



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

---

Project Number: 51190-001  
August 2018

## Proposed Loan, Grant, and Administration of Grant Nepal: Disaster Resilience of Schools Project

Distribution of this document is restricted until it has been approved by the Board of Directors. Following such approval, ADB will disclose the document to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 19 July 2018)

Currency unit	–	Nepalese rupee/s (NRe/NRs)
NRe1.00	=	\$0.009106
\$1.00	=	NRs109.8

## ABBREVIATIONS

ADB	–	Asian Development Bank
CEF	–	Clean Energy Fund
CLPIU	–	Central Level Project Implementation Unit
DRM	–	disaster risk management
EARF	–	environmental assessment and review framework
EMIS	–	education management information system
ICT	–	information and communication technology
IEE	–	initial environmental examination
MOEST	–	Ministry of Education, Science and Technology
NRA	–	National Reconstruction Authority
O&M	–	operation and maintenance
PAM	–	project administration manual
SMC	–	school management committee
SSDP	–	School Sector Development Plan

## NOTE

In this report, “\$” refers to United States dollars.

<b>Vice-President</b>	Wencai Zhang, Operations 1
<b>Director General</b>	Hun Kim, South Asia Department (SARD)
<b>Country Director</b>	Mukhtor Khamudkhanov, Nepal Resident Mission, SARD
<b>Team leader</b>	Sarosh Khan, Senior Portfolio Management Specialist, SARD
<b>Team members</b>	Jiwan Acharya, Senior Energy Specialist, SARD Narendra Chand, Senior Procurement Officer, SARD Christopher Damandl, Senior Counsel, Office of the General Counsel Naresh Giri, Senior Project Officer (Urban Development), SARD Smita Gyawali, Senior Project Officer (Education), SARD Ryotaro Hayashi, Social Sector Economist, SARD Erik Kjaergaard, Disaster Risk Management Specialist, SARD Taisuke Miyao, Senior Procurement Specialist, Procurement, Portfolio and Financial Management Department Shreejana Rajbhandari, Programs Analyst, SARD Anuradha Rana, Senior Executive Assistant, SARD Yukiko Sakurai, Senior Financial Management Specialist, SARD Deepak Singh, Senior Environment Officer, SARD Suman Subba, Senior Social Development Officer (Gender), SARD Laxmi Subedi, Senior Social Development Officer (Safeguard), SARD Rajani Tuladhar, Project Analyst, SARD
<b>Peer reviewer</b>	Tania Rajadel, Education Specialist, Sustainable Development and Climate Change Department

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

## CONTENTS

	<b>Page</b>
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Impacts and Outcome	3
C. Outputs	3
D. Summary Cost Estimates and Financing Plan	4
E. Implementation Arrangements	5
III. DUE DILIGENCE	6
A. Technical	6
B. Economic and Financial	7
C. Governance	7
D. Poverty, Social, and Gender	8
E. Safeguards	8
F. Summary of Risk Assessment and Risk Management Plan	9
IV. ASSURANCES	10
V. RECOMMENDATION	10
APPENDIXES	
1. Design and Monitoring Framework	11
2. List of Linked Documents	14

## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number:</b> 51190-001	
<b>Project Name</b>	Disaster Resilience of Schools Project	<b>Department /Division</b>	SARD/NRM
<b>Country Borrower</b>	Nepal Government of Nepal	<b>Executing Agency</b>	National Reconstruction Authority
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
✓ <b>Education</b>	Education sector development		158.86
		<b>Total</b>	<b>158.86</b>
<b>3. Strategic Agenda</b>	<b>Subcomponents</b>	<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	CO <sub>2</sub> reduction (tons per annum)	1,200
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	Climate Change impact on the Project	Medium
		<b>ADB Financing</b>	
		Adaptation (\$ million)	7.20
		Mitigation (\$ million)	1.80
		<b>Cofinancing</b>	
		Mitigation (\$ million)	5.00
<b>4. Drivers of Change</b>	<b>Components</b>	<b>Gender Equity and Mainstreaming</b>	
Governance and capacity development (GCD)	Institutional development	Effective gender mainstreaming (EGM)	✓
Knowledge solutions (KNS)	Application and use of new knowledge solutions in key operational areas		
Partnerships (PAR)	Pilot-testing innovation and learning Civil society organizations Implementation		
<b>5. Poverty and SDG Targeting</b>		<b>Location Impact</b>	
Geographic Targeting	No	Rural	High
Household Targeting	No	Urban	Medium
SDG Targeting	Yes		
SDG Goals	SDG4, SDG13		
<b>6. Risk Categorization:</b>	Low		
<b>7. Safeguard Categorization</b>	<b>Environment: B Involuntary Resettlement: B Indigenous Peoples: C</b>		
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>158.86</b>	
Sovereign Project grant: Asian Development Fund		10.00	
Sovereign Sector (Concessional Loan): Ordinary capital resources		148.86	
<b>Cofinancing</b>		<b>5.00</b>	
Clean Energy Fund under the Clean Energy Financing Partnership Facility - Project grant (Full ADB Administration)		5.00	
<b>Counterpart</b>		<b>35.00</b>	
Government		35.00	
<b>Total</b>		<b>198.86</b>	



## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan and a proposed grant, both to Nepal, for the Disaster Resilience of Schools Project. The report also describes the proposed administration of a grant to be provided by the Clean Energy Fund (CEF) under the Clean Energy Financing Partnership Facility for the project, and if the Board approves the proposed loan and grant, I, acting under the authority delegated to me by the Board, approve the administration of the CEF grant.<sup>1</sup>

2. The project will improve the disaster resilience of schools in three provinces in Nepal<sup>2</sup>. The project will support school infrastructure investments, disaster risk management (DRM), and institutional strengthening. It builds on and expands ongoing emergency reconstruction support of the Asian Development Bank (ADB).<sup>3</sup>

## II. THE PROJECT

### A. Rationale

3. **Disaster risks and impacts.** One of the most hazard-prone countries in the world, Nepal faces weather-related hazards such as landslides, floods, and droughts. The frequency and intensity of such hazards may increase because of climate change. Nepal also experiences earthquakes, which could trigger landslides, floods, and fires. Although massive earthquakes happen infrequently, they cause significant casualties, physical damage, and losses to the economy.<sup>4</sup> Damage and losses from the 2015 earthquake in Gorkha were assessed at \$7 billion, with 8,790 casualties, 22,300 injuries, 7,800 schools damaged, and 8 million people (almost 29% of the population) affected.<sup>5</sup>

4. While natural hazards trigger disasters, the vulnerability and exposure of assets and communities determine the risks and the consequences of such events. The degree of physical vulnerability of assets is affected by the design, quality of construction, and maintenance, as well as weak institutional capacity and lack of expertise on how to pursue resilience. The level of exposure is affected by (i) the proximity of the asset to hazard zones; (ii) its age, occupancy, and usage; and (iii) the communities' level of disaster risk awareness and preparedness. To protect people, safeguard investments, and promote sustainable development, the vulnerability and exposure of communities and physical assets to natural hazards must be reduced and the DRM capacity of at-risk communities needs to be enhanced.

5. **Plans and need for safe school infrastructure.** More than 72% of the buildings of the country's 35,000 schools are unsafe and require seismic retrofitting.<sup>6</sup> A 2016 structural integrity and damage assessment estimated that 2,234 schools are heavily damaged and not in use in 14 districts that were severely damaged by the 2015 earthquake.<sup>7</sup> These schools have makeshift

---

<sup>1</sup> Financing partners: the governments of Australia, Norway, Spain, Sweden, and the United Kingdom.

<sup>2</sup> The three provinces are 1, 3 and 4.

<sup>3</sup> ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to Nepal for the Earthquake Emergency Assistance Project*. Manila.

<sup>4</sup> Major earthquakes occurred in 1934, 1980, 1988, 2011, and 2015.

<sup>5</sup> Government of Nepal, National Planning Commission. 2015. *Nepal Earthquake 2015: Preliminary Damage and Needs Assessment*. Kathmandu. <http://www.nra.gov.np/uploads/docs/PDNA%20Volume%20A%20Final.pdf>; and Government of Nepal, National Reconstruction Authority. 2016. *Nepal Earthquake 2015: Post Disaster Recovery Framework, 2016–2020*. Kathmandu.

<sup>6</sup> Emergency Events Database. [http://emdat.be/emdat\\_db](http://emdat.be/emdat_db) (accessed 15 March 2018).

<sup>7</sup> Government of Nepal, Department of Education; and the World Bank. 2016. *Structural Integrity and Damage Assessment*. Kathmandu.

shelters and lack adequate facilities for learning, such as laboratories, libraries, and information and communication technology (ICT). They also possess limited basic facilities, such as water supply, sanitation, and electricity. About 25% will be rebuilt under planned and ongoing projects supported by Nepal's development partners.<sup>8</sup> The government is also seeking to finance the reconstruction of additional schools. However, a significant funding gap for school reconstruction remains, especially since 3,569 partially damaged schools with identified retrofitting needs are still in use. The structural integrity and damage assessment shows that all these heavily and partially damaged schools are vulnerable to seismic hazards, 30%–50% are vulnerable to precipitation and earthquake-triggered landslides, and 5% are susceptible to flooding. In addition to resilient school infrastructure, Nepal needs other DRM actions and stronger institutional capacity to safeguard communities and investments.

6. The Ministry of Home Affairs integrated school safety in its National Disaster Risk Reduction Policy and Strategic Action Plan, 2017–2030.<sup>9</sup> It designated schools as key centers for raising disaster awareness, a major factor in reducing the vulnerability and exposure of communities. The Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector developed a comprehensive school safety framework to provide safe learning facilities, school DRM, and risk reduction and resilience education.<sup>10</sup> ADB and other international agencies support these guidelines.

7. **The project.** The project will rehabilitate school infrastructure and complement efforts of an ongoing education program to improve the quality of school education, access to education, and school management.<sup>11</sup> The preparation of gender-sensitive and inclusive DRM planning will supplement the retrofitting and reconstruction efforts. The DRM action plan will be informed by the comprehensive school safety framework and a gap assessment of activities to be undertaken by other development partners and through interagency coordination.<sup>12</sup>

8. **Policy and strategy alignment.** The project aligns with the government's Post Disaster Recovery Framework, Preliminary Damage and Needs Assessment, and School Sector Development Plan (SSDP), 2016–2030—the government's most recent and most comprehensive

---

<sup>8</sup> Through the Earthquake Emergency Assistance Project (footnote 3) and the Disaster Risk Reduction and Livelihood Restoration for Earthquake-Affected Communities Project (ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Administration of Grant to Nepal for the Disaster Risk Reduction and Livelihood Restoration for Earthquake-Affected Communities Project*. Manila), ADB is reconstructing 162 schools in Nepal. The Japan International Cooperation Agency provided \$112 million to reconstruct 236 schools, the Government of India allocated \$50 million to reconstruct 70 schools, and the United States Agency for International Development and the Department for International Development of the United Kingdom provided their support. Together these contributions cover less than 25% of the identified needs.

<sup>9</sup> Government of Nepal. 2017. *National Disaster Risk Reduction Policy and Strategic Action Plan, 2017–2030*. Kathmandu (Developed in line with United Nations Office for Disaster Risk Reduction. 2015. *Sendai Framework for Disaster Risk Reduction, 2015–2030*. Geneva).

<sup>10</sup> Global Alliance for Disaster Risk Reduction & Resilience in the Education Sector. Comprehensive School Safety Framework. <http://qadrrres.net/resources/comprehensive-school-safety-framework>. The guidelines include land use planning supported by the United Nations Development Programme.

<sup>11</sup> ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Results-Based Loan and Technical Assistance Grant to Nepal for Supporting School Sector Development Plan*. Manila. Schools rehabilitated under this project will also be targeted for education quality improvement under the ongoing education program.

<sup>12</sup> These include the National Society for Earthquake Technology; United Nations Children's Fund (UNICEF); United Nations Educational, Scientific and Cultural Organization (UNESCO); and other sector and cluster groups. Such objective is reflected in Government of Nepal, Ministry of Education. 2016. *School Sector Development Plan, 2016–2030*. Kathmandu (under the fourth cross-cutting theme on disaster risk reduction and safety).



SSDP, which includes school safety as an explicit objective to develop human capital for Nepal's vision to become an inclusive and prosperous middle-income country by 2030.<sup>13</sup>

9. **Post-earthquake projects and lessons.** The ongoing ADB reconstruction projects (footnote 8) are under full implementation. As of the end July 2018, reconstruction of 30 (out of 162) schools have been substantially completed, and all the envisaged microcredit activities have been achieved. Both projects will be completed by June 2019. The project incorporates the following lessons learned from ADB's previous reconstruction activities in Nepal and other countries: (i) support investment mainly in secondary schools in urban and rural areas that will have significant impact on education targets, (ii) focus on improving infrastructure design for resilience and strengthening decentralized supervision to enhance implementation quality, (iii) carefully plan civil works procurement to encourage wider response and competition to scale up reconstruction, (iv) use reliable building condition assessments in evaluating moderately damaged buildings targeted for retrofitting, (v) establish a capable and experienced implementation team at the start of the project, (vi) use proven implementation arrangements, and (vii) enforce project-readiness criteria.

10. **Value added by ADB assistance.** The project will (i) help fill the significant funding gap in developing disaster-resilient schools; (ii) develop knowledge, skills, and capacity to meet higher design standards for resilient infrastructure; and (iii) strengthen information systems for school infrastructure inventory to enable prioritization of urgent needs. The project also includes an innovative approach to pilot community-based retrofitting in three selected schools that will enable municipalities to replicate such retrofitting activities using local funding under the new federal government structures.

## B. Impacts and Outcome

11. The project is aligned with the following impact: DRM for human resource development enhanced (footnotes 5 and 13). The project will have the following outcome: disaster resilience of schools and communities increased and learning environment improved.<sup>14</sup>

## C. Outputs

12. **Output 1: Heavily damaged schools reconstructed and improved.** The project will reconstruct to earthquake-resilient standards the heavily damaged buildings of 163 schools in the 14 districts most affected by the earthquake.<sup>15</sup> The reconstructed schools will have general science laboratories; computer-equipped ICT rooms; libraries; water, sanitation, and hygiene facilities that are segregated, have changing and disposal facilities for menstruating females, and are accessible to people with disabilities; and solar power supply or backup. To mitigate potential weather-related hazards to schools and to ensure a safe learning environment, reconstruction will follow the Indian Standard Criteria for Earthquake Resistant Design of Structures.<sup>16</sup> Off-grid and on-grid solar power systems will be installed in 130 of the 163 targeted schools. School selection is based on enrollment size, scale of damage, and equity (gender and historically disadvantaged

<sup>13</sup> Government of Nepal, Ministry of Education. 2016. *School Sector Development Plan, 2016–2030*. Kathmandu.

<sup>14</sup> The design and monitoring framework is in Appendix 1.

<sup>15</sup> The 14 districts are Bhaktapur, Dhading, Dolakha, Gorkha, Kathmandu, Kavrepalanchok, Lalitpur, Nuwakot, Okhaldunga, Ramechhap, Sindhuli, Sindhupalchok, Rasuwa, and Makwanpur. The project team has selected 67 schools for advance procurement.

<sup>16</sup> Government of India, Bureau of Indian Standards. 2002. *Indian Standard Criteria for Earthquake Resistant Design of Structures*. New Delhi.

group) considerations.<sup>17</sup> Of the targeted schools, 36 have buildings that require only reconstruction; 127 have buildings that need reconstruction and retrofitting. The targeted schools include 145 secondary schools and 18 feeder basic schools that will help achieve the SSDP goal of 85% enrollment in secondary schools.<sup>18</sup>

13. **Output 2: Unsafe schools retrofitted and disaster risk reduced.** This output targets 138 schools that have buildings with retrofitting needs, including 127 schools targeted under output 1 as these schools include also construction of improved facilities, and 11 feeder basic schools with only building retrofitting needs. The construction of improved facilities will complement the retrofitting works to reach a comparable learning environment sought for the schools reconstructed under output 1. As with output 1, schools will be selected based on enrollment size, scale of damage, and equity considerations. The project will also support the development of a DRM action plan and training program for school management committees (SMCs), students, and communities; and field testing of the risk management action plans in selected reconstructed and retrofitted schools.

14. **Output 3: Institutional capacity for disaster resilience strengthened.** This output will strengthen (i) the education management information system (EMIS) to improve school building inventory and condition, as well as local SMC reporting to the EMIS;<sup>19</sup> (ii) the capacity of an implementation unit and the municipalities to design and build disaster-resilient structures; and (iii) SMC capacity to operate and adequately maintain schools using local government funding.<sup>20</sup> Given the retrofitting needs that will remain, the project will develop a toolbox, which will be pilot tested in three schools, to help the community retrofit schools using local government funds.

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

15. The project is estimated to cost \$198.86 million (Table 1). Detailed cost estimates by expenditure category and by financier are in the project administration manual (PAM).<sup>21</sup>

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

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Heavily damaged schools reconstructed and improved	140.39
2. Unsafe schools retrofitted and disaster risk reduced	30.00
3. Institutional capacity for disaster resilience strengthened	4.23
<b>Subtotal (A)</b>	<b>174.62</b>
<b>B. Contingencies<sup>c</sup></b>	<b>20.37</b>
<b>C. Financing Charges During Implementation<sup>d</sup></b>	<b>3.87</b>
<b>Total (A+B+C)</b>	<b>198.86</b>

<sup>a</sup> Includes taxes and duties of \$21.3 million to be financed from government resources.

<sup>b</sup> In March 2018 prices and based on a \$1.00 = NRs106.40 exchange rate from the Nepal Rastra Bank.

<sup>c</sup> Physical contingencies are computed at 7% for civil works and 5% for consulting services. Price contingencies are computed at 1.5% on foreign exchange costs and 6.5% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Interest during construction for the ordinary capital resources loan has been computed at 1% per year.

Source: Asian Development Bank estimates.

<sup>17</sup> Gender Action Plan (accessible from the list of linked documents in Appendix 2).

<sup>18</sup> A feeder basic school is a school from which many students go to a secondary school in the same area.

<sup>19</sup> The EMIS is the Department of Education's main database for reporting on schools, students, and teachers based on data collected twice a year.

<sup>20</sup> Details on strengthening SMC capacity are in the design and monitoring framework in Appendix 1.

<sup>21</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

16. The government has requested (i) a concessional loan of \$148.86 million from ADB's ordinary capital resources and (ii) a grant not exceeding \$10.00 million from ADB's Special Funds resources (Asian Development Fund) 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% per year thereafter; and such other terms and conditions to be set forth in the draft loan agreement.

17. The summary financing plan is in Table 2. ADB will finance expenditures related to civil works, goods, consultants, contingencies, and interest during construction. Government financing will cover taxes and duties, environment and social mitigation costs, and any shortfall in the financing required to meet the agreed outputs. The school retrofitting and DRM costs will be covered by the ADB loan and grant. The CEF under the Clean Energy Financing Partnership Facility will provide grant cofinancing equivalent to \$5 million, to be administered by ADB. The CEF grant will cover the costs of designing and installing the solar power systems, which also address climate change mitigation. The ADB loan and grant and the CEF grant will not finance taxes. Details are in the PAM.

**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) <sup>a</sup>	148.86	74.9
Special Funds resources (ADF grant) <sup>b</sup>	10.00	5.0
Clean Energy Fund <sup>c</sup> under the Clean Energy Financing Partnership Facility	5.00	2.5
Government of Nepal	35.00	17.6
<b>Total</b>	<b>198.86</b>	<b>100.0</b>

ADF = Asian Development Fund.

<sup>a</sup> Includes \$20 million from ADF 12 disaster risk reduction funding.

<sup>b</sup> To be financed by the ADF 12 disaster risk reduction funding.

<sup>c</sup> Financing partners: the governments of Australia, Norway, Spain, Sweden, and the United Kingdom. Administered by the Asian Development Bank.

Source: Asian Development Bank estimates.

18. Climate mitigation is estimated to cost \$6.8 million and climate adaptation is estimated to cost \$7.2 million. ADB and the CEF will finance 100% of the mitigation and adaptation costs. Details are in the PAM.

## **E. Implementation Arrangements**

19. The National Reconstruction Authority (NRA) will be the executing agency until December 2021, when its mandate ends; the Ministry of Education, Science and Technology (MOEST) will then assume the role. The executing agency will (i) provide overall guidance, within the framework of its mandate, to implement reconstruction programs in coordination with sector ministries; and (ii) coordinate with other school reconstruction projects. The existing Central Level Project Implementation Unit (CLPIU) for education will be responsible for design and implementation. The implementation arrangements are summarized in Table 3 and described in detail in the PAM.

**Table 3: Implementation Arrangements**

<b>Aspects</b>	<b>Arrangements</b>
Implementation period	October 2018–September 2022
Estimated completion date	30 September 2022
Estimated loan and grant closing date	31 March 2023

Aspects	Arrangements		
Management			
(i) Oversight body	Project steering committee Chair: NRA secretary Members: NRA, MOEST, and MOUD joint secretaries; MOF representatives; municipalities' executive officers; and project director (CLPIU head)		
(ii) Executing agency	NRA and MOEST <sup>a</sup>		
(iii) Key implementing agencies	CLPIU-Education		
(iv) Implementation unit	7 CLPIU-Education staff in Kathmandu		
Procurement	OCB, international advertisement	14 contracts	\$128,778,800
	OCB, national advertisement	15 contracts	\$22,032,000
	Shopping	2 contracts	\$56,000
	OCB, national advertisement (solar systems) <sup>b</sup>	2 contracts	\$6,766,000
	Community procurement	3 contracts	\$750,000
Consulting services <sup>b</sup>	Individual consultant selection	156 person-months	\$720,000
	QCBS	7,262 person-months <sup>c</sup>	\$18,621,918, including value-added tax and provisional sum
Retroactive financing and advance contracting	Retroactive financing will be up to 20% of the ADB loan amount for eligible expenditures incurred no more than 12 months before the loan agreement signing in connection with civil works, design and supervision, project management, and capacity building. Advance contracting is being implemented for six civil works packages and for the QCBS recruitment of a consulting firm.		
Disbursement	The loan and grant proceeds will be disbursed following ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank; CLPIU = Central Level Project Implementation Unit; EPC = engineering, procurement, and construction; MOEST = Ministry of Education, Science and Technology; MOF = Ministry of Finance; MOUD = Ministry of Urban Development; NRA = National Reconstruction Authority; OCB = open competitive bidding; QCBS = quality- and cost-based selection.

<sup>a</sup> NRA's mandate is expected to be extended from December 2020 to December 2021, when MOEST will become the executing agency.

<sup>b</sup> Service providers will be engaged on lump-sum turnkey or EPC delivery basis compatible with the output-based aid requirements and ADB and government guidelines, and to be linked to results.

<sup>c</sup> Includes design and supervision, disaster risk management, and solar power installation consultants.

Source: Asian Development Bank estimates.

### III. DUE DILIGENCE

#### A. Technical

20. The project team conducted initial and detailed appraisal of the schools during project preparation. The project will reconstruct and/or retrofit the school buildings to earthquake-resilient standards, improve slope stability, and properly design rainwater drainage collection and outlet structures. Each secondary school will include infrastructure for a general science laboratory, a

library, an ICT computer room, and segregated toilets for boys and girls with changing and disposal facilities for menstruating females. The project will train SMCs in school operation and maintenance (O&M) and upgrade the MOEST's EMIS to account for school building inventory, condition, and maintenance needs.

21. The project will include adaptation and mitigation measures in infrastructure design and install solar panel systems in off-grid schools and selected grid-connected schools as backup or a cheaper alternative electricity source. Its solar power systems will increase clean power generation capacity by about 1 megawatt, resulting in 1,500 megawatt-hours of energy per year, equivalent to avoiding about 1,200 tons of carbon dioxide emissions per year. The climate change risk screening confirms that the project's climate change risk is moderate.<sup>22</sup>

## B. Economic and Financial

22. **Economic analysis.** The economic internal rate of return was estimated at 7.8%, which is sufficient for social sector or DRM projects.<sup>23</sup> The economic analysis was carried out following ADB's Guidelines for the Economic Analysis of Projects.<sup>24</sup> The project will develop safer schools and safety awareness of communities, as well as improve the learning environment by reconstructing and retrofitting public schools in the 14 districts affected by the 2015 earthquake. The principal benefits considered in the analysis were improved education access, internal efficiency, disaster impact mitigation, and improved facilities over the analyzed period. The principal costs are capital expenditures for reconstructing and retrofitting public schools, O&M, household investment for school, and opportunity cost of attending school. The sensitivity analysis of the estimated economic returns to key assumptions indicated that the overall investment will remain economically viable with a 10% capital cost overrun and a 10% decrease in benefits.

23. **Financial analysis.** The government budget allocation for education was NRs109.4 billion in 2016–2017, in line with the expansion of the overall budget. The Local Government Operation Act, 2074 (2017) decentralized the education budget for 2017–2018, reducing the share of the central budget and increasing the local budget. Basic and secondary schools account for about 80% of public education spending. Rather than build new schools, this project aims to reconstruct and retrofit existing schools, which does not require additional recurrent budget. However, the current level of O&M spending for schools is insufficient. As part of the policy dialogue with the government on SSDP, the project team will monitor during project implementation whether the O&M allocation to each targeted local government is appropriate.<sup>25</sup> The project is expected to help improve budget expenditure.

## C. Governance

24. **Financial management.** The financial management assessment concluded that the CLPIU's financial management risk is *substantial*. The key risks are (i) project activities may not continue after the executing and implementing agencies, which are time-bound entities, complete their tenure; and (ii) newly appointed accounting staff for the project may not be familiar with ADB procedures. However, the CLPIU has implemented ADB projects with no major issues,<sup>26</sup> and with the implementation of the proposed risk-mitigating measures, the financial management risk of the project will be satisfactory. The mitigation measures include conducting a midterm review of

<sup>22</sup> Climate Change Assessment (accessible from the list of linked documents in Appendix 2).

<sup>23</sup> Economic and Financial Analysis (accessible from the list of linked documents in Appendix 2).

<sup>24</sup> ADB. 2017. *Guidelines for the Economic Analysis of Projects*. Manila.

<sup>25</sup> Economic and Financial Analysis (accessible from the list of linked documents in Appendix 2).

<sup>26</sup> Auditor's unqualified opinion in the audited project financial statements for fiscal years 2015–2016 and 2016–2017.

implementation arrangements and ensuring adequate qualified and trained accounting staff at the CLPIU. A financial management expert will be engaged by CLPIU to provide capacity building support under the project.

25. **Procurement.** All procurement of goods and works and recruitment of consultants will follow the ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The procurement assessment concluded that the project procurement classification is *category B*, and the project procurement risk is *substantial*. However, this risk will be mitigated by CLPIU's project experience and the proposed engagement of a procurement specialist to strengthen the unit's procurement capacity. Since the project involves ADB administration of cofinancing for an operation financed by the Asian Development Fund, universal procurement will apply.<sup>27</sup>

26. **Anticorruption measures.** ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government. The specific policy requirements and supplementary measures are described in the PAM. The constitutional anticorruption agency is the Commission for the Investigation of Abuse and Authority, which is empowered to investigate any project irregularities. The CLPIU will follow government rules and procedures for expenses. The CLPIU will disclose all key project-related information, including a system and procedures for handling complaints, on its website following 2 months from effectiveness of the loan and grants.

#### D. Poverty, Social, and Gender

27. The project is classified *effective gender mainstreaming*. The project team has prepared a summary poverty reduction and social strategy and a gender action plan.<sup>28</sup> The project will provide adequate sex-segregated water, sanitation, and hygiene facilities that are accessible to people with disabilities. The facilities will also have changing and disposal facilities for menstruating females. The school buildings will be well lit with stairs, ramps, and playgrounds accessible to people with disabilities. DRM and school safety assessments identified the different needs of girls and women, including persons with disabilities, which the project will consider in its risk management and preparedness plans. The menstrual health and hygiene of girls will be enhanced through water and toilet facilities, relevant training on cleanliness, use of sanitary pads, and health care during menstruation in schools. A female teacher in each school will be trained to guide girls on menstrual health.

#### E. Safeguards

28. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.<sup>29</sup>

29. **Environment (category B).** NRA prepared an environmental assessment and review framework (EARF) and an initial environmental examination (IEE) following ADB's Safeguard Policy Statement and government laws. They were disclosed on ADB's website. NRA considered six sample school subprojects in two project districts for preparing the IEE. Given the size and nature of work and location of the schools on existing premises, the IEE concluded that no significant adverse impacts are anticipated. The project is not expected to encroach upon national

<sup>27</sup> ADB 2013. *Blanket Waiver of Member Country Procurement Eligibility Restrictions in Cases of Cofinancing for Operations Financed from Asian Development Fund Resources*. Manila.

<sup>28</sup> Summary Poverty Reduction and Social Strategy; and Gender Action Plan (accessible from the list of linked documents in Appendix 2).

<sup>29</sup> ADB. Safeguard Categories. <https://www.adb.org/site/safeguards/safeguard-categories>.

parks and protected ecosystems, ancient heritage sites, and their buffer zones. Some key impacts envisaged could be landslides, erosion, flooding, spoil and solid waste management, and occupational health and safety. The environmental management plan in the IEE and the EARF suggests mitigation measures for the potential impacts. The EARF will guide the mainstreaming of environmental safeguards during the full project cycle, including school selection using environmental criteria; environmental screening, categorization, and assessment; preparation of a mitigation plan; and compliance monitoring and reporting. The EARF also suggests conducting regular communication and consultation with stakeholders, and using the existing grievance redress mechanism. The CLPIU safeguards desk and the safeguard lead in a district-level project implementation unit,<sup>30</sup> supported by a national environment specialist (intermittent input) and full-time safeguard monitors (one in each project district) will be responsible for overall compliance and timely submission of reports. A contractor, with prior approval from the district-level project implementation unit, will appoint an environment and safety officer responsible for implementing the environmental management plan. The project team will provide safeguards orientation to SMCs to enhance their capacity for safeguards assurance during construction and operation of the schools.

30. **Involuntary resettlement (category B).** The land acquisition and involuntary resettlement impact assessment confirms that impacts are not significant. NRA, and the CLPIU prepared a due diligence report for social safeguards based on a review of 67 schools to be reconstructed. The remaining 107 schools to be reconstructed will be identified and selected during implementation. Reconstruction will be carried out mostly within the existing boundaries of the schools. Following ADB's Safeguard Policy Statement, NRA and the CLPIU prepared a resettlement framework to provide guidance for screening, impact assessment, safeguard planning, and implementation.<sup>31</sup> NRA and the CLPIU disclosed the framework on the ADB website and included procedures if land is required. NRA, in coordination with the CLPIU, will ensure the timely and adequate implementation of the resettlement framework for each school selection, screening, impact assessment, and mitigation measures. NRA capacity will be strengthened through training and consultant support. On behalf of NRA, the CLPIU will prepare a screening report, a due diligence report, and a resettlement plan; these documents will be submitted to ADB for review and approval. The CLPIU will enhance the existing three-level grievance redress mechanism in project areas.

31. **Indigenous peoples (category C).** The project will reconstruct and/or retrofit the earthquake-damaged school buildings mostly within the existing boundaries of the schools. It will have no identified or expected impact on the culture, human rights, or livelihood system of indigenous people in the project area. The project will not have any differential impact on learning practices of children from indigenous groups since its scope covers only reconstruction and/or retrofitting of school buildings. All schools will be screened by applying eligibility criteria for school selection.

## **F. Summary of Risk Assessment and Risk Management Plan**

32. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>32</sup>

---

<sup>30</sup> The district-level project implementation unit is also referred to as a local-level project implementation unit.

<sup>31</sup> Resettlement Framework (accessible from the list of linked documents in Appendix 2).

<sup>32</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

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

<b>Risks</b>	<b>Mitigation Measures</b>
MOEST assuming executing agency role from NRA delays project implementation.	ADB and the government will review and agree on continued implementation arrangements during the midterm review of the project to ensure implementation will not be disrupted.
The CLPIU does not have adequate accounting staff to perform additional financial management responsibility for the project.	NRA will deploy three additional staff (a senior accounts officer, an accounts officer, and an accountant from the Financial Comptroller General Office) and a financial management expert (consultant) in the CLPIU.
The CLPIU has insufficient staff and lacks familiarity to efficiently undertake procurement and contract management activities.	This will be mitigated by (i) filling staff vacancies at the CLPIU, (ii) developing the procurement capacity of CLPIU staff through training, (iii) engaging an individual procurement specialist to support the CLPIU's procurement unit, (iv) seeking ADB's orientation and guidance during bid evaluation, and (v) going through ADB's procurement oversight and project monitoring.
Operations and maintenance funding allocation is inadequate.	This will be mitigated by the ongoing education program, which will monitor allocations to the local governments of the 14 districts under a new federal structure. <sup>a</sup>

ADB = Asian Development Bank; CLPIU = Central Level Project Implementation Unit; MOEST = Ministry of Education, Science and Technology; NRA = National Reconstruction Authority.

<sup>a</sup> ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Results-Based Loan and Technical Assistance Grant to Nepal for Supporting School Sector Development Plan*. Manila.

Source: Asian Development Bank.

#### **IV. ASSURANCES**

33. The government has assured ADB that implementation of the project shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and loan and grant documents. The government has agreed with ADB on certain covenants for the project, which are set forth in the draft loan and grant agreements.

#### **V. RECOMMENDATION**

34. 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 \$148,864,000 to Nepal for the Disaster Resilience of Schools Project from ADB's ordinary capital resources, on concessional terms, with an interest charge at the rate of 1% 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 agreement presented to the Board; and
- (ii) the grant not exceeding \$10,000,000 to Nepal from ADB's Special Funds resources (Asian Development Fund) for the Disaster Resilience of Schools Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant agreement presented to the Board.

Takehiko Nakao  
President

17 August 2018



## DESIGN AND MONITORING FRAMEWORK

<b>Impact the Project is Aligned with</b> DRM for human resource development enhanced (Post Disaster Recovery Framework and School Sector Development Plan) <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Risks</b>
<p><b>Outcome</b> Disaster resilience of schools and communities increased and learning environment improved</p>	<p><b>By 2023</b> a. Enrollment rates in 174 schools restored to pre-earthquake levels with at least 89,000 students (46,200 girls) benefiting from safe and upgraded physical educational facilities in 3 provinces<sup>b, c</sup> (2017 baseline: not applicable)</p> <p>b. GESI-responsive DRM action plans approved and adopted by 50 schools and communities in 3 provinces<sup>d</sup></p>	<p>a–b. MOEST, EMIS database</p>	<p>MOEST assuming executing agency role from NRA delays project implementation.</p>
<p><b>Outputs</b> 1. Heavily damaged schools reconstructed and improved</p> <p>2. Unsafe schools retrofitted and disaster risk reduced</p>	<p><b>By 2022</b> 1a. 163 public schools (145 secondary and 18 feeder basic) reconstructed with improved facilities for science education, segregated toilets, changing and disposal facilities for girls, and ramps for people with disabilities<sup>c</sup> (2017 baseline: 0)</p> <p>1b. 130 schools with solar power installed and functional<sup>e</sup> (2017 baseline: 0)</p> <p><b>By 2022</b> 2a. Customized GESI-responsive retrofit design developed for schools in flat, hilly, mountainous, and remote communities (2017 baseline: not applicable)</p> <p>2b. 138 in-use public schools (127 targeted schools with combined reconstruction and retrofitting needs and 11 schools with retrofitting needs only) retrofitted<sup>f</sup> (2017 baseline: 0)</p> <p>2c. GESI-responsive DRM action plans for reconstructed and retrofitted schools prepared (2017 baseline: not applicable)</p>	<p>1a–b. NRA, MOEST, CLPIU progress reports; ADB review missions</p> <p>2a–b. NRA, MOEST, CLPIU progress reports; ADB review missions</p> <p>2c. MOEST, Municipality Program Implementation Unit, and Municipality Education Office</p>	<p>The CLPIU has insufficient staff and lacks familiarity to efficiently undertake procurement and contract management activities required to implement the project.</p>

<p>3. Institutional capacity for disaster resilience strengthened<sup>9</sup></p>	<p><b>By 2022</b></p> <p>3a. EMIS enhanced to improve school building inventory (2017 baseline: 0)</p> <p>3b. Training for 336 government engineers and 336 masons training in disaster-resilient construction completed, targeting 30% women (2017 baseline: 0, 0, and not applicable)</p> <p>3c. At least 350 SMC members, including one-third of female members, reported knowledge and skills on operations and maintenance of schools, including gender-responsive facilities and DRM (2017 baseline: not applicable)</p> <p>3d. Comprehensive user manual for DRR implementation in rural communities, derived from community-driven pilot, developed and endorsed (2017 baseline: not applicable)</p> <p>3e. Scalable pilot on community-driven retrofitting by local government of 3 schools in selected municipalities completed (2017 baseline: not applicable)</p>	<p>progress reports; ADB review missions</p> <p>3a. NRA, MOEST, CLPIU progress reports; ADB review missions</p> <p>3b–e. MOEST, Municipality Program Implementation Unit, and Municipality Education Office progress reports; ADB review missions</p>	
---	---	---	--

### Key Activities with Milestones

#### 1. Heavily damaged schools reconstructed and improved

- 1.1 Design, including structural elements, for two batches of selected schools completed (by May 2018 for the first batch and by October 2018 for the second batch)
- 1.2 Civil works technical bids evaluated and endorsed by ADB for the schools to be reconstructed (by September 2018 for the first batch and by January 2019 for the second batch)
- 1.3 Design and supervision consultancy recruitment initiated (by May 2018) and awarded (by November 2018)
- 1.4 Contract awarded for two batches of selected schools (by October 2018 for the first batch and by April 2019 for the second batch)
- 1.5 Schools turned over to MOEST, concerned municipalities, and communities (by June 2022)
- 1.6 Solar power implementation consultancy recruitment initiated (by September 2018) and awarded (by March 2019)
- 1.7 Solar power service provider recruitment initiated (by June 2019) and awarded (by December 2019)

#### 2. Unsafe schools retrofitted and school disaster risk reduced

- 2.1 Design, including structural elements, for all schools selected for retrofitting completed (by June 2019)
- 2.2 All school retrofitting contracts for two batches awarded (by February 2020)
- 2.3 DRM consultancy recruitment initiated (by January 2019) and awarded (by June 2019)

<p>2.4 All retrofitted schools turned over to MOEST, municipalities, and communities (by June 2022)</p> <p>2.5 DRM community-based and education-focused action plan prepared (by March 2020)</p> <p><b>3. Institutional capacity for disaster resilience strengthened</b></p> <p>3.1 Technical and institutional gaps identified and preliminary plan to strengthen the capacity of the implementing agency and relevant municipalities for school reconstruction, retrofitting, maintenance, and DRM developed (by December 2019)</p> <p>3.2 Training of government engineers and masons completed (by June 2022)</p> <p>3.3 Practical and readily scalable guidance manual completed (by June 2020)</p> <p>3.4 Retrofitting pilot tests in selected remote schools completed (by March 2021)</p> <p>3.5 SMC training on operation and maintenance, DRM, and girls' specific health issues successfully completed (by June 2021)</p> <p>3.6 Consultant and contractor performance monitored quarterly according to the project monitoring and evaluation plan</p> <p>3.7 Technical audit of civil works conducted by the National Vigilance Center to monitor reconstruction and retrofitting quality and DRM implementation (by June 2021)</p>
<p><b>Inputs</b></p> <p>ADB</p> <p>    \$148.86 million (loan)</p> <p>    \$10.00 million (grant)</p> <p>Clean Energy Fund under the Clean Energy Financing Partnership Facility: \$5.00 million</p> <p>Government: \$35.00 million</p>
<p><b>Assumptions for Partner Financing</b></p> <p>Not applicable</p>

ADB = Asian Development Bank; CLPIU = Central Level Project Implementation Unit; DRM = disaster risk management; DRR = disaster risk reduction; EMIS = education management information system; GESI = gender equality and social inclusion; MOEST = Ministry of Education, Science and Technology; NRA = National Reconstruction Authority; PMU = project management unit; SMC = school management committee.

<sup>a</sup> Government of Nepal, NRA. 2016. *Nepal Earthquake 2015: Post Disaster Recovery Framework, 2016–2020*. Kathmandu; and Government of Nepal, Ministry of Education. 2016. *School Sector Development Plan, 2016–2030*. Kathmandu.

<sup>b</sup> School building reconstruction will follow the Indian Standard Criteria for Earthquake Resistant Design of Structures (Government of India, Bureau of Indian Standards. 2002. *Indian Standard Criteria for Earthquake Resistant Design of Structures*. New Delhi).

<sup>c</sup> Improved facilities include laboratories, libraries, information and communication technology, and backup solar power supply.

<sup>d</sup> DRM action plans approved by the CLPIU and ADB include disaster risk awareness and prevention and safety drills.

<sup>e</sup> Of the 163 schools targeted for reconstruction, 130 will have solar power systems installed.

<sup>f</sup> Output 1 also targets 127 of these schools for reconstruction with improved facilities for science education, segregated toilets, changing and disposal facilities for girls, and ramps for people with disabilities.

<sup>g</sup> Capacity of MOEST, municipalities, SMCs, and communities strengthened.

Source: Asian Development Bank.

### **LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=51190-001-3>

1. Loan Agreement
2. Grant Agreement: Externally Financed
3. Grant Agreement: Special Operations
4. Sector Assessment (Summary): Education
5. Project Administration Manual
6. Contribution to the ADB Results Framework
7. Development Coordination
8. Economic and Financial Analysis (Summary)
9. Country Economic Indicators
10. Summary Poverty Reduction and Social Strategy
11. Risk Assessment and Risk Management Plan
12. Climate Change Assessment
13. Gender Action Plan
14. Initial Environmental Examination
15. Environmental Assessment and Review Framework
16. Resettlement Framework

#### **Supplementary Documents**

17. Financial Management Assessment
18. Economic and Financial Analysis Report
19. Due Diligence Report: Social Safeguards
20. Disaster Risk Assessment and Management
21. Solar Photovoltaic Component