIS data centers, preparing and implementing GIS-based town master plans, scaling up information technology initiatives, and mapping municipal and urban transport assets. It integrates water and wastewater management with urban mobility planning, creating synergies in both operation and planning. Implementing continuous water supply, NRW reduction, and citywide inclusive sanitation, combined with sustainable financial management and effective O&M, will significantly enhance Sikkim’s basic municipal services. Improvements in financial systems, GIS-based planning and asset management, O&M models led by women, and tariff and revenue planning will modernize water supply and sanitation service delivery. Multiuse THCCs and coordinated mobility plans will advance Sikkim’s multimodal connectivity, competitiveness, and livability by integrating smart parking, public transport, facilities for commercial and skills development spaces, and emergency relief functions. Strategically located along the Gangtok–Ranipool–Singtam–Rangpo corridor—a hub for industry, agriculture, and tourism—these THCCs will link to road, rail (Rangpo station), air (Pakyong airport), and future ropeways. In Singtam, a junction for five districts, the THCC will help ease traffic from five districts, while Pakyong and Soreng THCCs will support congestion management in these newly assigned district headquarters towns. ADB is also supporting Sikkim in upgrading district roads and bridges through project readiness financing. The project is

²⁹ Government of India. 2022. [Vision Viksit Bharat@2047](#); and Government of Sikkim, UDD. 2022. *Vision 2047–Concept Note*.

³⁰ Government of India, Ministry of Housing and Urban Affairs. 2023. [AMRUT 2.0 Operational Guidelines](#).

³¹ Government of Sikkim. 2017. [Sikkim Sustainable Development Goals \(Policies and Programs for their Attainment\)](#).

³² ADB. 2023. [Country Partnership Strategy: India, 2023–2027—Catalyze Robust, Climate-Resilient, and Inclusive Growth](#)

³³ The study is part of ADB. 2018. *Technical Assistance to India for Strategic Interventions for Economic Transformation—Strengthening Knowledge for Enhancing Development Outcomes* (project number 52140-001).

³⁴ ADB. 2024. [Strategy 2030 Midterm Review: An Evolution Approach for the Asian Development Bank](#).

coordinating with the state Skill Development Department for synergies with the World Bank-supported skill development and employment project on capacity-building activities.³⁵

D. Summary Cost Estimates and Financing Plan

17. The project is estimated to cost \$226.68 million (Table 1).

Table 1: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Output 1: Water supply and sanitation infrastructure improved with climate- and disaster-resilient and sustainability features	56.78
2. Output 2: Urban transport infrastructure improved	117.06
3. Output 3: Capacity for urban planning, mobility, sustainable services, and community awareness strengthened	3.11
Subtotal (A)	176.95
B. Contingencies^c	29.78
C. Financial Charges During Implementation^d	19.96
Total (A+B+C)^e	226.68

Notes: Numbers may not sum precisely because of rounding.

^a Includes taxes and duties of \$26.25 million. Such amount does not represent an excessive share of the project cost. All taxes and duties will be financed from government resources by cash contribution.

^b At end-2024 adjusted prices as of 25 February 2025.

^c Includes physical and price contingencies and a provision for exchange rate fluctuation. Physical contingencies are computed at 8% for civil works and equipment. Price contingencies are computed at 1.8%–2.0% on foreign exchange costs and 4.0%–4.6% on local currency costs, including provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^d Includes interest, commitment, and other charges on all financing sources.

^e Includes project preparatory expenses of \$0.99 million incurred prior to approval of the project financing by the Asian Development Bank, which were financed entirely by the government.

Source: Asian Development Bank estimates.

18. The government has requested a regular loan of \$179.07 million from ADB's ordinary capital resources to help finance the project. The loan will have a 20-year term, including a grace period of 5 years; an interest rate determined in accordance with ADB's Flexible Loan Product; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 12.75 years, and there is no maturity premium payable to ADB. These terms were confirmed with the Department of Economic Affairs and the Department of Finance of the Government of India.

19. The summary financing plan is in Table 2. ADB will finance the expenditures in relation to works, equipment, capacity building, project management, incremental administration costs, and contingencies. The Government of Sikkim will provide \$47.62 million to finance resettlement, taxes and duties, and financial charges during implementation. The Government of India and the Government of Sikkim have assured ADB that they will meet any financing shortfall to achieve the project outputs.

³⁵ World Bank Group. 2023. [Sikkim: Integrated Service Provision and Innovation for Reviving Economies Operation](#).

Table 2: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan) ^a	179.07	78.99
Government of Sikkim	47.62	21.01
Total	226.68	100.00

Notes: Numbers may not sum precisely because of rounding.

^a Ordinary capital resources are enabled by IF-CAP.

Source: Asian Development Bank estimates.

20. Total climate finance for the project is \$137.50 million, with an estimated \$32.60 million in mitigation costs and \$104.90 million in adaptation costs.³⁶ ADB will finance \$27.70 million of mitigation and \$89.20 million of adaptation costs. The project has been designed as a type 2A adaptation project, a development project that explicitly aims to reduce vulnerability to climate change over the long term and steer development in a resilient direction, with building climate resilience as one of its key objectives. The project includes climate change mitigation activities, resulting in a reduction of 6,341 tons of carbon dioxide equivalent annually.³⁷ Type 2A activities are incorporated within the water supply and sanitation component (output 1), urban mobility and infrastructure improvements (output 2), and enhanced state and municipal capacity for urban planning and climate resilience (output 3). Adaptation and mitigation measures are embedded in both new and retrofit designs to enhance long-term durability and sustainability. The project is also aligned with the government's climate commitments.

E. Implementation Arrangements

21. Implementation arrangements are summarized in Table 3.

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	September 2025–August 2032		
Estimated completion date	31 August 2032		
Estimated loan closing date	28 February 2033		
Management			
(i) Oversight body	High-powered steering committee Chief secretary, Government of Sikkim (chair) Designations (members)		
(ii) Executing agency	Government of Sikkim, UDD		
(iii) Key implementing agencies	Government of Sikkim, UDD Government of Sikkim, PHED		
(iv) Implementation unit	The project management unit will be in Gangtok, comprising officers from the UDD and PHED. PIUs from both the UDD and PHED will be in Gangtok, Gyalshing, Mangan, Pakyong, Rangpo, Singtam, and Soreng. PIUs with PHED officers will handle town-level water supply and sewerage projects, while PIUs with UDD officers will oversee other components. Both PIUs will have town-level field offices.		
Procurement	Open competitive bidding (nationally advertised)	9 contracts	\$162.33 million

³⁶ Adaptation finance is estimated using the following: European Investment Bank. 2023. [2022 Joint Report on Multilateral Development Banks' Climate Finance](#). Mitigation finance is estimated using the following: Joint Climate Finance Tracking Group of multilateral development banks and a group of representatives of the International Development Finance Club member banks. 2023. [Common Principles for Climate Mitigation Finance Tracking](#).

³⁷ Assessed based on Technical Guidance Note on Assessing Greenhouse Gas Emissions of Projects Financed by the Asian Development Bank (2025) and Joint Climate Finance Tracking Group of multilateral development banks and a group of representatives of the International Development Finance Club member banks. 2023. [Common Principles for Climate Mitigation Finance Tracking](#).

Aspects	Arrangements		
		Request for quotations (for goods)	1 contract
Consulting services	Quality- and cost-based selection, full technical proposal	2 contracts	\$9.46 million
	Consultants' qualification selection, biodata technical proposal	1 contract	\$0.41 million
Retroactive financing and/or advance contracting	The Government of Sikkim has requested advance contracting for works and consulting services under the project. Retroactive financing will apply for up to 20% of the ADB loan amount for eligible expenditures incurred before the effectiveness of the loan agreement, but not earlier than 12 months prior to the signing of the loan agreement.		
Disbursement	Disbursement of the loan proceeds will follow ADB's <i>Loan Disbursement Handbook</i> (2022, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, PHED = Public Health Engineering Department, PIU = project implementation unit, UDD = Urban Development Department.
Source: ADB.

III. DUE DILIGENCE

A. Technical

22. The project aligns with the master and sector plans for Sikkim and the Northeast Region of India. Detailed project reports have identified cost-effective, technically viable, and socially acceptable solutions tailored to Sikkim's context. Civil work contracts include performance-based O&M clauses to promote sustainable services and capacity transfer. The infrastructure designs for water supply, sanitation, and urban transport emphasize earthquake and disaster resilience features, and will be reviewed by an independent design agency for structural and geotechnical integrity. Designs will incorporate digital technology, early warnings for extreme events, and cost-effective operations. Drainage components will include flood protection elements, green and nature-based solutions where relevant, and community engagement in design. The THCCs will follow the National Building Code of India and comply with guidelines from the United Nations High Commission for Refugees and Indian National Disaster Management Authority for emergency relief centers and basic utilities during emergencies. The project integrates gender-responsive features across components and promotes low-carbon, sustainable construction, and efficient operations. Supervisory control and data acquisition systems are planned to use suitable technology compatible with existing IT infrastructure. Additional adaptation measures include flood proofing, landslide protection, green landscaping, and smart mobility management. Mitigation efforts include grid-tied rooftop solar for THCCs, energy-efficient equipment, sustainable building materials (e.g., green cement), and electric vehicle charging stations to promote low-emission mobility.

B. Safeguards

23. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.

24. **Environment (category B).** Two initial environmental examinations (IEEs), including environmental management plans (EMPs), were prepared and disclosed in accordance with ADB's Safeguard Policy Statement. Due diligence has confirmed all risks are assessed and impacts identified, and mitigation measures are proposed for avoiding or minimizing the impacts of all components under outputs 1 and 2, including other small-scale infrastructure. The IEEs and EMPs address anticipated limited impacts and outline mitigation measures for output 2's smaller facilities. The EMPs have adequate recommendations to maximize positive impacts and mitigate

and compensate for adverse impacts during implementation. The IEEs found no components fall inside protected areas or impact sensitive wildlife habitats, although some common species of flora and fauna were recorded. Mitigation measures suggested in the EMPs include avoiding and minimizing tree removals, protecting bird nests during breeding season, and undertaking compensatory planting for cleared trees. The impacts are predicted to be localized and of short duration, temporary, reversible, and of medium significance. Key impacts identified included water source sustainability; vulnerability of structures at riverbanks; traffic management; and air, water, and noise pollution. Information dissemination and meaningful consultation with the community on the IEEs and environment protection measures were carried out and will be conducted throughout the project cycle. The works contract awards will be contingent on updating of IEEs with review and clearance by ADB. The PMU will have a safeguard desk led by project staff as a safeguards focal point which will be supported by a full-time environmental safeguards expert of the project management and design supervision consultant. Each PIU will also have a staff member assigned as a safeguards focal point who will be supported by an associate environmental safeguard expert. Regular compliance monitoring will be supported by mobilizing four field monitors, each responsible for two nearby towns (cluster). The environmental safeguard expert will provide orientation to staff, associate environmental safeguard experts and field monitors, and contractors on safeguards mechanisms, monitoring details, and reporting requirements. Also, institutional strengthening will be carried out under output 3 covering environment, biodiversity, and safety training. A grievance redress mechanism will be established in the PMU and PIUs. The executing agency and implementing agencies will submit quarterly progress reports and semiannual environmental safeguard monitoring reports, and a project completion report on safeguards at project completion.

25. **Involuntary resettlement (category B).** Seven resettlement plans and one due diligence report have been prepared for the THCC components. In addition, three resettlement and Indigenous Peoples plans (RIPPs) and two combined resettlement and Indigenous Peoples due diligence reports (RIPDDR) have been prepared for water supply and wastewater components of five project towns. In addition, one combined resettlement and Indigenous Peoples framework has been developed for the overall project for any impacts for which the locations are to be confirmed. The total land needed for the project is 59,375 square meters (m^2), of which 95% (56,575 m^2) is government owned and 5% (2,800 m^2) is private land, to be acquired through negotiated settlement with third-party verification. Some vulnerable households with family members are among the affected people. The mitigation measures and safeguard planning documents are adequate to address the assessed impacts. Community consultations and focus group discussions were conducted for each selected project site for both the urban transport and the water and sanitation components. Consultation and information dissemination will continue during implementation, in addition to the grievance redress mechanism. The safeguards documents will be updated based on the detailed designs and during implementation to reflect changes, if any, and will be disclosed by ADB. Appropriate institutional arrangements are detailed in the project administration manual for the PMU, PIUs, and division and/or field offices. The PMU and PIUs will be supported by the project management and design supervision consultant, gender and community engagement consultants, and a planning and governance improvement consultant for community awareness, capacity building, and gender and social aspects. The consultants, together with ADB, will provide training to strengthen the capacity of the executing and implementing agencies and contractors. The PMU will also provide brief updates on social safeguards in quarterly progress reports for consecutive reporting periods. Semiannual social safeguard monitoring reports and a project completion report will be prepared and disclosed.

26. **Indigenous Peoples (category B).** Assessment indicates beneficial impacts on Indigenous Peoples because of the project. No direct or indirect impacts are anticipated to the dignity, human rights, livelihood systems, or territories or natural or cultural resources that are used, owned, occupied, or claimed by Indigenous Peoples as their ancestral domain or asset. Three RIPPs and two RIPDDRs include specific action plans for enhanced participation and inclusion of Indigenous Peoples in a culturally appropriate manner. Nine Scheduled Tribe households with 39 members are anticipated to face involuntary resettlement impacts, which are adequately addressed through the RIPPs. A resettlement and Indigenous Peoples planning framework has been prepared in line with ADB's Safeguard Policy Statement and applicable laws to ensure that projects prepared after the ADB Board of Directors approval have adequate measures for Scheduled Tribes to receive culturally appropriate benefits. The draft and final RIPPs and RIPDDRs will be disclosed to the Scheduled Tribes living in project towns and on ADB and project websites. The semiannual social safeguards monitoring reports will have updates on Indigenous Peoples.

C. Economic and Financial Viability

27. **Economic analysis.** The economic analysis was carried out in accordance with the ADB guidelines. The cost–benefit analysis confirms that the consolidated project is economically viable, with an overall economic internal rate of return of 12.2%, indicating substantial economic returns. Sensitivity analysis of identified risks such as increased construction costs, higher recurrent costs, lower-than-expected economic benefits, and project completion delays demonstrates that the consolidated project's economic return remains robust even under adverse scenarios. Sensitivity analysis of key risk factors, including increases in construction and recurrent costs, lower-than-expected economic benefits, and delays in project implementation, indicates that the project components remain generally robust to adverse scenarios.³⁸ To mitigate potential negative impacts, rigorous monitoring and management measures are critical to control cost overruns and ensure that the project successfully achieves its objectives.

28. **Financial analysis.** As the project is not designed for full cost recovery, financial viability analysis was not conducted. However, an incremental O&M cost recovery analysis and the institutional financial capacity were assessed by incorporating the impacts of the project components. Further, the incremental budget requirement for O&M from the Government of Sikkim will be assessed under output 3, as the water supply and sanitation assets will be managed by the PHED, which operates on budget allocation from the government.

D. Gender Equality

29. Women and girls in Sikkim spend 4.7 hours daily on WASH-related unpaid domestic duties and 2.4 hours on unpaid caregiving. As primary caregivers, they are directly affected by water quality issues and rising temperatures. Sikkim's geo-fragility and extreme weather events disproportionately impact women, who rely on climate-sensitive sectors like agriculture and have limited access to economic resources, decision-making power, and knowledge about nonfarming opportunities. Women are overrepresented in lower-quality jobs, and limited urban mobility restricts their access to better socioeconomic opportunities. Safe, accessible, and inclusive mobility is crucial for women's safety. Poor urban mobility in project towns, including Gangtok, creates safety concerns for women, children, people with disabilities, and the elderly. The female employment rate in urban Sikkim is 34.4%, compared to 80.3% for men. Many urban youth, especially young women, lack market-relevant skills and certification, including in green jobs, and

³⁸ Economic and Financial Analysis (Annex 3).

women and self-help groups (SHGs) have little knowledge of opportunities in WASH and mobility infrastructure and services, including O&M opportunities. Gender-responsive urban planning in Sikkim is in its early stages. While initiatives like AMRUT 2.0 aim for female-centric water governance, key plans such as the state's Strategic Urban Plan (2008), town master plans, and city climate action plans lack gender-responsive and inclusive features. Gangtok's 2010 comprehensive mobility plan is outdated and does not address inclusive mobility for women, the elderly, children, and people with disabilities.³⁹ The project is categorized *effective gender mainstreaming*. The project will benefit women and reduce their drudgery and time poverty by creating reliable, accessible, and time-saving WASH and urban mobility services. Key considerations include women's equal access to safe water and sanitation, including menstrual health and hygiene. The project will promote gender equality and women's empowerment through (i) gender-responsive THCCs with community and skills development centers along with commercial and tourist areas; (ii) gender-responsive and participatory planning;⁴⁰ (iii) gender-responsive and inclusive climate action plans and a revised state strategic urban plan; (iv) skill training for young women and women's SHGs to diversify livelihoods and gain employment opportunities; (v) engaging women's SHGs, enterprises led by women, and/or women's cooperatives in O&M work contracts for upkeep of THCCs; (vi) developing community-based and WASH services and initiatives led by women; (vii) delivering training for municipal staff (including 30% women) on integrated urban planning, climate resilience action planning, disaster risk management practices, and gender dimensions; and (viii) increasing awareness and outreach activities among community women, SHG members, schoolgirls, female drivers, women vendors, sanitation workers, caregivers, and female youth in technical education in areas such as WASH, traffic management, road safety, medical emergencies, weather extremes, and early warning systems. The project will support the preparation of a gender equality strategy for the UDD and sensitize staff on gender-inclusive governance. The project will offer professional experience to female students through a paid women's internship program.

E. Poverty and Social Dimensions

30. Poverty targeting is *general intervention*. Despite Sikkim's high Human Development Index (para. 3), attention to the access of women and vulnerable populations to WASH and public transport is needed. The project incorporates a gender-inclusive and pro-poor design to address remaining poverty. Community outreach will raise awareness about household water and sewerage connections, and public transport benefits. The project will create employment opportunities during construction, benefiting local communities and strengthening community-based organizations like women's SHGs. Capacity development will enhance job opportunities involving women in service delivery. The project will conduct further analysis throughout implementation for all interventions to align with the needs of the population and support job creation within the UDD and PHED, offering equal opportunities for men and women. Improved and safe mobility will reduce access challenges, boost efficiency, and alleviate time poverty.

31. **Stakeholder engagement.** The project preparation included stakeholder consultations with a focus on women and disadvantaged groups to disseminate information and open communication channels, raise awareness about the project's development impact, and resolve potential conflicts early. The project will continue engaging affected communities in its design, implementation, monitoring, and evaluation. For meaningful consultation, (i) a stakeholder

³⁹ Government of Sikkim, UDD. 2010. [Comprehensive Mobility Plan, Gangtok \(Sikkim\)](#).

⁴⁰ Gender-responsive urban planning integrates concepts for inclusive cities, rights to the city, and just cities with participatory planning, risk-sensitive land use, zoning, and development controls to promote the needs of women and girls, and provides safe, accessible, and barrier-free environments utilizing smart tools and social networks.

communication plan was prepared; (ii) consultations will include public representatives and civil society; and (iii) a project information booklet covering the benefits, components, resettlement entitlements, and grievance redress mechanism will be prepared in English, Hindi, and other local languages such as Nepali, which is widely spoken in Sikkim.

F. Procurement, Financial Management, and Integrity

32. **Procurement.** Procurement of goods, works, and services will follow the ADB Procurement Policy (2017, as amended from time to time) and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time). Strategic procurement planning was tailored to Sikkim's context. Despite the ADB North Eastern Region Capital Cities Development Investment Program, which spanned 2009–2019,⁴¹ premitigation procurement risk is rated *substantial* because of the UDD's limited experience with ADB and other multilateral development banks and the challenging geographical location of the project towns.⁴² Suitable bidding documents were developed for O&M services with practical key performance indicators. The project has high project readiness, with at least 30% of civil works packages at advanced procurement stages.

33. **Financial management.** A financial management assessment was conducted following ADB guidelines for the UDD as the executing agency and one of the implementing agencies. The premitigation risk is assessed *substantial* because of (i) orders having been issued by the state government but the PMU and PIU staff are not yet fully deployed, (ii) the UDD's limited experience with ADB-funded projects, (iii) the absence of internal audit, and (iv) the lack of accounting software to record transactions. To address these, the UDD will implement the financial management action plan, which includes (i) appointing experienced staff to the PMU and PIUs, supported by a professional financial management specialist; (ii) preparing a project financial management manual; (iii) procuring accounting software; and (iv) engaging a chartered accountant for internal audit.

34. **Integrity.** ADB's Anticorruption Policy (1998, as amended from time to time) and other relevant guidelines and procedures were explained to and discussed with the state government and the UDD and PHED.

G. Sustainability

35. The financial sustainability of the project's components under outputs 1 and 2 was assessed using incremental recurrent cost analysis, evaluating the historical and projected financial performance of the entities responsible for O&M. The analysis indicates that the revenues for the THCC components are expected to cover their O&M expenses. However, the water supply and sanitation component managed by the PHED will require additional budgetary support of 14.0%–18.0% of the total O&M allocation, while the UDD will require additional budgetary support of 1.1%–1.8% for other transport components. No data is available to determine the total O&M requirement for the PHED and UDD to ascertain whether its existing budget allocation is sufficient to maintain its total network of assets. However, as both the UDD and PHED are state government departments, the Government of Sikkim has agreed to provide the necessary increase in O&M funding. Water and sanitation contract packages will include

⁴¹ ADB. 2009. [India: Multitranches Financing Facility - North Eastern Region Capital Cities Development Investment Program](#).

⁴² ADB. 2024. [Technical Assistance to India for India Urban and Water Projects Support Facility \(53067-002\)](#). As part of project preparation, the ADB project team conducted a strategic procurement planning discussion and workshop in 2024.

minimum 5-year performance-based O&M provisions (2 years financed under the loan and 3 years by the government) to support operation and capacity development of the PHED staff. The UDD, experienced in managing infrastructure similar to THCCs, will also explore 5-year O&M contracts with private sector and community participation. These contracts will generate revenue through parking fees, commercial spaces, skill centers, and other activities, and will be supported by viability gap financing through the Government of Sikkim. Given that sufficient O&M resources depend on timely government transfers and tariff updates, the sustainability risk is rated *substantial*. To mitigate this, output 3 will support cost recovery through tariff reform and implementation plans, asset maintenance policies and plans, municipal revenue mobilization, and capacity development for O&M. Additional measures will also be considered, including implementing cross-subsidies, enabling revenue transfers, improving tax collections, and ensuring revenues are earmarked exclusively for O&M. It is also crucial to verify and substantiate the assumptions used in the financial sustainability analysis during the implementation.

H. Summary of Risk Assessment

36. The key assessed premitigation risks and mitigating measures are summarized in Table 4.

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigation Measures
Financial management. Delays or insufficient counterpart funds from the central and state governments hinder project implementation, leading to ineligible expenditures and constraints. Limited experience, no accounting software, and no internal audit weaken financial accuracy and accountability.	EA, IA, and PMU to (i) prepare a timely budget forecast and ensure its allocation in the annual budget; (ii) provide training on ADB's financial management and disbursement procedures to project staff; (iii) engage external chartered accountants for internal audits; (iv) include audit observations, recommendations, and actions in quarterly progress reports; (v) procure and install accounting software; and (vi) develop a financial management manual to ensure consistency and compliance.
Sustainability. Inadequate regulations; revenues, fees, and tariffs; human and technical capacity; and long-term funding affect O&M of the assets to the required service level.	EA and IAs to (i) strengthen the regulatory framework; conduct revenue, tariff, and subsidy studies; and develop road maps and institutional strengthening; (ii) ensure that Public Health Engineering Department and UDD have adequate staff to operate assets and received O&M budgets; (iii) build the technical capacity of staff through training and capacity building; and (iv) secure long-term O&M funding through government commitment, and include minimum 5-year performance-based O&M provisions in water and sanitation contracts.
Procurement. Executing and implementing agencies' limited experience with ADB-funded project contracts, coupled with capacity constraints and the wide geographic spread of project sites, may lead to low bidder turnout, substandard work quality, and procurement delays.	ADB and EA to (i) conduct early market engagements (e.g., bidder consultations, business seminars) throughout the procurement for key packages; (ii) prepare technical specifications and terms of reference with realistic performance indicators; (iii) use pre-bid meetings to brief bidders on submission checklists, fund flow, and incentives; (iv) ensure cost estimates and contract durations are realistic, with fair evaluation criteria and balanced risk sharing; (v) strengthen the PMU with experienced staff; (vi) provide training on ADB's procurement guidelines; and (vii) monitor adherence to ADB procurement principles.
Implementation. Delays in securing rights-of-way, design, and delivery of works because of challenging topography, limited connectivity, extreme weather, force majeure, budget overruns, and labor shortages.	EA, IAs, PMU and PIUs to (i) secure rights-of-way and access early; (ii) conduct pre-bid site visits to help contractors assess conditions and estimate costs; (iii) PIUs to work closely with contractors for timely delivery of design, work, and labor recruitment; and (iv) address climate and health risks in environmental management plans and allocate risks clearly in bidding documents and contracts.

ADB = Asian Development Bank, EA = Executing Agency, IA = Implementing Agency, O&M = operation and maintenance, PIU = project implementation unit, PMU = project management unit, UDD = Urban Development Department.

Source: ADB.

IV. ASSURANCES

37. The Government of India, the Government of Sikkim, and the UDD have assured ADB that implementation of the project shall conform to all applicable ADB requirements, including those concerning anticorruption measures, safeguards, gender equality, procurement, consulting services, financial management, and disbursement, as further mentioned in the loan documents.

38. The Government of India, the Government of Sikkim, and the UDD have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement and project agreement.

V. RECOMMENDATION

39. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$179,070,000 to India for the Sikkim Integrated Urban Development Project, from ADB's ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB's Flexible Loan Product; for a term of 20 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Masato Kanda
President

25 August 2025

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with			
The urban livability of project towns improved with better service delivery and climate and disaster resilience (Sikkim State Action Plan for Climate Change, 2014; and Sikkim State Strategic Urban Plan, 2008) ^a			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Outcome Mobility and urban services in the project towns improved	By 2033: a. 108,972 people (92% of the total population in project towns) benefited from a continuous piped water supply averaging 135 liters per capita per day (2025 baseline: 1–2 hours per day) (DR1, DR3, and DR7) b. NRW reduced to 20% in the project towns, improving water security and climate resilience (2024 baseline: 50%) (DR 3) c. Water tariff increased by average 50% and sewerage tariff introduced with consideration for poor and vulnerable households and households led by women in the project towns (2025 baseline: volumetric water tariff from ₹5/kl to ₹20/kl and sewerage tariff: 0) (DR4 and DR11) d. 102,420 people (100% of the population in the project towns) benefited from citywide inclusive sanitation (2025 baseline: Not applicable) (DR1, DR3, and DR7) e. Peak commuting time within city limits reduced by 30% in project towns (2025 baseline: 6 minutes for 1 km) (DR1, DR3, and DR7) f. Municipal own-source operating income to operating expenditure ratio increased by an average of 15 percentage points in project towns (2025 baseline: 40%) (DR11)	a.–f. Quarterly project performance monitoring reports; UDD and PHED asset and service databases (2033); UDD, urban local bodies, and PHED annual reports (2033); ADB project review mission reports and project completion report	R: Delays in policy approvals or budget allocations for tariff reforms and municipal financial management may affect sustainability of service delivery. A: Government commitment to urban reform agenda and interdepartmental coordination remains strong after project implementation.
Outputs 1. Water supply and sanitation infrastructure improved with climate- and disaster-resilient and sustainability features	By 2032: 1a. 24.5 km of water distribution network rehabilitated; 126.5 km of new network and water treatment plants of 21 MLD capacity constructed and made operational with 5-year performance-based contracts in project towns (2025 baseline: Not applicable) 1b. 45.7 km of street sewers and integrated sludge and wastewater treatment plants of 12 MLD capacity	1a.–1d. Quarterly project performance monitoring reports, ADB project review mission reports, and project completion report (2033)	R: Extreme weather events or natural hazards disrupt construction schedules and infrastructure delivery. A: Timely availability of land, permits, and clearances for infrastructure works

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	<p>constructed in project towns (2025 baseline: Not applicable)</p> <p>1c. Fecal sludge management systems with desludging, cesspool vehicles, and tariff system implemented in project towns (2025 baseline: Not applicable)^b</p> <p>1d. At least four community-based, water and sanitation infrastructure and service initiatives led and managed by women developed^c (2025 baseline: 0)</p>		and institutional reforms.
2. Urban transport infrastructure improved	<p>By 2032:</p> <p>2a. 25 km of urban roads and junctions improved along with footpaths and street lights with gender-responsive and inclusive features;^d stormwater drains and a crematorium complex, constructed (2025 baseline: Not applicable)</p> <p>2b. Nine new THCCs with gender-responsive features^e constructed with facilities of emergency disaster relief centers, skills development centers, commercial and tourist areas, public transport and parking facilities (2025 baseline: 0)</p> <p>2c. Five THCC-related O&M work contracts^f allotted to women's self-help groups, enterprises led by women, and/or women's cooperatives (2025 baseline: 0)</p> <p>2d. Seven new urban adaptive corridors with smart lighting, bus bays, pollution monitoring systems, digital displays, and closed-circuit TV surveillance integrated with existing central command center (2025 baseline: 2)</p> <p>2e. Institutional mechanism to own and operate THCCs strengthened,^g and asset management plan of transport infrastructure developed and made operational (2025 baseline: Not applicable)</p>	2a.–2e. Quarterly project performance monitoring reports, ADB project review mission reports, and project completion report (2033)	
3. Capacity for urban planning, mobility, sustainable services, and community awareness strengthened	<p>By 2032:</p> <p>3a. State Strategic Urban Plan (2008) updated with resilience, gender, and inclusive considerations;^h and GIS-based infrastructure master plans prepared for six towns (2025 baseline: Not applicable)</p>	3a.–3j. Quarterly project performance monitoring reports, PHED and UDD annual reports, Government of Sikkim reports and publications, and project	

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	<p>IT, and green jobs, and at least 200 (50%) are offered internships or placements' (2025 baseline: 0)</p> <p>3l. At least four knowledge products on urban mobility, climate resilience, disaster risk management, and WASH under the UDD training center prepared and disseminated (2025 baseline: 0)</p> <p>3m. At least 50 female students gained professional experience through a paid internship program in technical (nontraditional) fields and reported increased knowledge in urban development^m (2025 baseline: 0)</p>	<p>post-training surveys and training reports, Government of Sikkim reports and publications, and project completion report (2033)</p>	
<p>Key Activities with Milestones</p> <p>1. Water supply and sanitation infrastructure improved with climate- and disaster-resilient and sustainability features.</p> <p>1.1 Award contracts including O&M and related equipment, systems, and infrastructure by Q1 2026.</p> <p>1.2 Construct all works and systems and assemble equipment by Q1 2028.</p> <p>1.3 Develop fecal sludge management systems with desludging, cesspool vehicles, and proper disposal with treatment, and implement a tariff system in Pakyong, Rangpo, Singtam, and Soreng by Q1 2028.</p> <p>1.4 Develop community-based WASH infrastructure and service initiatives led and managed by women by Q1 2028.</p> <p>2. Urban transport infrastructure improved.</p> <p>2.1 Award contracts for all civil works (THCCs, urban road and other infrastructure, including nature-based works) and related equipment with features suitable for the elderly, women, children, and people with disabilities by Q1 2026.</p> <p>2.2 Award the contract for installation of air pollution monitoring equipment, electronic display boards, public announcement call boxes, and closed-circuit TV for smart zones integrating with the command centers by Q1 2028.</p> <p>2.3 Construct THCCs and infrastructure works and assemble related equipment and infrastructure by Q3 2028.</p> <p>2.4 Award at least five THCC-related O&M works contracts to women's self-help groups, enterprises led by women, and/or women's cooperatives by Q2 2029.</p> <p>2.5 Complete the central command center and installation of air pollution monitoring equipment, electronic display boards, public announcement call boxes, and closed-circuit TV surveillance in seven project towns by Q1 2029.</p> <p>2.6 Develop and make operational the institutional mechanism to own and operate THCCs, drainage improvement plans, and asset management plans of transport and related infrastructure by Q1 2029.</p> <p>3. Capacity for urban planning, mobility, sustainable services, and community awareness strengthened.</p> <p>3.1 Update the Strategic Urban Plan (2008) and develop GIS-based urban infrastructure master plans for four towns (Pakyong, Rangpo, Singtam, and Soreng) by Q2 2029.</p> <p>3.2 Make the city GIS data center operational and connect it to the integrated command and control center at Gangtok for Pakyong, Rangpo, Singtam, and Soreng by Q2 2029.</p> <p>3.3 Develop and make operational water and sanitation safety plans and develop water security plans for Pakyong, Rangpo, Singtam, and Soreng by Q2 2029.</p> <p>3.4 Develop an integrated strategic mobility plan for Sikkim and prepare comprehensive mobility plans for seven project towns by Q2 2029.</p> <p>3.5 Develop city climate action plans with gender-responsive features for seven project towns by Q2 2031.</p> <p>3.6 Develop and make operational city asset management policy systems for water supply and wastewater infrastructure by Q2 2029.</p> <p>3.7 Develop a sustainable O&M plan, NRW reduction plan, financial management and tariff studies, and volumetric tariff road maps with implementation plans for water supply, sewerage, and sanitation by Q2 2029.</p> <p>3.8 Develop a municipal resource mobilization and revenue improvement plan and implement computerized accounting system modernization by Q2 2029.</p> <p>3.9 Develop and approve a gender equality strategy for the UDD by Q2 2029.</p> <p>3.10 Conduct training for at least 70 technical staff of the UDD, PHED, and State Climate Change Cell (at least 30% women) in urban planning, resilience action planning, disaster risk management, and gender by Q2 2029.</p>			

<p>Key Activities with Milestones</p> <p>3.11 Conduct skill training (certification levels) for at least 400 young women in urban water supply, sanitation, hospitality, tourism, IT, and green jobs, and at least 200 (50%) are offered internships or placements by Q1 2030.</p> <p>3.12 Produce and disseminate at least four knowledge products across project-specific sectors, such as urban mobility, climate change, disaster risk management, and WASH under the UDD urban training center by Q1 2030.</p> <p>3.13 Conduct a paid internship program for 50 female college students from technical (nontraditional) fields to help them gain professional experience in urban development by Q4 2027.</p>
<p>Project Management Activities</p> <p>Award contracts and mobilize consultants for the project management unit and construction supervision by 30 September 2025.</p> <p>Establish project performance management systems, inception, and reporting by 31 December 2025.</p> <p>Update the initial environmental examination for output 2 by including updates in other infrastructure works by 30 June 2026.</p> <p>Complete safeguard activities and monitoring for civil works by 30 September 2032.</p> <p>Implement all safeguard measures and the gender assessment and action plan, and submit quarterly project progress reports, safeguard monitoring reports, and gender action plan reports throughout project implementation up to project closing by 30 September 2032.</p> <p>Carry out all gender action plan key activities by 30 September 2029.</p> <p>Conduct all stakeholder communication strategy key activities by 30 June 2029.</p> <p>Issue periodic project progress reports (every quarter).</p> <p>Conduct annual and midterm reviews (two missions per year).</p> <p>Prepare and submit annual project financial statements by 30 September from 2026 to 2033.</p>
<p>Inputs</p> <p>Asian Development Bank: \$179.07 million^a Government: \$47.62 million</p>

A = assumption; ADB = Asian Development Bank; DR = development result; GIS = geographic information system; kl = kiloliter; km = kilometer; MLD = million liters per day; NRW = nonrevenue water; O&M = operation and maintenance; PHED = Public Health Engineering Department; Q = quarter; R = risk; THCC = transit hub-cum-community complex; UDD = Urban Development Department; WASH = water, sanitation, and hygiene.

^a Government of Sikkim. 2014. [The Sikkim State Action Plan on Climate Change](#); and Government of Sikkim. 2008. [Strategic Urban Plan \(2008\)](#).

^b Implementation of fecal sludge management systems will be measured by the commissioning of scheduled desludging services, deployment of cesspool vehicles, and introduction of a tariff structure, with data sourced from municipal service records and project progress reports.

^c The project will adopt Atal Mission for Rejuvenation and Urban Transformation MITRA-sanctioned WASH infrastructure and management initiatives led and managed by women. The Government of Sikkim has announced 17 Atal Mission for Rejuvenation and Urban Transformation projects in Gangtok, Mangan, Rangpo, and Singtam.

^d These include (i) safety features such as well-marked crossings, safety signage, pedestrian walkways, ramps, railings, covered drains, paved shoulders (soft and hard), speed bumps, and solar blinkers; (ii) adequate street lights covering at least 80% of all roads, especially in front of important community institutions; (iii) closed-circuit TV cameras at warranted locations targeting the safety of women and girls; and (iv) separate toilets along the road in appropriate intervals.

^e These include accessible, connected, safe, healthy, and secure infrastructure for women and other vulnerable populations, including the use of smart and innovative tools and social networks to respond to disasters. The THCCs will have inclusive design features, including community halls, separate and barrier-free toilets and changing areas, safety surveillance, and adequate lighting and seating arrangements.

^f Nine contracts (nine lots) for THCC O&M work will be procured. Subcontracts or concessions will be drawn for eligible women representing entities and nongovernment organizations for O&M of commercial areas.

^g Strengthening of institutional mechanisms will be measured by the establishment of entities responsible for THCC ownership and operations under the urban local bodies and the UDD, adoption of standard operating procedures, and development and approval of asset management plans, as documented in government orders, operational manuals, and project progress reports.

^h The Strategic Urban Plan (2008) update will ensure the rights of women and disadvantaged groups to participate in inclusive and participatory planning in development processes. It will address diverse gender needs and make sure urban infrastructure is accessible, safe, and resilient for all, especially vulnerable populations and women.

ⁱ City climate change action plans will identify the cities' vulnerable communities, including women's differential needs, and conduct a climate vulnerability assessment on priority areas of the Sikkim State Action Plan for Climate Change (2014) and establish a responsibility framework to prioritize mitigation and adaptation measures for different groups.

- ^j This will include a framework for the UDD's functions in (i) human resource practices and staffing that enable the increased representation of women; (ii) women's participation in capacity-building, training, and outreach activities; and (iii) gender budgeting and resourcing, including for gender-friendly workplace facilities.
- ^k Total staff is 880, with 69 holding technical positions and 34% of them being women. Potential partners may include the Land Revenue and Disaster Management Department and the National Institute of Himalayan Environment.
- ^l Young women aged 15–29 years will be considered as per the definition of youth recognized by the Government of India. Short- and long-term certified courses will be considered. The state's Skill Development Department, Tourism and Civil Aviation Department, and Forest and Environment Department run certified and National Skills Qualification Framework courses for youth and women, and courses for WASH trades are accredited by the Water Management and Plumbing Skill Council (national skills levels 3–5). More details are provided in the Gender Assessment and Action Plan (Annex 5).
- ^m The paid female internship program offers college students hands-on experience in technical (nontraditional) skills, like urban planning and governance, commerce and accounting, social development, engineering, and IT. More details are provided in the Gender Assessment and Action Plan (Annex 5) and project administration manual.
- ⁿ Ordinary capital resources are enabled by IF-CAP.

Source: ADB.