



# Report and Recommendation of the President to the Board of Directors

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Project Number: 54355-001  
November 2021

## Proposed Loan, Grant, and Technical Assistance Grant Kingdom of Bhutan: Green and Resilient Affordable Housing Sector Project

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Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 14 October 2021)

Currency unit	–	ngultrum (Nu)
Nu1.00	=	\$0.013
\$1.00	=	Nu75.23

## ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
COVID-19	–	coronavirus disease
MOF	–	Ministry of Finance
MOWHS	–	Ministry of Works and Human Settlement
NHDCL	–	National Housing Development Corporation Limited
NHP	–	National Housing Policy
NPPF	–	National Pension and Provident Fund
NSB	–	National Statistics Bureau
O&M	–	operation and maintenance
PAM	–	project administration manual
PBL	–	policy-based loan
PMU	–	project management unit
SDG	–	Sustainable Development Goal
TA	–	technical assistance
TASF	–	Technical Assistance Special Fund

## NOTES

- (i) The fiscal year (FY) of the Government of Bhutan ends on 30 June. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2022 ends on 30 June 2022.
- (ii) In this report, “\$” refers to United States dollars.

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## CONTENTS

	<b>Page</b>
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Project Description	4
C. Value Added by ADB	5
D. Summary Cost Estimates and Financing Plan	6
E. Implementation Arrangements	7
III. ATTACHED TECHNICAL ASSISTANCE	8
IV. DUE DILIGENCE	8
A. Technical	8
B. Economic and Financial Viability	8
C. Sustainability	9
D. Governance	9
E. Poverty, Social, and Gender	10
F. Safeguards	10
G. Summary of Risk Assessment and Risk Management Plan	11
V. ASSURANCES	12
VI. RECOMMENDATION	12
APPENDIXES	
1. Design and Monitoring Framework	13
2. List of Linked Documents	17

## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number:</b> 54355-001	
<b>Project Name</b>	Green and Resilient Affordable Housing Sector Project	<b>Department/Division</b>	SARD/SAUW
<b>Country</b>	Bhutan	<b>Executing Agency</b>	Ministry of Finance
<b>Borrower</b>	Bhutan		
<b>Country Economic Indicators</b>	<a href="https://www.adb.org/Documents/LinkedDocs/?id=54355-001-CEI">https://www.adb.org/Documents/LinkedDocs/?id=54355-001-CEI</a>		
<b>Portfolio at a Glance</b>	<a href="https://www.adb.org/Documents/LinkedDocs/?id=54355-001-PortAtaGlance">https://www.adb.org/Documents/LinkedDocs/?id=54355-001-PortAtaGlance</a>		
<b>2. Sector</b>		<b>Subsector(s)</b>	
✓ <b>Water and other urban infrastructure and services</b>	Urban housing		<b>ADB Financing (\$ million)</b>
			30.00
		<b>Total</b>	<b>30.00</b>
<b>3. Operational Priorities</b>		<b>Climate Change Information</b>	
✓ Addressing remaining poverty and reducing inequalities		GHG reductions (tons per annum)	9.360
✓ Accelerating progress in gender equality		Climate Change impact on the Project	High
✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability			
✓ Making cities more livable		<b>ADB Financing</b>	
✓ Strengthening governance and institutional capacity		Adaptation (\$ million)	4.80
		Mitigation (\$ million)	7.20
		<b>Cofinancing</b>	
		Adaptation (\$ million)	0.00
		Mitigation (\$ million)	0.00
<b>Sustainable Development Goals</b>		<b>Gender Equity and Mainstreaming</b>	
SDG 1.5		Effective gender mainstreaming (EGM)	✓
SDG 5.4			
SDG 11.1		<b>Poverty Targeting</b>	
SDG 13.a		Household Targeting	✓
<b>4. Risk Categorization:</b>		Low	
<b>5. Safeguard Categorization</b>		Environment: B Involuntary Resettlement: B Indigenous Peoples: C	
<b>6. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>30.00</b>	
Sovereign Sector grant: Asian Development Fund		6.00	
Sovereign Sector (Concessional Loan): Ordinary capital resources		24.00	
<b>Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Counterpart</b>		<b>7.00</b>	
Government		7.00	
<b>Total</b>		<b>37.00</b>	
Note: An attached technical assistance will be financed on a grant basis by the Technical Assistance Special Fund (TASF-7) in the amount of \$1,000,000.			
<b>Currency of ADB Financing:</b> US Dollar			

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan and a proposed grant, both to the Kingdom of Bhutan for the Green and Resilient Affordable Housing Sector Project. The report also describes proposed technical assistance (TA) for Supporting the Green and Resilient Affordable Housing Sector Project, and if the Board approves the proposed loan and grant, I, acting under the authority delegated to me by the Board, approve the TA.

2. The project will support the government's national priority to improve the livability, safety, and sustainability of human settlements through better access to adequate and affordable rental housing,<sup>1</sup> which will be implemented using the sector loan modality. The project will increase the supply of green and resilient affordable housing in Nganglam, Phuentsholing, Samdrup Jongkhar, Samtse, Thimphu, and Trashiyangtse; and benefit about 1,000 lower- to middle-income civil servants and non-civil servants, including marginalized municipal waste workers. The project will also implement the associated infrastructure and facilities, enhance the institutional capacity of the National Housing Development Corporation Limited (NHDCL), and strengthen the housing sector policy and regulatory framework necessary to provide access to land, and leverage the private sector to address the housing supply shortage.

## II. THE PROJECT

### A. Rationale

3. **Country macroeconomic context.** Bhutan is steadily urbanizing. The share of the urban population increased from 30% in 2005 to 42% in 2021, driven by an average annual growth rate of 1.9% over that period. The urbanization rate is projected to reach 56.8% by 2047.<sup>2</sup> Urban population growth is fueled by rural migration, mostly to the four largest urban centers of Gelephu, Phuentsholing, Samdrup Jongkhar, and Thimphu, which account for 59.0% of the total urban population. While 58.0% of the Bhutanese population still lives in rural areas and engages in small-scale and subsistence agriculture, the constant flow of rural migration to urban centers is exerting mounting pressure on urban services. Bhutan has a chance to be proactive and focus on housing development. Economic growth in the capital city, Thimphu, has been fueled by expansion in construction, services, and manufacturing. Bhutan has a current overall unemployment rate of 2.4%, which is low relative to neighboring South Asia countries.<sup>3</sup> The Government of Bhutan's Twelfth Five Year Plan, 2018–2023 calls for developing the economy by fostering growth in the private sector, which will create jobs and contribute to sustainable poverty reduction and the country's transition to green and resilient development (footnote 1).

4. **Housing demand.** Affordable housing development in Bhutan has not kept pace with population growth, particularly in urban areas where the demographic increase puts pressure on the limited usable and appropriately zoned land and pushes house prices up, making it increasingly unaffordable. In 2017, the estimated shortfall of housing nationwide was 21,156.<sup>4</sup>

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<sup>1</sup> Government of Bhutan, Gross National Happiness Commission. 2019. [Twelfth Five Year Plan, 2018–2023: Just, Harmonious and Sustainable Society through Enhanced Decentralisation](#). Thimphu. Affordable housing is defined as the ability for households to meet housing costs within 30% of their gross monthly income.

<sup>2</sup> Government of Bhutan, National Statistics Bureau (NSB). 2019. [Population Projections Bhutan 2017–2047](#). Thimphu.

<sup>3</sup> Government of Bhutan, NSB. 2018. [Population and Housing Census of Bhutan, 2017, National Report](#). Thimphu.

<sup>4</sup> Asian Development Bank (ADB). 2017. *Housing Finance Feasibility Study*. Consultant's report. Manila (SC107332); and ADB. 2018. *Housing Finance Feasibility Study*. Manila (SC 107332).

Nearly 63.5% of urban households rent, 17.5% live in rent-free dwellings, and only 19.0% of households own their homes.<sup>5</sup> The affordable housing shortage is particularly acute for low-income households, who spend on average more than 40% of their income on housing—greater than the recommended 30%.<sup>6</sup> Housing options are becoming increasingly unaffordable for low-income households and vulnerable groups, including women, leaving them in (i) overcrowded conditions in shared accommodation, and (ii) residing in informal settlements.

**5. Sector challenges—planning constraints, limited housing supply, and lack of access to finance.** Unclear and onerous land use planning and zoning constrain the timely conversion of agricultural land for housing in Bhutan. The supply of sufficient and appropriately zoned land for residential development limits the supply of affordable housing (footnote 6). The private sector faces challenges in increasing housing stock because of high development costs and the difficulty of acquiring land located near services and employment centers. Key commercial housing finance constraints that limit housing development include high land prices and maximum lending terms capped at 20 years (footnote 6). Despite these limitations, mortgage lending for housing has increased significantly from 17% of total loans in 2018 to 27% in 2020.<sup>7</sup> This reflects continuing high demand for housing credit, and is perceived as a medium-term risk by domestic banks because of their high exposure in a vulnerable housing sector and the possibility of leading to a real estate bubble. For home loans, microfinance is nascent in Bhutan and no microfinance institutions offer housing finance to households. Low-income earners are unable to access housing credit without verifiable income statements linked to formal employment. While making housing finance more accessible to households is necessary to address demand-side challenges, the government needs to intervene to increase housing supply.

**6. Climate and disaster vulnerability.** Bhutan is highly vulnerable to climate change and natural hazards.<sup>8</sup> Flooding is considered the most significant climate-related hazard affecting the built environment. The country is also exposed to other hazards such as earthquakes, glacial lake outburst floods, forest fires, and landslides. Making housing and infrastructure more resilient to the impacts of climate and disaster events is essential to protect the urban population, especially the vulnerable communities.

**7. Government policy.** Bhutan's Twelfth Five Year Plan, 2018–2023 prioritizes the government's strategic thrust for economic stability, economic diversification, poverty reduction, and affordable housing provision (footnote 1). The government approved the National Housing Policy (NHP) in 2020. The NHP vision is “housing for all” and the policy objectives are (i) providing safe, affordable, and adequate rental housing for all; (ii) promoting home ownership; (iii) encouraging public-private partnerships (PPP) to provide affordable housing; (iv) establishing a robust governance system; and (v) promoting green and energy-efficient housing.<sup>9</sup> The NHP establishes an enabling environment for government to unlock housing challenges faced by the private sector, by committing to reforms to streamline the land use zoning to increase supply, and strengthening housing financing systems by the banking and non-banking sector, coupled with fiscal incentives to make housing finance more attractive and providing access to land. The government's public housing program intends to supply 2,500 affordable housing units in a phased manner, of which 1,000 are proposed to be built under this project. PPP arrangements

<sup>5</sup> Government of Bhutan, NSB. 2017. [Bhutan Living Standards Survey Report 2017](#). Thimphu.

<sup>6</sup> Government of Bhutan, NSB. 2017. [Bhutan Poverty Analysis Report 2017](#). Thimphu.

<sup>7</sup> Government of Bhutan, Royal Monetary Authority. 2019. [Annual Report 2019](#). Thimphu; and Government of Bhutan, Royal Monetary Authority. 2018. [Annual Report 2018](#). Thimphu.

<sup>8</sup> Climate and Disaster Risk Assessment (accessible from the list of linked documents in [Appendix 2](#)).

<sup>9</sup> Government of Bhutan, Ministry of Works and Human Settlements (MOWHS). 2020. *Long-Term Strategy for Housing*. Thimphu.

for increasing housing stock is needed for mass affordable housing development.

8. The Ministry of Works and Human Settlements (MOWHS) represents the government in human settlement matters and is responsible for housing policies and preparing urban planning strategies. The NHDCL, a state-owned enterprise, is focused on providing and maintaining public housing. NHDCL units are leased at below market rates, and more than half of them are leased to lower-income households. Of its 2,496 units, civil servants account for 84% of tenancies, while non-civil servants account for 15%. Only 1% of NHDCL units are owner-occupied. A preliminary assessment of the NHDCL indicates that it operated successfully from 2015 to 2019, averaging annual growth of 9.9% in rental revenue, 15.9% in profit after tax, and 8.5% in its asset base. The government has tasked NHDCL to increase supply of affordable housing in coordination with the National Land Commission, which is responsible for management and allocation of land, and the National Pension and Provident Fund (NPPF), which has investment portfolio in housing lending.

9. **ADB intervention in the sector.** The Asian Development Bank (ADB) has adopted a holistic, long-term approach to the “housing crunch” in Bhutan.<sup>10</sup> Upstream analyses paved the way for a policy-based loan (PBL) to develop financial markets using a programmatic approach.<sup>11</sup> Subprogram 1 of the PBL, approved in 2019 for the Financial Market Development Program, focused on reforms to enhance the efficiency, stability, and inclusiveness of the finance sector and supported updating the NHP. In October 2020, ADB approved subprogram 2 of the PBL to support the development of a housing finance strategy to address housing supply issues, including fiscal measures (including incentives to suppliers) and gender-based actions to improve women’s access to finance (footnote 11). Subprogram 3 of the PBL, approved in October 2021, will support a housing survey across urban areas, implementation of housing financing schemes, and developing plans for affordable housing. Complemented by reforms tied to the PBL, this project will support government efforts to increase housing supply and improve sector performance by better targeting of the NHDCL’s affordable housing to the lowest income earners while incorporating climate- and disaster-resilient building designs and innovative construction methods; and strengthening MOWHS’s housing management information system to measure and monitor demand and supply-side bottlenecks in the sector. The government has indicated its intention to approach ADB for additional financing to expand affordable housing to cover an additional 5% of the shortage (para. 4). Additional financing will be based on satisfactory performance and lessons from the project implementation. ADB will coordinate with development partners—the World Bank and the Japan International Cooperation Agency—that are providing assistance for urban development, and climate change and disaster risk reduction.

10. The following lessons are incorporated in the project design: (i) TA support is needed to achieve sector reforms; (ii) strengthening of the implementing agency’s capacity will ensure financial sustainability, adequate operation and maintenance (O&M), and improved asset management; and (iii) a viable business model will be developed.<sup>12</sup>

<sup>10</sup> ADB. 2017. *Asian Development Outlook 2017: Transcending the Middle-Income Challenge*. Manila.

<sup>11</sup> ADB. 2019. *Report and Recommendation of the President to the Board of Directors: Proposed Programmatic Approach and Policy-Based Loan for Subprogram 1 and Technical Assistance Grant to the Kingdom of Bhutan for the Financial Market Development Program*. Manila; ADB. 2020. *Report and Recommendation of the President to the Board of Directors: Proposed Policy-Based Loan for Subprogram 2 and Technical Assistance Grant to the Kingdom of Bhutan for the Financial Market Development Program*. Manila; and ADB. 2021. *Report and Recommendation of the President to the Board of Directors: Proposed Policy-Based Loan for Subprogram 3 to the Kingdom of Bhutan for the Financial Market Development Program*. Manila.

<sup>12</sup> Independent Evaluation Department. 2018. *Validation Report: Urban Infrastructure Development Project in Bhutan*. Manila; ADB; Independent Evaluation Department. 2018. *Performance Evaluation Report: Housing for Integrated Rural Development Investment Program (Tranches 1, 2, and 3) in Uzbekistan*. Manila; ADB; Independent Evaluation



11. **Sector lending modality.** The project meets sector lending requirements as (i) the government has an NHP and implementation program, which provide a framework for sector investments; (ii) the NHDCL has the capacity to implement the sector development plans; and (iii) the existing policies are appropriate, and assistance provided under the project will support their implementation. The government has identified affordable rental housing subprojects, which are at different stages of readiness, so the sector approach adds flexibility and is suitable. Additional subprojects will be guided by detailed eligibility criteria agreed with the government.<sup>13</sup>

12. **Alignment with ADB strategic priorities.** The project is consistent with (i) pillar 3 of ADB's country partnership strategy for Bhutan, 2019–2023 on more inclusive and equitable socioeconomic development; and (ii) ADB's Strategy 2030, as it supports five of the seven operational priorities.<sup>14</sup> The project aligns with Sustainable Development Goal (SDG) 1 (no poverty), SDG 5 (gender equality), SDG 11 (sustainable cities), and SDG 13 (climate action).<sup>15</sup> It is also aligned with ADB's housing strategy.<sup>16</sup>

13. **Coronavirus disease.** Bhutan achieved a remarkable reduction in poverty incidence from 31.7% in 2003 to 8.2% in 2017, but the coronavirus disease (COVID-19) pandemic is deepening preexisting vulnerability.<sup>17</sup> ADB estimates that COVID-19 has put about 23,000 jobs at risk. The project provides a direct boost to construction activity and support in the form of job generation, while increasing the supply of housing for vulnerable, displaced people living in border towns heavily affected by the COVID-19 pandemic.

## B. Project Description

14. The project is aligned with the following impact: livability, safety, and sustainability of human settlements ensured (footnote 1). The project will have the following outcome: access to green and resilient affordable housing for low-income households improved.<sup>18</sup>

15. **Output 1: Climate- and disaster-resilient, energy-efficient, and affordable housing units and public facilities for low-income households constructed.**<sup>19</sup> Output 1 will support the NHDCL in building about 1,000 rental units, three integrated community service centers, and two recycled waste stations connected to services, in support of SDG 1. The government selected high-priority investments as subprojects.<sup>20</sup> The increase in the supply of affordable rental housing is expected to immediately relieve the housing shortage and benefit lower-income civil servants (about 10%) and non-civil servants (about 90%), including marginalized municipal waste workers.

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Department. 2013. [Validation Report: Neighborhood Upgrading and Shelter Sector Project in Indonesia](#). Manila: ADB.

<sup>13</sup> Project Administration Manual (accessible from the list of linked documents in [Appendix 2](#)).

<sup>14</sup> ADB. 2019. [Country Partnership Strategy Bhutan, 2019–2023—Fostering Diversification and Reducing Disparities](#). Manila; and ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient and Sustainable Asia and the Pacific](#). Manila. The project contributes to key operational priorities of ADB's Strategy 2030, including (i) addressing remaining poverty and reducing inequalities; (ii) accelerating progress in gender equality; (iii) tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability; (iv) making cities more livable; and (v) strengthening governance and institutional capacity.

<sup>15</sup> United Nations. [Sustainable Development Goals](#) (accessed 16 October 2021).

<sup>16</sup> ADB. Forthcoming. [Guidance for ADB's Housing Strategy](#). Manila.

<sup>17</sup> United Nations. 2020. [Policy Brief: The Impact of COVID-19 on Women](#). New York.

<sup>18</sup> The design and monitoring framework is in [Appendix 1](#).

<sup>19</sup> Resilient housing design incorporates climate change and disaster risk-reduction measures to avoid, minimize, and/or recover from a disaster in a timely and efficient manner.

<sup>20</sup> Priority subprojects are located in Nganglam; Phuentsholing (Amochu, Rinchening and Drungpa's Residence); Samtse (Tading); Samdrup Jongkhar (Dradulthang and Toed); Thimphu (Semtoka); and Trashiyangtse.

The NHDCL will select beneficiaries most in need by applying beneficiary eligibility and selection criteria, with gender equality considered as part of the eligibility criteria as defined in the PAM (footnote 13). The building designs incorporate gender-inclusive features; enhanced safety against earthquake and fire hazards; and resource efficiency, making greater use of locally available materials.<sup>21</sup> The building structures will employ reinforced-concrete frames and innovative pre-engineered structures. The project design has identified and incorporated climate and disaster resilience features, considering multiple hazards. The project will support green building certification through the International Finance Corporation's Excellence in Design for Greater Efficiencies (EDGE) certification program.<sup>22</sup> The housing designs reflect local cultural heritage values and traditional architecture.<sup>23</sup> Additional subprojects will be selected during project implementation in line with the NHP using the eligibility criteria set out in the project administration manual (PAM) (footnote 13).

**16. Output 2: Institutional capacities, policy, and regulatory framework of the housing sector strengthened.** This output will (i) strengthen the NHDCL's housing design, construction, and management capacity—informed by climate and disaster risks and affordability considerations; (ii) review the building code and regulations; (iii) develop climate- and disaster-resilient building designs and related solutions to improve safety, resource efficiency, and gender and disability inclusiveness; (iv) conduct awareness training and a capacity building program for key project stakeholders on climate- and disaster-resilient design and the building code; (v) enhance the NHDCL's business model, strengthening its O&M capacity, and developing partnerships with the private sector; (vi) strengthen the housing management information system of the MOWHS by expanding it to include tenancy data and better understand and prepare evidence-informed policy updates to address demand and supply-side bottlenecks in the sector; (vii) develop a gender and socially inclusive national homeownership strategy, including a rent-to-own mechanism; and (viii) provide project implementation support, including supervision, and set up a safeguard unit in the NHDCL.

### C. Value Added by ADB

17. ADB assistance will add value by enhancing the NHDCL's institutional capacity to (i) implement innovative affordable housing designs that incorporate (a) gender-inclusive features; (b) anti-seismic building structures; (c) pre-engineered building construction methodology, which is versatile and reduces construction time; and (d) resource efficiency, making the housing design greener and more resilient (necessary for green building certification); (ii) support low-income households in accessing affordable rental housing through better targeted NHDCL units and more publicly available information on tenancy data; and (iii) establish a detailed registry for the NHDCL's housing asset management for improved efficiency in maintenance programs. Affordability is addressed by providing a choice of units and applying pro-poor beneficiary selection criteria. ADB's value addition also includes a review of the national building code and improved land management; incorporates climate change, disaster risk reduction, gender inclusiveness, and energy efficiency considerations; and encourages the use of greener construction techniques to achieve green building certification. ADB's sustained interventions in the sector target issues affecting the housing value chain. In addition, ADB support will develop

<sup>21</sup> The gender-inclusive considerations include a preference for households headed by women and tenancy agreements signed by both spouses. In addition, the service centers will include childcare facilities, shelter for women, and offers employment opportunities. The green features include insulated walls, improved windows, use of timber and stone, and water-efficient faucets.

<sup>22</sup> [EDGE](#). The Green Business Certification Inc.™ (GBCI) is an independent international company that administers the EDGE certification program. The GBCI reviews EDGE proposals and issues EDGE certificates.

<sup>23</sup> Government of Bhutan, MOWHS. 2014. [Bhutanese Architectural Guidelines](#). Thimphu.

a national homeownership strategy, and a PPP guideline based on improved monitoring of sector bottlenecks. The \$6 million Asian Development Fund (ADF) 13 Thematic Pool grant will (i) support incremental costs associated with geophysical hazards and capacity building, and (ii) enable the NHDCL to deepen the gender impact by introducing gender-sensitive features in support of SDG 5.

#### D. Summary Cost Estimates and Financing Plan

18. The project is estimated to cost \$37.0 million (Table 1). Detailed cost estimates by expenditure category and by financier are included in the PAM (footnote 13).

**Table 1: Summary Cost Estimates**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Climate- and disaster-resilient, energy-efficient, and affordable housing units and public facilities for low-income households constructed	30.5
2. Institutional capacities, policy, and regulatory framework of the housing sector strengthened	3.1
<b>Subtotal (A)</b>	<b>33.7</b>
<b>B. Contingencies<sup>c</sup></b>	<b>2.9</b>
<b>C. Financial Charges During Implementation</b>	<b>0.4</b>
<b>Total (A+B+C)</b>	<b>37.0</b>

Note: Numbers may not sum precisely because of rounding.

<sup>a</sup> Includes \$0.9 million in taxes and duties. Such an amount does not represent an excessive share of the project cost. The National Housing Development Corporation Limited will finance taxes and duties of \$0.9 million in the form of cash contribution.

<sup>b</sup> In mid-2021 prices as of the end of August 2021. Exchange rate of \$1 = Nu74.5 is used.

<sup>c</sup> Physical and price contingencies are computed at 5.0% for civil works and equipment. Price contingencies are computed at 1.6%–1.8% for foreign exchange costs and 5.3%–6.4% for local currency costs and include provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

Source: Asian Development Bank estimates.

19. The government has requested a concessional loan of \$24 million from ADB's ordinary capital resources, and a grant not exceeding \$6 million from ADB's Special Funds resources (ADF) to help finance the project. The loan will have a 32-year term, including a grace period of 8 years; an interest rate of 1.0% per year during the grace period and 1.5% thereafter; and such other terms and conditions set forth in the draft loan and project agreements. The Ministry of Finance (MOF) has indicated that (i) ADB's concessional loan of \$24 million will be relented to the NHDCL through a subsidiary loan agreement with the same terms and conditions as the ADB loan, but with the NHDCL bearing the foreign exchange risk; (ii) the ADF grant of \$6 million will be passed on as a grant to the NHDCL; and (iii) \$7 million in counterpart funding will come from a loan to the NHDCL from the NPPF, backed by a government guarantee. The NPPF loan will have a 22-year loan period, including a grace period of 2 years, and an interest rate of 7.15% per year.

20. The summary financing plan is in Table 2. The loan and grant will finance expenditures in relation to (i) part of the civil works and equipment, and (ii) consulting services. Counterpart funds, provided through NHDCL, will finance expenditures on civil works, land acquisition and resettlement, consulting services, incremental administration expenses, contingencies, financing charges, and taxes. A project grant from the Japan Fund for Poverty Reduction (JFPR) is being processed as cofinancing to improve disaster and climate resilience for low-income households in Bhutan, subject to the approval of the Government of Japan. A JFPR grant proposal would

finance improved anti-seismic building standards in Bhutan, pilot-test housing with sanitation and energy-efficient technology, and provide capacity building for enhancing the required technical skills and develop the self-help capacities of the poor based on needs assessment. The JFPR grant cofinancing equivalent to \$3 million will be administered by ADB.

**Table 2: Summary Financing Plan**

<b>Source</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank		
Ordinary capital resources (concessional loan)	24.0	64.9
Special Funds resources (ADF grant)	6.0	16.2
National Housing Development Corporation Limited	7.0	18.9
<b>Total</b>	<b>37.0</b>	<b>100.0</b>

ADF = Asian Development Fund.

Source: Asian Development Bank estimates.

21. Climate mitigation is estimated to cost \$7.2 million and climate adaptation is estimated to cost \$4.8 million. ADB will finance 100% of mitigation and adaptation costs. Mitigation activities include installing light emitting diode lighting and use of locally available building materials. Adaptation activities include constructing flood protection structures, retaining walls, and institutional strengthening. The cost of disaster risk reduction measures to boost the project's disaster resilience is \$10.4 million, of which \$2.0 million will be sourced from the ADF grant.

## **E. Implementation Arrangements**

22. Implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 13).

**Table 3: Implementation Arrangements**

<b>Aspects</b>	<b>Arrangements</b>		
Implementation period	December 2021–December 2027		
Estimated completion date	31 December 2027		
Estimated loan and grant closing date	30 June 2028		
<b>Management</b>			
(i) Oversight body	Project steering committee: Ministry of Finance (chair), Ministry of Works and Human Settlements, National Land Commission, Gross National Happiness Commission, National Commission for Women and Children, National Housing Development Corporation Limited, and representatives of the subprojects (members)		
(ii) Executing agency	Ministry of Finance		
(iii) Key implementing agency	National Housing Development Corporation Limited		
(iv) Implementation units	Project management unit: Thimphu, 14 staff. Project implementation units: Phuentsholing, 13 staff; Trashiyangtse, 4 staff; Samdrup Jongkhar, 9 staff; and Nganglam, 4 staff.		
Procurement	Open competitive bidding (international advertising) (3 lots)	1 contract	\$10.40 million
	Open competitive bidding (national advertising)	8 contracts	\$8.34 million
Consulting services	Quality- and cost-based selection	216 person-months	\$2.81 million
		13 person-services	\$0.04 million

Aspects	Arrangements		
		(90:10) (2 contracts)	
	Cost-based selection	61 person-months	\$0.30 million
Retroactive financing and/or advance contracting	Advance contracting and retroactive financing will be considered for eligible expenditures for civil works and consulting services not exceeding 20% of the loan and grant amounts incurred prior to effectiveness, but not earlier than 12 months before the loan and grant agreements are signed.		
Disbursement	Disbursement of the loan and grant proceeds will follow the Asian Development Bank's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the government and Asian Development Bank.		

Source: Asian Development Bank estimates.

### III. ATTACHED TECHNICAL ASSISTANCE

23. The project will include an attached TA estimated to cost \$1.1 million, of which \$1.0 million will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-7). The government will provide counterpart support in the form of counterpart staff, office space for consultants, access to information for consultants, and other in-kind contributions. The TA objectives are to (i) strengthen the NHP and review land availability, land management, and land use planning; (ii) mainstream resilience considerations in the housing development process, and promote the use of innovative construction technology and practices; (iii) establish an interoperable housing management information system; and (iv) provide technical support to the NHDCL on the projects' safeguard compliance.<sup>24</sup> Specifically, the TA will provide technical advisory support services to the NHDCL (i) to review and update its allotment rules to ensure consistency with the NHP, and (ii) to monitor costs and target the uptake of new rental housing by low-income groups. It will also assist the NHDCL in monitoring and reporting on the achievement of the project design and monitoring framework indicators, in addition to ensuring that the project safeguards are effectively managed. The TA will also support the MOWHS in reducing the regulatory, land, and financing barriers for mobilizing private sector resources for increasing housing stock that are beyond the remit of the NHDCL.<sup>25</sup>

### IV. DUE DILIGENCE

#### A. Technical

24. The sector loan modality requires the appraisal of a typology of subprojects that serve as a sample for future subprojects.<sup>26</sup> The specifications applied to affordable housing will match green building principles such as the reduced use of energy, water, and embodied energy; disaster-resilient design; resource conservation; and the use of energy-efficient practices.

#### B. Economic and Financial Viability

25. The economic rationale for the intervention is sound—focused on inclusiveness, resilience, and affordability. The economic analysis evaluated the project's viability in terms of subprojects for which detailed engineering designs have been completed. The estimated economic internal

<sup>24</sup> The project is benefiting from technical assistance provided through: ADB. 2020. [Technical Assistance for Implementing the Cities Development Initiative for Asia](#). Manila; and ADB. 2020. [Technical Assistance for Support to the Implementation of Strategy 2030 Operational Plans](#). Manila.

<sup>25</sup> Attached Technical Assistance Report (accessible from the list of linked documents in [Appendix 2](#)).

<sup>26</sup> About \$14 million of the loan is not fully scoped and subprojects may be added subject to satisfying eligibility criteria.

rates of return is 9.2%, which is higher than the economic opportunity cost of capital of 6%, indicating significant economic return.<sup>27</sup> The project's economic viability is even higher if unquantifiable benefits such as environmental improvements are included in the analysis. Asset construction under this project and capacity building in the NHDCL will benefit about 1,000 households. The estimated poverty impact ratio is 24.4%, and since 8.2% of households in Bhutan live below the poverty line, the project is expected to benefit the poor.<sup>28</sup>

### C. Sustainability

26. The project team conducted financial analysis following ADB guidelines, assessing both the project and the NHDCL as the operating entity. Rental revenue is the major source of revenue for the NHDCL. In fiscal year 2019, rent provided 75% of NHDCL revenue. For the project, the NHDCL is proposing to charge rental rates similar to those in an affordable housing project in Phuentsholing. The NHDCL spends about 20% of its rental revenue on O&M. Rental revenues, projected to grow by 10% every 2 years, can cover debt service as well as O&M costs in most years. In the case of a shortfall in debt servicing caused by either unexpectedly high O&M costs, lower rental recovery, or depreciation of the ngultrum against the United States dollar, the MOF has assured ADB that the NHDCL will be able to service the debt. The financial sustainability risk is *moderate*. ADB will provide sector advice, capacity building to enhance the NHDCL's financial performance.

27. Affordability is crucial for ensuring the sustainability of the project. The project beneficiaries currently pay rents equal to 20.7%–41.0% of their household income for homes averaging 69 square meters.<sup>29</sup> Under the project, the proposed rent for a unit averaging 69 square meters with better services is significantly less, at 16.3%–29.1% of household income. The market rent for comparable houses is between 35%–44% of household income.<sup>30</sup>

### D. Governance

28. **Financial management.** The financial management assessment followed ADB guidelines.<sup>31</sup> The assessed pre-mitigation financial management risk is *substantial* because (i) the NHDCL lacks experience in implementing externally financed projects, (ii) two accounts staff positions are vacant, and (iii) the statutory auditor has identified internal control weaknesses. These risks will be mitigated by (i) filling the vacant accounting staff positions and engaging a financial management expert to support the project; (ii) providing training on ADB financial management requirements, and disbursement procedures and systems; (iii) including comprehensive financial information in the quarterly progress reports; and (iv) addressing pending audit observations. Moreover, an independent auditor acceptable to ADB will audit the project financial statements annually using auditing standards acceptable to ADB. A financial management action plan is described in detail in the PAM (footnote 13).

29. **Procurement.** The procurement of works and the recruitment of consultants will follow the ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for

<sup>27</sup> A 6% threshold for the economic opportunity cost of capital is applicable for social sector projects under ADB. 2017. [Guidelines for the Economic Analysis of Projects](#). Manila. Since this project aims to provide affordable housing to low-income households and sanitary workers, it qualifies for this lower threshold of 6%.

<sup>28</sup> Social, Poverty, and Gender Analysis (accessible from the list of linked documents in [Appendix 2](#)); and ADB. [Poverty Data: Bhutan](#).

<sup>29</sup> ADB. 2021. *Baseline Socio-economic Survey Report*. Consultant's report. Manila (TA 9781-REG).

<sup>30</sup> Based on a market research survey, the monthly rent for a two-bedroom unit is Nu10,000–Nu11,000 in project areas.

<sup>31</sup> ADB. 2015. [Financial Management Technical Guidance Note: Financial Management Assessment](#). Manila.



ADB Borrowers (2017, as amended from time to time). An assessment of the project procurement capacity risk concluded that the overall procurement risk is *moderate*. Mitigation measures include recruiting the project implementation consultant through advance contracting and building capacity in the NHDCL on the ADB Procurement Policy and Procurement Regulations for ADB Borrowers. The project will enhance value for money through the strategic packaging of multistory buildings into (i) the construction of reinforced-concrete buildings and pre-site preparation, procured through the local market; and (ii) pre-engineered buildings, procured by bundling packages suitable for the international market.

30. **Anticorruption.** ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and the NHDCL. Integrity due diligence was conducted. No significant integrity risks were identified. The specific policy requirements and supplementary measures are described in the PAM (footnote 13).

## E. Poverty, Social, and Gender

31. The project team conducted meaningful consultations with targeted communities. The national poverty line in 2017 was Nu2,195.95 per capita per month. By this measure, the percentage of people living in poverty fell from 12.0% in 2012 to 8.2% in 2017. In 2021, the poor (based on income criteria) constitute 4.4% of the target population. The average poor household has 4.9 members compared with 3.0 members in non-poor families. About 75.0% of the houses of poor families are temporary shelters, a fifth of which do not have piped water supply (footnote 5). Consultations with the targeted beneficiaries will continue during implementation.

32. The project is categorized *effective gender mainstreaming*. Women comprise 39% of the civil servants in Bhutan.<sup>32</sup> Households headed by women comprise 27% of the target population (footnote 31). The lack of affordable housing affects women as they are generally responsible for household management. A gender equality and social inclusion action plan will address these matters, including (i) at least 30% of housing tenure allotted to households headed by women; (ii) three integrated service centers established to deliver services to women and children, including a shelter for victims of gender violence, and a daycare and counseling facility benefiting at least 700 female household members; (iii) two women's self-help groups established for recycled waste livelihoods; (iv) capacity building on gender mainstreaming; and (v) gender-sensitive policies. The NHDCL will engage a civil society organization to implement gender equality solutions.

## F. Safeguards

33. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.<sup>33</sup>

34. **Environment (category B).** An environmental assessment and review framework was prepared and disclosed following ADB's Safeguard Policy Statement and applicable government regulations; and will guide assessments of additional subprojects on site selection, screening and categorization, information disclosure and consultation, impact assessment and environmental management planning, institutional arrangements, grievance redress, monitoring, and reporting. The project will not consider any category A subprojects with significant adverse, irreversible, or unprecedented impacts. Initial environmental examinations and environment management plans

<sup>32</sup> Government of Bhutan, Royal Civil Service Commission. 2020. [Annual Report \(April 2019–June 2020\): State of the Royal Civil Service](#). Thimphu.

<sup>33</sup> ADB. [Safeguard Categories](#).

for five sample subprojects are disclosed and included in the bidding documents.<sup>34</sup> Sample initial environmental examinations confirm no significant impacts. Potential impacts are mostly short-term, localized, and related to construction. The project management unit (PMU) and project implementation units will have environmental safeguard officers and site engineers, assisted by a project implementation assistance consultant, to manage safeguard requirements. The PMU will submit environmental monitoring reports semiannually during project implementation.

35. **Involuntary resettlement (category B).** The NHDCL prepared a resettlement framework, draft resettlement plans for the subprojects in Thimphu and Phuentsholing, and a draft due diligence report for Trashiyangtse following ADB's Safeguard Policy Statement. The project will not consider any subproject with significant involuntary resettlement impacts. The government land required for the sample subprojects is 4.5 hectares. The sample subprojects will affect 18 households with 65 members, through physical displacement and/or loss of livelihoods; and four households with 19 members, through loss of minor structures and/or trees. One vulnerable household with two members is among the affected persons. Proposed mitigation measures and safeguard documents for subprojects are adequate to address the assessed impacts. Safeguard documents will be updated following the final design. The resettlement framework will guide the preparation of resettlement planning documents for additional subprojects. ADB has disclosed the resettlement framework and resettlement plans. The government will disclose relevant information from the documents in the local language to the affected people. The NHDCL will ensure that the resettlement plans are included in the bidding documents. The PMU will prepare semiannual social safeguard monitoring reports for ADB's review and disclosure. The NHDCL will establish a grievance redress mechanism and disclose it to project beneficiaries and affected communities before works are awarded. Since this is the NHDCL's first ADB-funded project, a capacity building program on ADB's Safeguard Policy Statement social safeguards execution, and monitoring and evaluation is planned. A social safeguard officer in the PMU will manage the implementation of social safeguards, assisted by a project implementation assistance consultant. The project engineer, site engineers, and contractors will implement the social safeguards requirements in the resettlement plans, and regularly provide project implementation reporting.

36. **Indigenous peoples (category C).** No project impacts are expected on indigenous peoples or indigenous communities, as described in ADB's Safeguard Policy Statement, and no plans are required.

## G. Summary of Risk Assessment and Risk Management Plan

37. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>35</sup>

**Table 4: Summary of Risks and Mitigating Measures**

Risks	Mitigation Measures
Financial management risk: (i) the implementing agency lacks experience in implementing projects financed by ADB or other multilateral development banks, (ii) the positions of an accounts officer and accountant are still vacant, and (iii) the statutory auditor has identified internal control weaknesses to be addressed.	Mitigation measures include (i) filling the vacant accounts staff positions and engaging a financial management expert to support the project, (ii) providing training on ADB's financial management requirements and disbursement procedures, (iii) including comprehensive financial information in quarterly progress reports, and (iv) addressing pending audit observations.

<sup>34</sup> Thimphu; Trashiyangtse; and Amochu, Rinchending, and Drungpa's Residence in Phuentsholing.

<sup>35</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in [Appendix 2](#)).



<b>Risks</b>	<b>Mitigation Measures</b>
The project has not been approved yet as part of the national budget, which may delay the implementation.	The project is to be included in the FY2022 budget under a separate budget code for timely release of funds for effective project implementation.
The NHDCL has limited understanding of ADB's new procurement framework, including contract management and administration.	Project implementation assistance consultant services include an international procurement specialist to provide transaction support and capacity building.
The NHDCL rental revenue may experience shortfalls.	NHDCL's other sources of income include consultancy fees, investments, and transfers from the government. ADB will provide capacity building and policy advice to enhance NHDCL's financial performance.

ADB = Asian Development Bank, FY = fiscal year, NHDCL = National Housing Development Corporation Limited.  
Source: Asian Development Bank.

## **V. ASSURANCES**

38. The government and the NHDCL have assured ADB that project implementation of the project shall conform to all applicable ADB requirements, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, financial management, and disbursement as described in detail in the PAM and loan and grant documents.

39. The following conditions will be satisfied before the disbursement of the loan and grant proceeds:

- (i) a financing agreement will be entered into between the NPPF and the NHDCL to ensure counterpart funding and will become legally binding upon each of the parties thereto in accordance with its terms, and a government guarantee will be issued by the MOF to the NPPF and becomes effective and legally binding in accordance with its terms; and
- (ii) a subsidiary loan agreement will be entered into between the government and the NHDCL for relending the loan proceeds upon terms and conditions satisfactory to ADB.

## **VI. RECOMMENDATION**

40. I am satisfied that the proposed loan and grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve:

- (i) the loan of \$24,000,000 to the Kingdom of Bhutan for the Green and Resilient Affordable Housing Sector Project, from ADB's ordinary capital resources, in concessional terms, with an interest charge at the rate of 1.0% per year during the grace period and 1.5% per year thereafter; for a term of 32 years, including a grace period of 8 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; and
- (ii) the grant not exceeding \$6,000,000 to the Kingdom of Bhutan, from ADB's Special Funds resources (Asian Development Fund) for the Green and Resilient Affordable Housing Sector Project on terms and conditions that are substantially in accordance with those set forth in the draft grant and project agreements presented to the Board.

Masatsugu Asakawa  
President

11 November 2021

### DESIGN AND MONITORING FRAMEWORK

<b>Impact the Project is Aligned with</b>			
Livability, safety, and sustainability of human settlements ensured (Twelfth Five Year Plan, priority to achieve a harmonious society) <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Risks and Critical Assumptions</b>
<b>Outcome</b> Access to green and resilient affordable housing for low-income households improved	<b>By 2028</b> a. At least 95% of civil servant and private sector low-income households occupying the housing units pay no more than 30% of their disposable income on rent (2021 baseline: 48% for civil servants and 21% for private sector low-income households) (OP 4.1) b. At least 80% occupancy rate in completed housing units (2021 baseline: 0) (OP 4.1) c. At least 95% of housing units with 20% less energy and water consumption (2021 baseline: 0) <sup>b</sup> (OP 4.1) d. At least 700 households benefit from services provided by the newly constructed integrated community service centers (2021 baseline: 0) (OP 4.1)	a.–d. Project M&E, annual reports of the NHDCL and the MOWHS, and TA reports	R: Vulnerability to COVID-19 pandemic impact and continued restrictions on the value chain for goods and services
<b>Outputs</b> 1. Climate- and disaster-resilient, energy-efficient, and affordable housing units and public facilities for low-income households constructed <sup>c</sup>	<b>By 2027</b> 1a. 1,000 adequate, affordable, and resilient housing units constructed and 30% of the housing tenure allotted to women (2021 baseline 0 units, 0 women) (OP 4.1.2) 1b. Three integrated service centers with gender-inclusive features constructed (2021 baseline: 0) <sup>d</sup> (OP 2.5.2) 1c. At least 95% of the residential buildings constructed comply with green guidelines and EDGE certification and are equipped with energy-efficient insulation, metering devices, water pumps, and	1a.–f. Project M&E, annual reports of the NHDCL and the MOWHS, and TA reports	A: Continued government commitment to expanding affordable housing supply and improving neighborhoods within the project implementation period. A: Government committed to applying green building guidelines R: COVID-19 pandemic containment measures including national and local lockdowns, adversely impact project progress

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<p>2. Institutional capacities, policy, and regulatory framework of the housing sector strengthened</p>	<p>heating systems (2021 baseline: 0)<sup>e</sup> (OP 3.2.5)</p> <p>1d. Two recycled waste stations with gender-inclusive features constructed (2021 baseline: 0)<sup>d</sup> (OP 2.5.2)</p> <p>1e. At least two SHGs with operational by-laws in recycled waste livelihoods established (2021 baseline: 0) (OP 4.2.1)</p> <p>1f. At least 80% of SHG members (of whom 75% are women) have increased knowledge of waste management, business, and financial skills (2021 baseline: 0) (OP 2.1.1)</p> <p>2a. By 2022, project performance and management system established to ensure generation of sex-disaggregated data (2021 baseline: Not established)</p> <p>2b. By 2024, 81 staff of the NHDCL, PMU, and PIUs report improved knowledge and skills in operation and maintenance and asset management of affordable housing facilities, of whom at least 25% are women (2021 baseline: 0) (OP 6.1.1, OP 2.1.1)</p> <p>2c. By 2024, building code and guideline that incorporate climate change, disaster risk reduction, gender inclusiveness, and energy efficiency completed and submitted to the MOWHS (2021 baseline: Not applicable)<sup>e</sup> (OP 4.3.1)</p> <p>2d. By 2024, the MOWHS' housing management information system is upgraded with links to tenancy services and interoperable with the NHDCL asset management</p>	<p>2a.–g. Project M&amp;E and annual reports of the NHDCL and the MOWHS, cabinet resolutions, and TA reports</p>	

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	<p>system (to be established) (2021 baseline: Not applicable) (OP 4.2.1)</p> <p>2e. By 2024, improved land management capacity and strategy for land assembly completed, including options for urban land pooling and land banking for similar future affordable housing projects (2021 baseline: Not applicable) (OP 4.2.1)</p> <p>2f. By 2024, business model and public-private partnership guidelines for future sector investment completed (2021 baseline: Not applicable) (OP 4.2.1)</p> <p>2g. By 2024, strategy for gender-inclusive homeownership is finalized (2021 baseline: Draft available)<sup>f</sup> (OP 4.2.1)</p>		

### Key Activities with Milestones

#### 1. Climate- and disaster-resilient, energy-efficient, and affordable housing units and public facilities for low-income households constructed

- 1.1 Complete detailed designs for core subproject (Q1 2021–Q4 2022)
- 1.2 Construct 1,000 affordable housing units (Q1 2022–Q4 2027)
- 1.3 Identify and process candidate subprojects and works (Q1 2022–Q4 2024)
- 1.4 Establish integrated community service centers and waste recycling facilities (Q1 2022–Q4 2027)
- 1.5 Establish women's SHGs for livelihoods from waste recycling (Q1 2022–Q4 2025)

#### 2. Institutional capacities, policy, and regulatory framework of the housing sector strengthened

- 2.1 Implement capacity development program (Q1 2021–Q4 2024)
- 2.2 Develop business model and prepare draft public-private partnership guidelines for future sector investments (Q1 2022–Q4 2024)
- 2.3 Prepare NHDCL business plan (Q1 2022–Q4 2024)
- 2.4 Draft and finalize engineering guidelines for the practice of climate resilience, disaster risk reduction, energy efficiency and gender-inclusivity in affordable housing construction (Q1 2022–Q4 2024)
- 2.5 Review the national building code and related guidelines to include climate change, disaster risk reduction, gender inclusiveness and energy efficiency (Q1 2022–Q4 2023)
- 2.6 Establish a homeownership strategy and options by providing gender-inclusive alternative finance and occupancy models (Q1 2022–Q4 2023)
- 2.7 Strengthen the MOWHS housing management information system (Q1 2022–Q4 2023)
- 2.8 Provide project implementation services (Q1 2022–Q4 2027)

#### Project Management Activities

Establishing the PMU and PIUs  
 Procuring works  
 Hiring of the project implementation assistance consultant  
 Reporting, monitoring and evaluation (including surveys)  
 Accounting and auditing

#### Inputs

ADB: \$24.0 million (loan: concessional ordinary capital resources)

<p>\$6.0 million (grant: Asian Development Fund)  \$1.0 million (TA grant: TASF-7)  NHDCL: \$7.0 million</p>
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A = assumption, ADB = Asian Development Bank, COVID-19 = coronavirus disease, EDGE = Excellence in Design and Greater Efficiencies, M&E = monitoring and evaluation, MOWHS = Ministry of Works and Human Settlement, NHDCL = National Housing Development Corporation Limited, OP = operational priority, PIU = project implementation unit, PMU = project management unit, Q = quarter, R = risk, SHG = self-help group, TA = technical assistance, TASF = Technical Assistance Special Fund.

- <sup>a</sup> Government of Bhutan, Gross National Happiness Commission. 2019. [Twelfth Five Year Plan, 2018–2023: Just, Harmonious and Sustainable Society through Enhanced Decentralisation](#). Thimphu.
- <sup>b</sup> Baseline data will be determined during the first year of implementation to determine energy and water consumption patterns of tenants who reside in equivalent size NHDCL buildings.
- <sup>c</sup> Affordable housing is defined as medium- and low-income households meeting housing costs, either rent or mortgage payments, with 30% of gross monthly income or less. Resilient housing is designed to incorporate climate change and disaster risk reduction measures to avoid, minimize and/or recover from disasters in a timely and efficient manner.
- <sup>d</sup> Integrated service centers are multipurpose facilities in residential neighborhoods that provide childcare facilities for working mothers, shelter for women in difficult circumstances, and community-based livelihood and advocacy centers. Waste stations are for recycled waste, which offers employment opportunities for women and creation of self-help groups.
- <sup>e</sup> Government of Bhutan, MOWHS. 2013. [Bhutan Green Building Design Guidelines](#). Thimphu.
- <sup>f</sup> Building codes and guidelines will be reviewed and amended aligning to relevant international building codes to ensure gender-inclusive space and fixtures (like restrooms, showers, locker rooms and changing rooms) based on practical gender needs.

**Contribution to Strategy 2030 Operational Priorities:**

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2).

Source: Asian Development Bank.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=54355-001-3>

1. Loan Agreement
2. Grant Agreement
3. Project Agreement
4. Sector Assessment (Summary): Water and Other Urban Infrastructure and Services (Urban Housing)
5. Project Administration Manual
6. Financial Analysis
7. Economic Analysis
8. Summary Poverty Reduction and Social Strategy
9. Risk Assessment and Risk Management Plan
10. Contribution to Strategy 2030 Operational Priorities
11. Attached Technical Assistance Report
12. Climate Change Assessment
13. Gender Equality and Social Inclusion Action Plan
14. Initial Environmental Examination: Thimphu
15. Initial Environmental Examination: Drungpa Residence Site, Phuentsholing
16. Initial Environmental Examination: Rinchening, Phuentsholing
17. Initial Environmental Examination: Amochhu, Phuentsholing
18. Initial Environmental Examination: Trashiyangtse
19. Environmental Assessment and Review Framework
20. Resettlement Plan: Phuentsholing
21. Resettlement Plan: Thimphu
22. Resettlement Framework

**Supplementary Documents**

23. Land Acquisition and Involuntary Resettlement Due Diligence Report
24. Climate and Disaster Risk Assessment
25. Social, Poverty, and Gender Analysis
26. Disaster Risk Assessment