

Project: **Bangladesh Urban Resilience Project**
 Project Stage: Implementation

Team Leader(s): Swarna Kazi, Ignacio Urrutia

Country: Bangladesh

Key Project Data

Project Number	P149493	IDA Grant/Loan Number	5599-BD
Board Approval Date	March 24, 2015	Effectiveness Date	August 3, 2015
Closing Date	June 30, 2024		
Total Financing	US\$ 171.87 million	Total Disbursements	US\$ 158.52 million (98.1%)
Current Equivalent	US\$ 161.64 million		
Date of Last Mission	November 29, 2023	Current Mission Start Date	June 4, 2024
Current Mission End Date	June 11, 2024		

Introduction

A World Bank Team¹ met with representatives of the Government of Bangladesh (GoB) to jointly carry out a hybrid Implementation Support Review (ISR) for the Urban Resilience Project (URP) from June 4-11, 2024. The main objectives of the mission were to review the progress of the key agreed actions from the last ISR held from November 29, 2023, to December 20, 2023, and to identify the remaining actions to complete the project based on the progress review. This Technical Note records the main findings of the mission and agreements reached between the GoB and the World Bank Team.

- URP is a multi-ministerial project, executed by four implementing agencies: (i) Department of Disaster Management (DDM); (ii) Rajdhani Unnayan Kartripakkha (RAJUK) – Capital Development Authority; (iii) Project Coordination and Monitoring Unit (PCMU); and (iv) Dhaka North City Corporation (DNCC), implementing on behalf of DNCC, Dhaka South City Corporation (DSCC), Fire Service and Civil Defense (FSCD) and Sylhet City Corporation (SCC). Project activities are highly technical and inter-related across agencies, which require phased planning and implementation, and are integral to the overall complex reform agenda for urban resilience.
- The key issues were discussed at the wrap-up meeting on June 11, 2024 with the Member (Secretary), Agriculture, Water Resources & Rural Institutions Division, Planning Commission, Ministry of Planning.

Summary Project Status

Progress Towards Achieving Project Development Objective (PDO)	The project is near towards achievement of the Project Development Objective (PDO). Three out of the four PDO level indicators have achieved the targets, the remaining one is expected by June 30, 2024. The project has achieved 16 out of the 17 intermediate result indicator targets and the remaining one is expected to be completed by June 30, 2024 which will also complete the remaining PDO indicator.
Implementation Progress	- All remaining activities are expected to be completed by June 30, 2024. Component A – Implemented by DDM and DNCC - Three Emergency Operation Centers (EOCs) and two Command and Control Rooms (CCRs) were established for the City Corporations and FSCD in Dhaka and Sylhet. Equipment was procured and

¹ Swarna Kazi (Senior Disaster Risk Management Specialist and Task Team Leader), Ignacio Urrutia (Senior Disaster Risk Management Specialist and Task Team Leader), Md. Kamruzzaman (Senior Procurement Specialist), Mohammed Atikuzzaman (Senior Financial Management Specialist), Md. Akhtar Zaman (Senior Social Development Specialist), Iqbal Ahmed (Senior Environmental Specialist), Debashish Paul Shuvra (Disaster Risk Management Specialist), Mohammad Rafiqul Islam (Disaster Risk Management Specialist), Sachi Suzuki (Disaster Risk Management Specialist), S. M. Mehedi Hasan (Disaster Risk Management Consultant), Sk Towhidur Rahaman (Disaster Risk Management Consultant), Olivia Moutusi Sarker (Disaster Risk Management Consultant), Mohammad Abdul Basit (Disaster Risk Management Consultant), and Amani Haque (Program Associate).

	installed to run the EOC with a live surveillance system. The EOCs in DNCC, DSCC & SCC were established and inaugurated. • 68 wards of Dhaka (DNCC/DSCC) and 20 wards of Sylhet (SCC) were provided with decentralized emergency response services. • Procurement of specialized ICT equipment which includes Very High frequency radio terminals, Digital Mobile Radio Network equipment, specialized search and rescue equipment, rescuer carrying vehicle, turn table ladders, hazmat suits, etc. were completed. These were used during all recent fires in Dhaka. • The remaining activity is delivery of a rescue boat for FSCD, which will be completed by June 30, 2024. • A Geographic Information System (GIS) based asset inventory and web GIS based asset management system was prepared for DNCC, DSCC & SCC as a platform for efficient planning and management of the city corporation assets and to reinforce emergency response capacity. • For capacity building of the government, Training, Exercises, and Drills (TED) program was completed and has trained over 2,500 government officials in emergency and disaster risk management. Component B - Implemented by RAJUK • Total of 15,000-meter Standard Penetration Test (SPT), 400 Seismic downhole tests, 5,000 meter Cone Penetration Test (CPT) and 400 Seismic Cone Penetration Test (SCPT) were conducted to prepare seismic hazard micro zonation maps which led to completion of preparation of Risk-Sensitive Land Use Planning for Dhaka. • A three-step vulnerability assessment, comprising the Rapid Visual Assessment (RVA) of 5 million sqm with a total of 3,252 buildings, Preliminary Engineering Assessment (PEA) covering 579 buildings with an equivalent area of 1 million sqm and the final step, Detailed Engineering Assessment (DEA) of 0.4 million square meter comprising of 187 buildings completed, which led to the development of a long-term investment plan for Dhaka. Component C – Implemented by RAJUK • Program for Building Code and Construction Code Enforcement developed, and as per the program, over 2,000 professional engineers were trained. • Electronic Construction Permitting System was launched by RAJUK in September 2021, which ensures automation of occupancy certificate and building approval process. The system is intended to improve transparency and governance and to advance compliance with building codes and development control regulations, thus contributing to urban resilience. The system is running successfully in all zones of RAJUK since November 18, 2023. • A professional accreditation program was developed under RAJUK for the structural engineers and RAJUK now has the first 50 certified structural engineers in Bangladesh. • The Urban Resilience Unit building is being constructed with state-of-the-art laboratory facilities to conduct geotechnical and geological tests along with future building assessments. The progress is 95%, and this package is expected to be completed before the project closing date of June 30, 2024. Component D – Implemented by PCMU: Overall coordination of the project. The M&E team under PCMU submitted all reports required.
Disbursement Status	• Out of a total IDA credit of Special Drawing Rights (SDR 121.96 million (equivalent to US\$161.64 million), US\$158.52 million has been disbursed as of May 30, 2024, representing 98.1% of the total financing. Regarding the undisbursed amounts under the DDM component, ERD sent a cancellation request of US\$1.89 million, equivalent of the SDR 1.73 million to the Bank on June 6, 2024, considering the payment obligation up to the disbursement deadline of October 30 for expenditures incurred by the closing date June 30, 2024.
Monitoring and Evaluation (M&E)	• M&E for all components is being carried out by a specialized M&E Firm under the PCMU. The M&E firm submitted all reports.

Key Issues and actions:

Dhaka North City Corporation (DNCC):

- Delivery of the one remaining package, rescue boat, to be completed by June 30, 2024.

Rajdhani Unnayan Kartripakkha (RAJUK - Capital Development Authority):

- Construction of the Urban Resilience Unit (URU) building to be completed by June 30, 2024.

Department of Disaster Management (DDM):

- Cancellation processing of USD 1.89 million (XDR 1.73 million) to be completed by June 30, 2024.

Project Coordination and Monitoring Unit (PCMU):

- Final report to be submitted by June 30, 2024.

Overall Project Performance

OVERALL PROJECT IMPLEMENTATION STATUS

1. Component A: Reinforcing the Country's Emergency Management Response Capacity

Component A aims to operationalize an integrated emergency management system that will enable to plan and respond to both everyday emergencies as well as major disasters in an organized and effective manner. The component is financing: (i) construction and/or refurbishment of decentralized facilities for emergency management and response; (ii) establishment of a communications network for these facilities to operate during emergencies; (iii) specialized search and rescue (SAR) equipment; and (iv) training for emergency operations and response.

- ***The construction, renovation, and ICT equipment procurement implemented by DNCC (Sub-components A2, A3, and A4) were completed.*** All fifty-eight (58) decentralized facilities were constructed and/or renovated. Within these facilities, 30 facilities are for DNCC, DSCC & SCC which include 8 Emergency Warehouses (DNCC-5, DSCC-3), 3 EOCs (DNCC, DSCC & SCC) associated with 1 Urban Resilience Unit (Sylhet), 8 Disaster Risk Management Offices (DNCC, DSCC), 10 Zonal Control Rooms (1 control room at each zonal office) and 28 facilities for FSCD which include 2 Command & Control Rooms (Mirpur, Dhaka, and Sylhet), 13 Emergency Management Warehouses (11 Dhaka, 2 Sylhet), and 13 Auxiliary Control Rooms.
- Contract for the package (G-1-15) was signed on August 23, 2021, and ICT equipment was installed in the National Disaster Management Research and Training Institute (NDMRTI) and Emergency Response and Communication Center (ERCC). Package G-1-14 Procurement of ICT Equipment for Emergency Operation Center (EOC) at DNCC and Package G-1-18: Procurement of ICT Equipment for Emergency Operation Center (EOC) at DSCC & SCC are completed and installed; and package G-1-19: Procurement of ICT Equipment for Command Control Room at FSCD Dhaka & Sylhet were installed and completed. The agencies are using the EOCs and CCRs currently for monitoring different key activities of their organizations.
- ***Geographic Information System (GIS) A GIS based asset inventory and web-based asset management system were developed for DNCC, DSCC & SCC*** as a platform for efficient planning and management of the city corporation assets and to reinforce emergency response capacity of the city corporations. The digital asset ArcGIS Enterprise geo database consisting of DNCC, DSCC and SCC will manage database of structural assets (such as road networks, flyovers, footpaths, road dividers, public toilets, garbage collection points, dustbins, and so on) that will eventually facilitate the city corporations in strategic planning and resource utilization, planning and management of day-to-day operations. Under package S9, all stakeholder consultation workshops have been completed with DNCC, DSCC and SCC along with meetings with different departments, and feedback addressed. The critical DNCC assets were verified again through field visits based on the feedback. The final report, maps and data have been submitted and reviewed. The databases for DNCC, DSCC, and SCC were installed in respective EOC Servers.
- ***Greenfield Towers for DNCC, DSCC, SCC & FSCD were constructed (Package W 4.1 & 4.2)*** Greenfield Towers were constructed for the city corporations and FSCD. The construction work for all the towers has been completed. The equipment for the Digital Mobile Radio (DMR) network, which was purchased under this project, has been set up on these towers.
- ***DDM renovated and equipped national facilities and completed Trainings, Exercised and Drills (TED) (Sub-components A1 and A5)*** Under sub-component A1, renovations of Emergency Response and Communication Center (ERCC) and the National Disaster Management Research and Training Institute (NDMRTI) were completed and equipped with ICT materials. Under the sub-component A2, DDM PIU signed and implemented Trainings, Exercises and Drills (TED) contract with UNDP, under the UNDP-WB standard agreement for technical assistance format. Over 2500 government officials have been trained in disaster risk management.

2. Component B: Vulnerability Assessment of Critical and Essential Facilities

The objective of this component is to develop a consensus-driven analytical foundation required for longer-term investments to reduce risk in the built environment for Dhaka city. This is being carried out through two sub-components led by RAJUK, B1 (Consultancy Service S-4): Vulnerability assessment of critical and essential facilities; and B2 (Consultancy Service S-5): Development of a Risk-Sensitive Land Use Planning (RSLUP) practice, including a Strategic Environment Assessment (SEA).

- **RAJUK completed the vulnerability assessment of critical and essential facilities and lifelines (Package S-4).** Under Package S4, both phases (5 million sqm) of Rapid Visual Assessment (RVA) were completed on December 26, 2020, and a total of 3,252 buildings were assessed. Preliminary Engineering Assessment (PEA) were completed on June 25, 2021, and covers 579 buildings with an equivalent area of 1 million sqm, and Detailed Engineering Assessment (DEA) has been completed for 0.4 million sqm consisting of 187 buildings and reports have been submitted and No Objection provided by the World Bank. A long-term investment and strategy development report has been prepared as part of the final deliverable and was developed and approved by the PIU as well with No Objection from the World Bank. The contract ended on June 30, 2022, and all the deliverables for this package were completed. RAJUK disseminated the results and notified the related departments or divisions of the government and informing them about the need of retrofitting or reconstruction of those 187 buildings.
- **RAJUK conducted a series of risk assessments and developed a strategy to introduce a risk-sensitive land use planning (RSLUP) practice in Dhaka (Package S-5).** Under package S5, Field tests were completed with a total of 15,000m Standard Penetration Test (SPT), 400 Seismic downhole tests, 5,000m Cone Penetration Test (CPT) and 400 Seismic Cone Penetration Test (SCPT) in preparing seismic hazard micro zonation maps. The RSLUP strategy was developed and submitted as part of the final report of this package, and the report was approved with all data submitted with it. The contract ended on April 30, 2022, and all deliverables were completed. RAJUK disseminated the results and is working on incorporating the recommendations from the RSLUP in the newly published Detailed Area Plan 2022-35.

3. Component C: Improved Construction, Urban Planning and Development

The objective of this component is to put in place the institutional infrastructure and competency to reduce long-term disaster vulnerability, addressing both the existing built environment as well as future development. The packages under this component focus on creating the Urban Resilience Unit (URU) to support disaster risk reduction, mainstreaming, and improving urban resilience in Dhaka. The implementation was largely based on the then proposed Bangladesh National Building Code, which has since been approved and the gazette was published on February 11, 2021.

- **RAJUK completed a development of institutional framework for the URU, awaiting the approval process to be completed (package S-6)** The institutional design was developed for the URU and the Training and Capacity Building Report was completed. Even though the community outreach campaign was heavily hampered due to the COVID-19 pandemic, it was completed on June 10, 2021. PIU considers the outreach campaign as an ongoing process and the materials developed under this component will be used for carrying out further outreach campaigns when the URU is established. The final M&E report included goals and indicator set-up along with a full monitoring and evaluation framework to be implemented when the URU is established. All the deliverables envisaged under the contract were completed before the contract closed on June 12, 2021. The establishment of Urban Resilience Unit is under approval process in Ministry of Housing and Public Works (MoHPW).
- **RAJUK established an Electronic Construction Permitting (ECP) System (Package S-7).** The contract for the development of the ECP system ended on April 12, 2021. The ECP program was formally launched by the State Minister of Housing and Public Works on September 19, 2021, where a Memorandum of Understanding was also signed with the Institute of Architects Bangladesh (IAB) and Institution of Engineers Bangladesh (IEB) on the approval process through the ECP system. This was one of the critical steps to fulfill one of the key project development indicators regarding the system established for vulnerability reduction. The operation and maintenance (O&M) are ongoing for the ECP system, and even after the project ends, RAJUK will continue its O&M through own funding. From November 18, 2023, all zones of RAJUK are using the new system for construction approval process.

- **RAJUK set up a Professional Accreditation Program for Engineers (Package S-8A).** The package was signed on March 1, 2021, and International Code Council (ICC) was hired as the consultancy firm. The objective of this component is to evaluate and further upgrade the currently available accredited program for building professionals based on international best practices, with a focus on accreditation for Engineers which is currently provided by Bangladesh Professional Engineers Registration Board (BPERB). The Inception report was submitted and approved on July 19, 2021. The Demand Analysis Report was submitted and approved on November 4, 2021. The Professional Registration Program Design report was submitted and was provided No Objection by the World Bank after review on February 15, 2023. Under this package, training has been conducted on 48 different modules and over 2,000 structural engineers were trained. The professional engineering exam was taken by Bangladesh University of Engineering and Technology (BUET), and after evaluation, finally 50 participants were certified as SEng. The final report was submitted, and package was completed on December 31, 2023.
- **RAJUK developed a series of recommendations to improve building code enforcement within RAJUK Jurisdiction (Package S-9).** “Program for Building Code and Construction Code Enforcement” was developed and finalized. The pilot phase of this proposed program was delayed due to the COVID-19 pandemic. The Training and Capacity Building report was submitted on August 5, 2021, and was approved after review. Training and capacity building activities focusing on Bangladesh National Building Code 2020 (BNBC 2020) was conducted for professionals, government officials, academicians, and university students as participants. To complete the remaining works properly, this contract was extended till December 31, 2023, with no cost associated with the extension. The Education and Outreach Campaign report was submitted on June 1, 2022, and was approved on July 25, 2022. The Monitoring and Evaluation report was submitted, and no objection was provided by the World Bank on January 9, 2023. The sustainability report was submitted and provided with no objection by the World Bank on October 17, 2023. The final report was submitted, and the package was completed on December 31, 2023.
- **Consultancy Services Regarding the Design and Supervision of URU Construction developed the design, estimation, and bidding documents for the 10 storied with 2 basement URU building (Package S-11).** Along with the signing of the relevant works package for this construction, W-1, the supervision phase of the consultant commenced in November 2020. Due to the impact of COVID 19 pandemic, the contract required the involvement of local consultants more than the international consultants due to the international travel barriers. The contract was extended with no additional cost for another year up to June 30, 2023, with the extension of package W1. However, with the extension of package W1, this package was extended again up to June 30, 2024 with slight variation due to increased time.
- **Construction of the Urban Resilience Unit will be completed by June 30, 2024 (Works Package W-1).** The contract was signed on October 20, 2020, and works commenced on November 24, 2020. The construction activities were hampered during the COVID-19 peak period in mid-2021 due to several lockdowns and unavailability of raw materials. The contract was extended with no additional cost up to October 30, 2023. However, due to Letter of Credit (LC) opening issue and disruption of supply chain of import materials for Russia’s invasion of Ukraine, the construction of the main building is delayed and was extended till June 30, 2024, for handover of the building to RAJUK. Current physical progress is around 95%, which includes the completion of two storied laboratory building and only finishing works remaining for the 10 storied + 2 basement main building. Only finishing work remains for the building. The construction and handover will be done by June 30, 2024.
- **Field and laboratory equipment for building materials under URU were procured and installed.** All goods were delivered. For package G12 and G-13, the equipment was delivered, and training was completed. The contract for package G-17, Truck-mounted CPT equipment was signed on January 9, 2020, and the delivery was on October 24, 2021; however, the training is remaining due to delay in laboratory building construction. The cutter crane under package G-24 was delivered on March 4, 2021, and associated training was also completed.

4. Component D: Project Coordination, Monitoring and Evaluation

- PCMU is responsible for overall coordination and monitoring of this multi-ministerial project. One of the key activities is Monitoring and Evaluation (M&E) of all components through a specialized M&E Firm. Extension of the contracts were

done till June 30, 2024. Currently PCMU is working on the final report.

FINANCIAL, PROCUREMENT AND SAFEGUARD PERFORMANCE

5. Procurement Performance:

DNCC: All key procurement packages have been awarded, one important package (Search and Rescue Equipment) is in the implementation stage while the rescue boat is expected to be delivered in June 2024. All other contracts have been completed. DNCC informed that there is no other issue related to procurement.

RAJUK: RAJUK has implemented high value complex service packages. The D&S consulting contract S11 require 2nd variation which is under process. Works package no W-1 is in the final stage of implementation, and it is scheduled to be completed on 30 June 2024. Installation completed for Procurement of Equipment for Exploration of RSLUP Profile, package no G-17 but training partially completed.

DDM: DDM has completed all Goods, Works and Consultancy Service packages.

PCMU: Three Consultancy firms for Monitoring & Evaluation Consultancy through a firm, Internal Audit and Strategic Studies end level evaluation are in the implementation stage and will be completed within June 2024.

World Bank has conducted the Post Procurement Review of this project. We have not noticed any governance issue and non-compliance issue. The PPR report will be shared with the agencies soon.

6. Financial Performance:

All PIUs have been consistently conformant to timely submission of acceptable IUFs, audit reports, broadsheet replies for resolving audit observations, and withdrawal application According to the latest Client Connection data, the documented expenditure amounts to US\$146.18 million, representing 90% of total allocation. As the project is heading towards closure, the Bank team discussed closing procedure, especially on the DA advance recovery (US\$11.10m for all PIUs) in the upcoming withdrawal applications, cut-off the date for eligible expenditure and the eligibility criteria that excludes front loading of any expenditure such as, operation and maintenance (O&M), training fees, capacity charge or rental, lease research cost and any type of pre-payment of operational cost after the closing date.

7. Environmental and Social Safeguard Performance:

The civil works under different works packages have been completed, except for the RAJUK 10-story building, which has only 5% of the work remaining to be completed by the loan closing. The management of the environmental and social (E&S) risks in the civil works under all the PIUs (RAJUK, DNCC and DDM) is deemed satisfactory. The PCMU is requested to prepare and submit E&S risk management completion report by June 30, 2024. All PIUs should contribute to the reporting process, with a focus on stakeholder participation and grievance resolution.

List of Key Agreed Actions					
#	Actions	Sub-actions	Responsibility	Due Date	Status
1	URP/PCMU/S-1 / Monitoring and Evaluation Consultancy through a Firm	Final report	PCMU	July 30, 2024	Ongoing

2	Submit revised IUFR and review bank reconciliations of FS	Submission	DNCC	Continuous	Continuous
3	URP/RAJUK/S-11 / Consultancy Services for Design and Supervision of Urban Resilience Unit (URU) Building including Research, Training, and Testing Laboratory facilities under RAJUK in Dhaka, Bangladesh	Monitoring of URU construction	RAJUK	Ongoing	Ongoing
4	URP/RAJUK/W-1/ Establishment of URU Building	Complete Construction and handover	RAJUK	June 30, 2024	Will be completed by June 30, 2024. Physical progress 95% with the remaining finishing works to be completed within the project end date.
5	URP/DNCC/Procurement of Rescue Boat	Delivery and completion	DNCC	June 30, 2024	Will be completed by June 30, 2024. Most of the shipment already arrived. Rest will arrive within end date.

Results Framework

Project Development Objective Indicators						
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Wards with decentralized emergency response services in Dhaka (DNCC/DSCC jurisdiction)	Number	Value	0.00	68.00	68.00	68.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		All wards are covered. Target achieved.	Target achieved. All wards are covered.	Target achieved. The end date was revised during the restructuring
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Wards with decentralized emergency response services in Sylhet (SCC jurisdiction)	Number	Value	0.00	20.00	20.00	20.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target achieved.	Target achieved.	Target achieved. The end date was revised during the restructuring
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Increased capacity of officials and emergency management response personnel	Text	Value	2.00	5.00	5.00	5.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target achieved.	Target achieved.	Target achieved. The end date was revised during the restructuring
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Systems established to reduce vulnerability of new buildings	Number	Value	0.00	2.00	3.00	4.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		The RSLUP strategy and the ECP system have been developed. Establishment of two more systems (URU and PAP) are ongoing. PAP is expected to be completed by January 2024 and URU is expected to be completed by May 2024.	Target partially achieved. The RSLUP strategy, the ECP system and Professional Accreditation Program have been developed. Establishment of URU is almost completed.	Target expected to be achieved by closing date. The number of systems to be established was revised from 3 to 4 during restructuring. This includes the original, Urban Resilience Unit, Electronic Construction Permitting, Professional Accreditation Program developed and/or strengthened, and also the new system, Risk Sensitive Land Use Planning Practice.
Intermediate Results Indicators						
Component A: Reinforcing the Country's Emergency Management Response Capacity						
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target

DDM facilities renovated (ERCC, NDMRTI)	Number	Value	0.00	2.00	2.00	2.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		All construction work has been completed.	Target achieved. All construction work has been completed.	Target achieved. The end date was revised during the restructuring
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
FSCD facilities constructed and/or renovated	Number	Value	0.00	28.00	28.00	28.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Revised target achieved. Those facilities include Two (2) FSCD Command & Control Rooms, 13 Emergency Warehouses and 13 Auxiliary Control Room	Target achieved. Those facilities include Two (2) FSCD Command & Control Rooms, 13 Emergency Warehouses and 13 Auxiliary Control Room.	Target achieved. Number of facilities revised due to space/land availability and institutional requirements. Auxiliary control rooms reduced from 17 to 13. Emergency warehouses increased from 12 to 13.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
DNCC/DSCC/SCC facilities constructed and/or renovated	Number	Value	0.00	30.00	30.00	30.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Revised Targets already achieved. Facilities include 8 Warehouses (Dhaka), 3 EOCs (for each CC) 1 URU (SCC), 8 DRM Offices (for each WR), 10 Zonal Control Rooms	Target achieved. Facilities include 8 Warehouses (Dhaka), 3 EOCs (for each CC) 1 URU (SCC), 8 DRM Offices (for each WR), 10 Zonal Control Rooms.	Target achieved. Number of facilities revised as per institutional requirements from 26 to 30.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
DDM/DNCC/DSCC/SCC/FSCD and Satellite Control Room facilities equipped with ECT suites and/or kits	Number	Value	0.00	100	100	100.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target already achieved. All planned ECT suits and flyaway communication kits have been purchased. Kits and suits installation & testing are ongoing.	Target achieved. All planned ECT suits and flyaway communication kits have been purchased. Kits and suits installation & testing are ongoing.	Target achieved. Revised during restructuring as per institutional requirements. During implementation, need for additional flyaway emergency communication kits was identified and included.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
FSCD emergency management warehouses equipped with specialized search and rescue equipment	Number	Value	0.00	13.00	13.00	13.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Revised target already achieved. (11 Dhaka, 2 Sylhet)	Target achieved (11 Dhaka, 2 Sylhet).	Target achieved. Number of emergency management warehouses equipped revised from 12 to 13 as per institutional requirement.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Multi-agency exercises and drills completed	Number	Value	0.00	12.00	12.00	12.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024

		Comments		Target achieved	Target achieved.	Target achieved. The end date was revised during the restructuring
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Training sessions to government officials and emergency management personnel delivered	Number	Value	0.00	40.00	40.00	40.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target achieved. Under the TED contract over 2500 personnel have been trained.	Target achieved. Under the TED contract over 2,500 personnel have been trained.	Target achieved. This indicator was added during restructuring. This was part of the original project scope but was not reflected in the original results framework.
Component B: Vulnerability Assessment of Critical and Essential Facilities						
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Identified and prioritized critical and essential facilities and lifelines for Dhaka	Percentage	Value	0.00	100.00	100.00	100.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target already achieved. Critical & essential facilities and lifelines identified as planned 5 million square meter RVA completed.	Target achieved. Critical & essential facilities and lifelines identified as planned 5 million square meter RVA completed.	Target achieved.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Vulnerability of prioritized critical and essential facilities and lifelines assessed for Dhaka	Percentage	Value	0.00	100.00	100.00	100.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target achieved. Required number of PEA and DEA completed.	Target achieved. Required number of PEA and DEA completed.	Target achieved.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Vulnerability reduction strategy and program for Dhaka developed	Yes/No	Value	No	Yes	Yes	Yes
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Vulnerability reduction strategy developed, and target achieved.	Target achieved. The vulnerability reduction strategy was developed.	Target achieved. This was a new indicator added during restructuring. This was part of the original project scope but was not reflected in the original results framework.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Risk-sensitive land use planning practice for Dhaka developed	Percentage	Value	0.00	100.00	100.00	100.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target achieved. A complete Risk-sensitive	Target achieved. A complete Risk-sensitive	Target achieved. This was a new indicator

				Land Use strategy has been developed for Dhaka.	Land Use strategy has been developed for Dhaka.	added during restructuring. This was part of the original project scope, sub- component B2 (Support Development of RSLUP in Dhaka) but was not reflected in the original results framework.
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Component C: Improved Construction, Urban Planning, and Development

Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
E-Permits for construction issued by RAJUK	Text	Value	0.00	Baseline + 30%	Baseline + 30%	Baseline + 30%
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target achieved. The system is publicly launched, and piloting started on April 1, 2023. From November 18, 2023 it is running in all zones of RAJUK.	Target achieved. The system was publicly launched, and from November 18, 2023 it is running in all zones of RAJUK.	Target achieved.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Urban Resilience Unit facility of RAJUK constructed	Percentage	Value	0.00	80.00	95.00	100.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Construction work of 10 floor and 2 basement structure completed. Mechanical, electrical, and plumbing works ongoing.	Target partially achieved. Construction work of 10 floor and 2 basement structure completed. Mechanical, electrical, and plumbing works ongoing.	Target expected to be achieved by June 30, 2024
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Urban Resilience Unit facility of RAJUK equipped with laboratory and field-testing equipment	Percentage	Value	0.00	90.00	100.00	100.00
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Installation of equipment is going on for the laboratory. Vendor Trainings for most of the delivered equipment have been completed	Target achieved. The installation of equipment and trainings completed.	Target achieved.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
New building code implementation and enforcement strategy developed	Yes/No	Value	No	Yes	Yes	Yes
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		Target achieved. All major works completed. 62 recommendations for enforcement of the strategy need to be implemented by RAJUK.	Target achieved. All major works completed. 62 recommendations for enforcement of the strategy need to be implemented by RAJUK.	Target achieved. This was a new indicator. This was part of the original project scope, covered under C4: Improved Building Code Enforcement, but was not reflected in the original results framework.
Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Professional Accreditation Program developed and/or strengthened	Text	Value	No	No	Yes	Yes
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024

		Comments		Design of PRP Portal has been finalized and submitted. PAP design report and Pilot testing design report are yet to complete. The SEng course exam has been conducted. The target is expected to be achieved by December 30, 2023.	Target achieved. 50 professional engineers were trained and certified.	Target achieved. This indicator was revised. Defined further detail during implementation. For Structural Engineers the professional accreditation program will be developed, for other major engineering disciplines (mechanical, electrical), architects, and planners, the current accreditation will be strengthened.
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Component D: Project Coordination, Monitoring, and Evaluation

Indicator Name	Unit of Measure		Baseline	Actual (Previous)	Actual (Current)	Target
Monitoring Reports produced	Number	Value	0.00	27	27	18
	Sub Type	Date	31-May-2015	30-November-2023	30-May-2024	30-June-2024
		Comments		22 Quarterly performance report and 5 Annual performance report submitted. Total 27 reports.	Target achieved. All reports submitted.	Target achieved. This indicator was revised to reflect the number of reports to be produced within the project period after delay contract signing

Annex 1: Officials Met

Name	Ministry/Organization	Title
Mr. Md Shahiduzzaman Sarker	Ministry of Planning	Honorable Minister of State
Mr. Khandker Ahsan Hossain	Planning Commission	Chief (Additional Secretary), Programming Division, Planning Commission
Mr. Abdul Baki	Planning Commission	Member (Secretary), Agriculture, Water Resources & Rural Institutions Division
Mr. Md. Shahriar Kader Siddiky	Economic Relations Division, Ministry of Finance	Additional Secretary, Economic Relation Division
Mr. Myenul Hasan	Economic Relations Division, Ministry of Finance	Deputy Secretary, Economic Relation Division
Ms. Nurun Nahar	Project Coordination and Monitoring Unit (PCMU), Programming Division, Ministry of Planning	Project Director, URP PCMU, Programming Division
Mr. Alauddin Patwary	PCMU, Programming Division, Ministry of Planning	Deputy Director, PCMU
Mr. Md. Atiqul Islam	Dhaka North City Corporation (DNCC)	Mayor
Mr. Arifur Rahman	Dhaka North City Corporation (DNCC)	Project Director, URP-DNCC
Mr. Mohammad Abul Kashem	Dhaka North City Corporation (DNCC)	Deputy Project Director (Procurement & Contract Management), URP-DNCC
Mr. Hedaitul Islam	Dhaka North City Corporation (DNCC)	Financial Management Specialist, URP-DNCC
Dr. Tariq Bin Yousuf	Dhaka North City Corporation (DNCC) (Former)	Former Project Director, URP-DNCC
Mr. Md. Mijanur Rahman	Department of Disaster Management (DDM)	Director General, DDM
Dr. A.T.M Mahbub-ul Karim	Department of Disaster Management (DDM)	Project Director, URP-DDM
Mr. Md. Mosarraf Hossen	Department of Disaster Management (DDM)	Financial Management Specialist, URP-DDM
Major General Md Siddiquir Rahman Sarker	Rajdhani Unnayan Kartripakkha (RAJUK)	Chairman
Mr. Abdul Latif Helaly	Rajdhani Unnayan Kartripakkha (RAJUK)	Project Director, URP-RAJUK
Mr. Md. Aminur Rahman	Rajdhani Unnayan Kartripakkha (RAJUK)	Superintending Engineer, URP-RAJUK
Mr. Khandakar Md. Wahid Sadique	Rajdhani Unnayan Kartripakkha (RAJUK)	Deputy Project Director & Executive Engineer, URP-RAJUK
Mr. Md. Shahjahan	Rajdhani Unnayan Kartripakkha (RAJUK)	Sr. Financial Management and Planning Specialist, URP-RAJUK
Mr. Muhammad Ibrahim	Local Government Division (LGD)	Secretary
Mr. A H M Kamruzzaman	Local Government Division (LGD)	Joint Secretary
Brigadier General Md Main Uddin, BSP (BAR), ndc, psc, G, M Phil	Bangladesh Fire Service and Civil Defense (FSCD)	Director General
Lt. Col. Mohammad Tajul Islam Chowdhury, sgp, psc	Bangladesh Fire Service and Civil Defense (FSCD)	Director, Operation and Maintenance
Mr. Sirajul Islam	Dhaka South City Corporation (DSCC)	Chief Town Planner, DSCC
Mr. Abu Tayeb Rokon	Dhaka South City Corporation (DSCC)	System Analyst, DSCC
Professor Dr. Raquib Ahsan	Bangladesh University of Engineering and Technology (BUET)	Professor, Department of Civil Engineering

Annex 2: Completed actions since last mission

SI	Actions	Sub-actions	Responsibility	Due Date	Status
1	RDPP preparation and approval		PCMU	Done: January 2024	Completed.
2	URP/PCMU/S-1 / Monitoring and Evaluation Consultancy through a Firm	Extension of Contract Signed	PCMU	Done: January 2024	Completed.
3	23 rd Project Steering Committee Meeting	Meeting conducted	PCMU	Done: February 2024	Completed.
4	Submission of Quarterly Monitoring and Evaluation Report	Submission	PCMU	Done	Completed.
5	"URP-DDM/S-3.1 /Consultancy Service for Training, Exercises and Drills Program"	Completion of Training	DDM	Done: May 30, 2024	Completed. Over 2,500 government officials have been trained
6	URP-DNCC/G-1-20/ Procurement of ICT Equipment for Surveillance System in Emergency Operation Centers (EOC) at DNCC, DSCC, SCC	Delivery and Installation	DNCC	Done: January 2024	Completed.
7	URP/RAJUK/S-8A / Consultancy Services for Professional Accreditation Program in RAJUK	Final report	RAJUK	Done: December 30, 2023	Completed.
8	URP/RAJUK/S-9 / Consultancy Services for Building Code Enforcement	Final Report	RAJUK	Done: December 30, 2023	Completed.
9	URP/RAJUK/S-11 / Consultancy Services for Design and Supervision of Urban Resilience Unit (URU) Building including Research, Training, and Testing Laboratory facilities under RAJUK in Dhaka, Bangladesh	Monitoring of URU construction	RAJUK	Ongoing	Ongoing.
10	URP/RAJUK/W-1/ Establishment of URU Building	Complete Construction and handover	RAJUK	June 30, 2024	Expected to be completed by June 30, 2024. Physical progress is 95%.

Annex 3: List of reports prepared under URP Project

Serial No	List of reports prepared by UNDP, DDM for TED Programs
1	Training on Basic Disaster Risk Management-Participant's Module in English and Bangla
2	Training on Basic Disaster Risk Management by Training, Exercises and Drills (TED) Program Urban Resilience Project (DDM-Part)-Trainer's Manual
3	INTERNATIONAL SEARCH AND RESCUE ADVISORY GROUP (INSARAG) Brochure
4	Training, Exercises and Drills (TED)-Brochure
5	Training, Exercises and Drills (TED)-One pager initial in English and Bangla
6	Training for Associate Emergency Manager (AEM) certification program-Participant's Module
7	Training for Associate Emergency Manager (AEM) certification program-Trainer's Manual
8	Training on Emergency Operations Plan (EOP) and management of Emergency Operations Centre (EOC)-Participants Module
9	Training on Emergency Operations Plan (EOP) and management of Emergency Operations Centre (EOC)-Trainers Manual

Serial No	List of reports prepared by RAJUK	Package No
1	Comprehensive situation analysis Final Report-MD 01	Package S-04
2	Detailed RVA Report Including Work Plan	
3	RVA-Based Prioritization Methodology for Public Building	
4	Synthesis Report for 1st Level RVA	
5	Combined Synthesis Report for 1st Level RVA-All Critical Buildings Under the Scope	
6	Md8 Volume1 -Design of Long-Term Vulnerability Reduction Investment Plan and Related Dhaka Urban Resilience Strategy	
7	Md8 Volume2-Final Consultancy Report	
8	Final Inception Report	
9	D-02 Needs Assessment Report	
10	D-03 Complete Database for all Critical Infrastructure, Superstructures Described in the Scope of the Services	
11	ID-04 Situation Analysis Report	
12	ID-05 Overall Data Collection Report	
13	ID-07 Urban Profile and Characteristics Report	

Serial No	List of reports prepared by RAJUK	Package No
14	ID-08 Analysis Outcomes	
15	Synthesis Report for 1st Level RVA-First Part of Second Batch	
16	Final Inception Report	
17	Geotechnical Report for Proposed Multi-storied Building	Package S-11
18	Report on Geotechnical Investigations on Sub-Soils for Construction of Urban Resilience Unit (URU) Building including Research, Training, and Testing Laboratory Facilities under RAJUK	
19	Final Feasibility Report	
20	Inception Report	Package S-14
21	Software Requirements Specification (Srs) of Designing Website & Archiving Project Documents for URU, RAJUK	
22	System Design Document of Designing Website & Archiving Project Documents for URU, RAJUK	
23	DMR Flood Hazard, Vulnerability and Risk Assessment (Deliverable No. MD-4.1, Vol. 3)	Package S-5
24	DMR Seismic Vulnerability Assessment (Deliverable No. MD-4.1, Vol.6)	
25	DMR Seismic Hazard Assessment (Deliverable No. MD-4.1, Vol. 2)	
26	DMR Liquefaction Hazard Assessment (Deliverable No. MD-4.1, Vol. 4)	
27	DMR Soil Subsidence Hazard Assessment (Deliverable No. MD-4.1, Vol. 5)	
28	Seismic Hazard Assessment Hazard Zonation at Bedrock (MD-4.1, Phase 1)	
29	Comprehensive Study on a DMR Geotechnical and Geological Investigation Seismic Hazard Microzonation Zonation at Surface (MD-4.1, Phase 2)	
30	Urban Patterns of Development	
31	Geodatabase Guideline	
32	Remote Sensing and Analysis	
33	Review of past studies	
34	Data Collection Gap Analysis	
35	Socio-Economic Data Characteristics Legal and Policy Framework Analysis	
36	Mapping the initiatives Related to RSLUP	
37	Governance Characteristics of Dhaka	
38	Assessment of Planning Legislations and Shortcoming	
39	Inception Report	
40	Strategic Environmental Assessment-Inception Report	
41	Strategic Environmental Assessment-Final Report	
42	Situational Analysis and Diagnosis Report First Part of Second Main Deliverable (MD2-1)-Final Consultation Report	

Serial No	List of reports prepared by RAJUK	Package No
43	Situational Analysis and Diagnosis Report Second Part of Second Main Deliverable (MD2-2)-Situation Analysis Report	
44	Preliminary Assessment Report (MD-3.1)	
45	Strategic Framework Report	
46	Geotechnical Survey Plan for RSLUP	
47	Conduct Detailed Geophysical Studies of all DMDP area of Dhaka City-Microtremor Survey	
48	S5 Capacity Building Technical Courses Program Part 1 : Geotechnical Engineering Course Topics and References	
49	S5 Capacity Building Technical Training Program	
50	Comprehensive Framework for Mainstreaming DRR into the Dhaka Planning System MD4.2	
51	Development of a Draft Greater Dhaka Risk Sensitive Land Use Strategy MD4.3	
52	Development a Plan for Urban Expansion (Deliverable D5, MD5. Vol 1)	
53	Conditions for the Provision of Post Disaster Adequate, Affordable Housing (Deliverable D6, MD5. Vol 2)	
54	Development of How-To Guides Planners (Deliverable D8, MD5. Vol 3)	
55	Action-Oriented Guidelines (Deliverable D9.1, MD5. Vol 4)	
56	S5 Capacity Building, Training and Awareness Campaign (Deliverable D9.2, MD5. Vol 5)	
57	Complete RSLUP Guidebook (Deliverable D10, MD5. Vol 6)	
58	Final Capacity Building Program Report	Package S-6
59	Final Monitoring and Evaluation Report (FMER)	
60	Inception Report	
61	Situation Analysis And Feasibility Report	
62	Institutional Design and Organizational Study Report	
63	Business Rules Specification Report	Package S-07
64	ECP Strategic Plan Report	
65	Operational Acceptance Report	
66	User Acceptance Test Report	
67	Inception Report	
68	Construction Permitting Assessment Report	
69	Strategic Plan Report	
70	Completion Report	Package S-08 A
71	Concept Note Report	

Serial No	List of reports prepared by RAJUK	Package No
72	Sustainability Report	
73	Demand Analysis Report	
74	Inception Report	
75	Pilot Design Report	
76	Professional Registration Program (PRP) Design Report	

Serial No	List of reports submitted by M&E team to PCMU
1	1st Quarterly Progress Report (May-June 2018)
2	2nd Quarterly Progress Report (July 18-September 18)
3	3rd Quarterly Progress Report (October 18-December 18)
4	4th Quarterly Progress Report (January 19-March 19)
5	5th Quarterly Progress Report (April 2019-June 2019) and 1st Annual Progress Report (May 2018-June 2019)
6	6th Quarterly Progress Report (July 2019-September 2019)
7	7th Quarterly Progress Report (October 2019-December 2019)
8	8th Quarterly Progress Report (January 2020-March 2020)
9	9th Quarterly Progress Report (April 2020-June 2020) and 2nd Annual Progress Report (July 2019-June 2020)
10	URP Final Report (March 2015 to December 2020), 10th Quarterly Progress Report (July to September 2020) and 11th Quarterly Progress Report (October to December 2020)
11	12th Quarterly Progress Report (January 2021 - March, 2021)
12	13th Quarterly progress Report (April 2021-June 2021) & 3rd Annual Report (July 2020- June 2021)
13	14th Quarterly Progress Report (July 2021-September 2021)
14	15th Quarterly Progress Report (October 2021 - December 2021)
15	16th Quarterly Progress Report (January - March, 2022)
16	17th Quarterly Progress Report (April-June 2022) and 4th Annual Progress Report (July 2021 - June 2022)
17	18th Quarterly Progress Report (July-September 2022)
18	19th Quarterly Progress Report (October-December 2022)
19	20th Quarterly Progress Report (January-March 2023)
20	21st Quarterly Progress Report (April 2023 - June 2023) and 5th Annual Progress Report (July 2022-June 2023)

Serial No	List of reports submitted by M&E team to PCMU
21	22nd Quarterly Progress Report (July 2023 - September 2023)
22	23rd Quarterly Progress Report (October 2023 - December 2023)

Annex 4: Activities carried out under URP Project

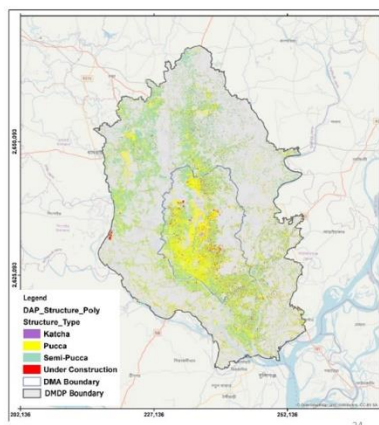
Vulnerability Assessment and Prioritized Investment Plan for Critical Assets in Dhaka (Package No. RAJUK/URP/S-4)

Consulting Firm:

JV of NKY Architectural and Engineering Co.(Turkey),
ProtekYapi Engineering Co. (Iran) and Sheltech (Pvt.)
Limited

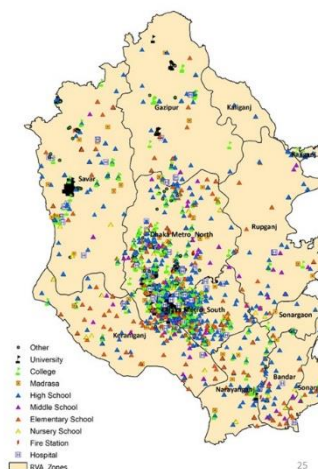
The Distribution of Different Building Types in DMR

Structure Type	Count	Percentage (%)
RC	513,507	24%
Semi-RC/URM	877,620	41%
Others	735,660	34%
Under Construction	20,432	1%
Sum	2,147,219	100%

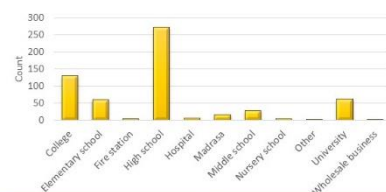


RVA done for 3,252 Buildings (0.6% of Total Buildings in DMR)

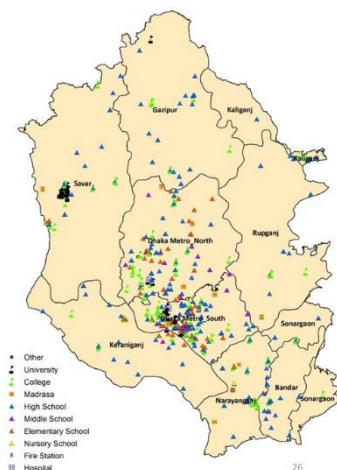
General Type	Number of buildings
Schools and Colleges	2,705
Hospitals	207
Police Stations	36
Others	304
Total	3,252



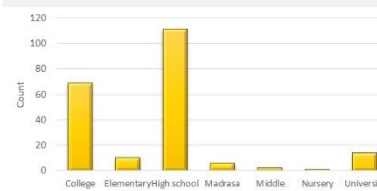
PEA Assessment done for 579 Buildings (17.8% of 3,252 RVA Buildings in DMR)



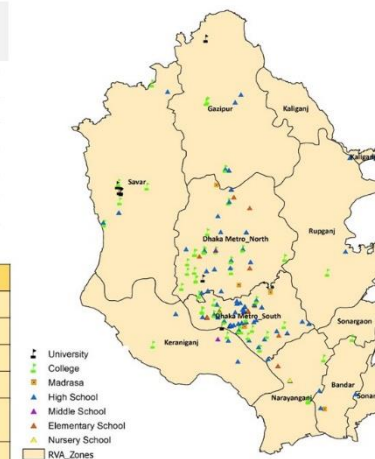
General Type	Number of buildings
Schools and Colleges	568
Hospitals	5
Fire Stations	3
Others	3
Total	579



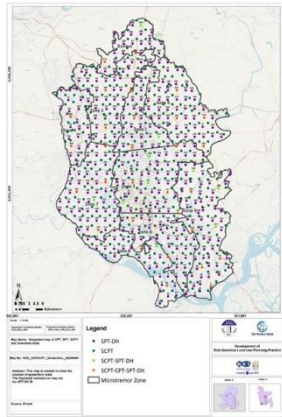
DEA Outcome



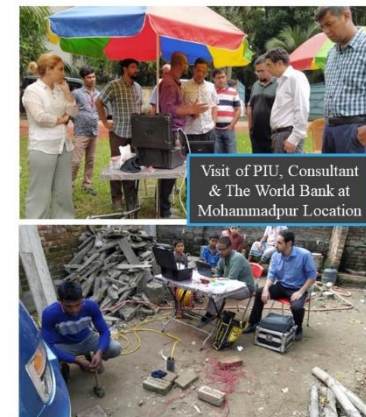
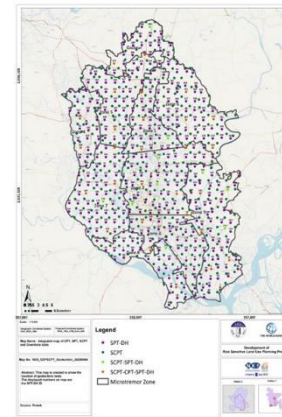
General Type	Number of Buildings
Schools	94
Collages	78
Universities	11
Hospitals	4
Total (need to be retrofitted)	187
Total (need to demolished)	42



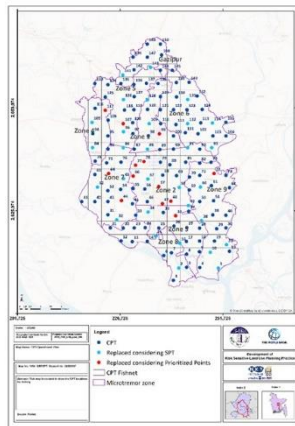
Standard Penetration Test (SPT)



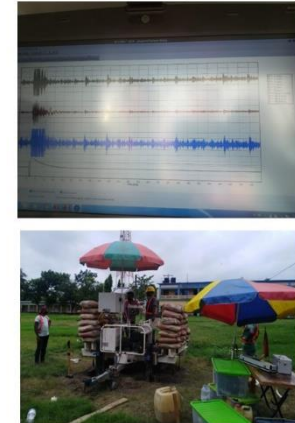
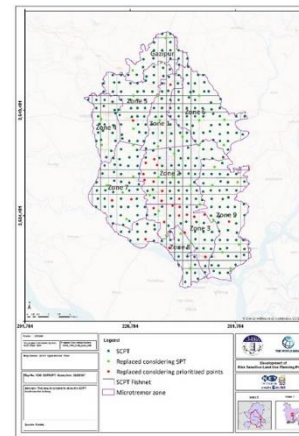
Seismic Downhole Test



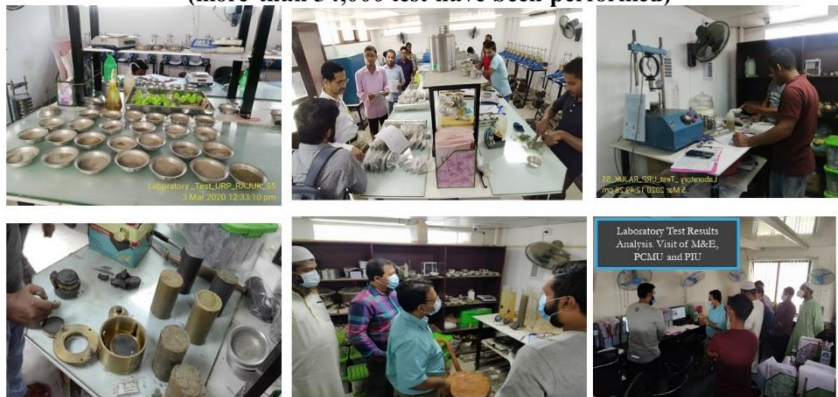
Cone Penetration Test (CPT)



Seismic Cone Penetration Test (SCPT)



Laboratory Tests (more than 34,000 test have been performed)



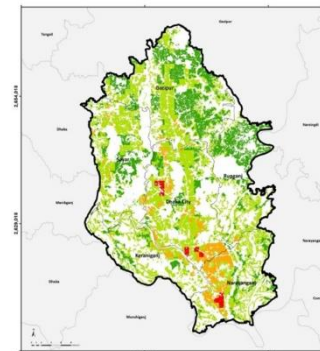
37

RISK SENSITIVE URBAN EXPANSION PLAN

- 3 scenarios for the future expansion of the Dhaka Metropolitan Region;
- Scenario 1: Infill Development
- To maintain the land for future generations

Development Strategies in DMR:

Development Boycott	0.5%
Development Limit	3%
Development Control	17%
Development Prosperity	10%



Development Strategy According to Risk Matrix Analysis

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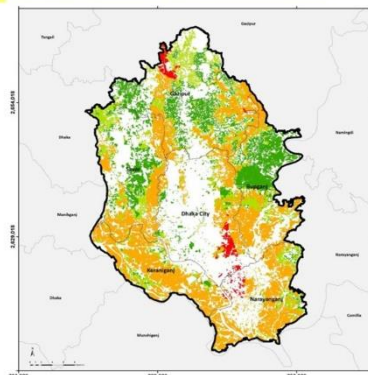
RISK SENSITIVE URBAN EXPANSION PLAN

Scenario 2: Peripheral Development

- To meet the current generation needs rapidly

Development Strategies in DMR:

Development Boycott	1%
Development Limit	23%
Development Control	6%
Development Prosperity	9%



Development Strategy According to Multi-Hazard Analysis

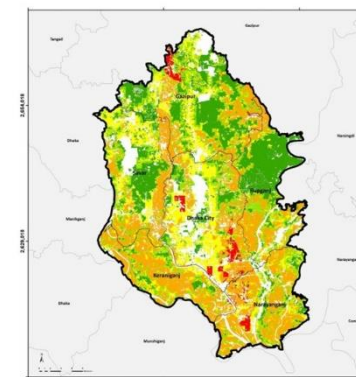
RISK SENSITIVE URBAN EXPANSION PLAN

Scenario 3: Combined Vision

- To have a more balanced and realistic view to future expansion

Development Strategies in DMR:

Development Boycott	1.5%
Development Limit	26%
Development Control	13%
Development Prosperity	29%



Development Strategy According to HVRA

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Field and Lab Equipment (25 categories and 150 nos.)

Item No.	Equipment Name	Quantity (No.)	Functions
1	Cyclic Universal Testing Machine (Capacity: 600 kN)	1	Fatigue Test for Rebar (Rod)
2	Universal Testing Machine (2000 KN)	1	Tensile and Compressive Test for Rebar (Rod)
3	Universal Testing Machine (Capacity: 600 kN)	1	Tensile and Compressive Test for Rebar (Rod)
4	Cyclic Tri-axial Testing Machine	1	Cyclic Tri-axial (Liquefaction potential) Test for determining cyclic strength of saturated soils.
5	Cross-Hole Seismic Equipment (up to 60 m) with accessories and necessary Software	3	To determine dynamic soil property (Shear Wave Velocity) for creating seismic Micro-zonation map.
6	Static Tri-axial System	2	To determine mechanical properties and shear strength of soil

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Field & Lab Equipment (25 categories and 150 nos.) (Cont.)

Item No.	Equipment Name	Quantity (No.)	Functions
7	Automatic Consolidation	5	To measure the compressibility of soils.
8	Direct and Residual Shear Test Device	5	To determine the Shearing Strength of soils.
9	Overhead Crane with a capacity of 40 Ton with Double Girder	1	To carry medium and heavy duty loads..
10	Fork Lift (5 Ton)	1	To carry, lift and stack materials.
11	Terrestrial Laser Scanner (TLS) with necessary Software	1	To survey Natural Hazards.
12	Parallel Seismic Instruments with necessary Software	2	To determine the length and integrity of foundations.
13	Pile Integrity Tester with necessary Software	2	To evaluate integrity and consistency of in-situ pile materials, length and cross sectional area.
14	Capo Test/Pullout Test Machine with accessory.	10	To estimate compressive strength of concrete.

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Field & Lab Equipment (25 categories and 150 nos.) (Cont.)

Item No.	Equipment Name	Quantity (No.)	Functions
15	Micro-tremor Equipment with 5 Sensors and all necessary accessories	2	To determine the soil properties/types.
16	Thermal Imager with Electronic Fungus Free Dry Box and necessary Software for Image Processing	50	To give an image of different temperature area from any object for detecting dampness, electrical lines, etc. in concrete.
17	RTK Global Positioning System (GPS) with necessary Software	5	To locate global position, for land survey, hydrographic survey and in consumer unmanned aerial vehicle navigation.
18	Rebar Scanner (Cover-meter) with accessories and necessary Software (depth of penetration minimum 12.0 inches)	10	To detect Rebar inside concrete
19	Rebar Scanner (Cover-meter) with accessories and necessary Software (depth of penetration minimum 6.0 inches)	20	To detect Rebar inside concrete

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Field & Lab Equipment (25 categories and 150 nos.) (Cont.)

Item No.	Equipment Name	Quantity (No.)	Functions
20	Ground Penetrating RADAR (GPR) with necessary Software and Accessories	2	To use for locating and distinguishing subsurface features and utilities including cables, pipes, concrete, reinforcements, underground storage tanks, etc.
21	Electrical Resistivity	2	To measure the electrical resistive properties of earthen materials.
22	Ultra Pulse Velocity Machine	10	To determine the in-situ strength and quality of concrete.
23	Diamond Core Cutting Machine with all necessary accessories for both dry and wet condition	10	To measure current strength of concrete by Destructive Test.
24	Procurement Of Equipment for Exploration of RSLUP Profile: 200 kN Truck Mounted CPT Equipment	2	To determine geotechnical properties of soils.
25	Cutter Crane with 10 inch slab cutting capacity	1	To demolish/cutting unauthorized RCC/CC structures.

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Equipment Details



1. Cyclic Universal Testing Machine (Capacity: 600 kN) - Used for Rebar Testing



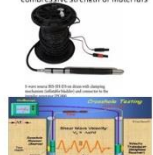
2. Universal Testing Machine (Capacity: 2000 kN) - Used to test the tensile strength and compressive strength of materials



3. Universal Testing Machine (Capacity: 600 kN) - Used to test the tensile strength and compressive strength of materials



4. Cyclic Tri-axial Test - Used to determine the cyclic strength (sometimes called the liquefaction potential) of saturated soils



5. Cross-Hole Seismic Equipment (up to 60 m) - Determining dynamic soil property (Shear Wave Velocity), creating seismic zonation map

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Equipment Details



6. Static Tri-axial System - Determine of mechanical properties and shear strength of soil



7. Automatic Consolidation - To measure the compressibility of soils



8. Direct and Residual Shear Test Device - To determine the Shearing strength of soil



9. Overhead Crane with a capacity of 40 Ton with Double Girder - To carry medium and heavy duty loads

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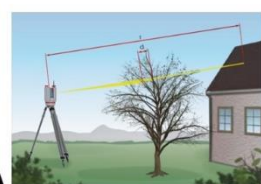
Equipment Details



10. Fork Lift (5 Ton) - Used to carry, lift, or stack materials



11. Terrestrial Laser Scanner (TLS) - Can do Natural Hazard Surveying



12. Parallel Seismic Instruments (PSI) - To determine the length and integrity of foundations



13. Pile Integrity Tester - Evaluate integrity and consistency of in-situ pile materials, length and cross sectional area

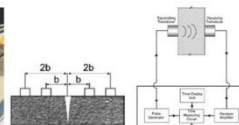


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Equipment Details



22. Ultra Pulse Velocity Machine - Used for determining the in-situ strength and quality of concrete



23. Diamond Core Cutting Machine for measuring current strength (Destructive Test)



24. 200 kN Truck Mounted CPT Equipment - To determine geotechnical properties of soils



25. Cutter Crane with 30 inch slab cutting capacity & 9.65 ton lifting capacity - Demolishing RCC structure by cutting RCC/CC structures

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Organization Wise Goods/Infrastructures :



Sl. No.	Name of Organization	List of Goods/Infrastructures
1	Dhaka North City Corporation (DNCC)	Emergency Operation Center (EOC)-1 Nos
2		warehouses-5 nos
3		Green Field Tower-4 nos
4		Double Cabin Picku-2 nos
5		Microbus-1nos
6		VHF and HF Radio Sets-320 nos
7		DMR Network
8		Crane-1nos
9		Dozer-1 nos
10		Wheel Type Excavator-1 nos
11		Chain Type Excavator- 1 nos
12		Mortuary Van-2 nos
13		Ambulance-5 nos
14		Furniture For EOC
15		Surveillance System
16		GIS based Maps(Ward level)



Organization Wise Goods/Infrastructures :



Sl. No.	Name of Organization	List of Goods/Infrastructures
1	Dhaka South City Corporation (DSCC)	Emergency Operation Center (EOC)-1 Nos
2		warehouses-3 nos
3		Green Field Tower- 1 nos
4		Double Cabin Picku-1 nos
5		UHF and HF Radio Sets-400 nos
6		DMR Network
7		Crane-1nos
8		Dozer-1 nos
9		Wheel Type Excavator-1 nos
10		Chain Type Excavator- 1 nos
11		Mortuary Van-2 nos
12		Ambulance-5 nos
13		Furniture For EOC-DSCC
14		Surveillance System in Emergency Operation Centers (EOC) at DSCC
15		GIS based Maps(Ward level)



Organization Wise Goods/Infrastructures :



Sl. No.	Name of Organization	List of Goods/Infrastructures
1	Sylhet City Corporation (SCC)	Emergency Operation Center (EOC)-1 Nos
2		Green Field Tower- 3 nos
3		Double Cabin Picku-1 nos
4		(Lot-01: i. DMR Network & ii. UHF Radio Terminals
5		Crane-1nos
6		Dozer-1 nos
7		Wheel Type Excavator-1 nos
8		Chain Type Excavator- 1 nos
9		Furniture For EOC-SCC
10		Surveillance System in Emergency Operation Centers (EOC) at SCC
11		GIS based Maps(Ward level)



Organization Wise Goods/Infrastructures :



Sl. No.	Name of Organization	List of Goods/Infrastructures
1	Department of Disaster Management (DDM)	ICT Equipment for NDRCC/NDMRTI Under DDM-1 Nos
Total (Goods + Services + Works)		



Organization Wise Goods/Infrastructures :



Sl. No.	Name of Organization	List of Goods/Infrastructures	Cost	Comments
1	Fire Services and Civil Defence (FSCD)	Command and Control Room (CCR) Dhaka & Sylhet-2 Nos	48509.20	
2		Warehouse FSCD, Dhaka & Sylhet-11 nos		
3		Green Field Tower- 10 nos		
4		VHF Radio Sets- 550 nos		
5		HF Radio Sets-125 nos		
6		DMR Network-112 nos		
7		Emergency Tenders- 22 nos		
8		Water Rescue Vehicle-5 nos		
9		Breathing Apparatus Tender- 6 nos		
10		Personal Protective Rescue suit-99 nos		
11		Rescuer Tool-Drone-3 nos		
12		Rescuer carrying vehicle (7.5 ton) 6 Nos		
13		Turn Table Ladder-3 nos		
14		Chemical Tender/Hazmat-5 nos		
15		Furniture for Warehouses-160 nos		
16		Microbus- 1 no.		
17		ICT Equipment for CCR -100 Items		
18		Rescue Boat-4 nos		
19		Green Field Tower-10 nos		

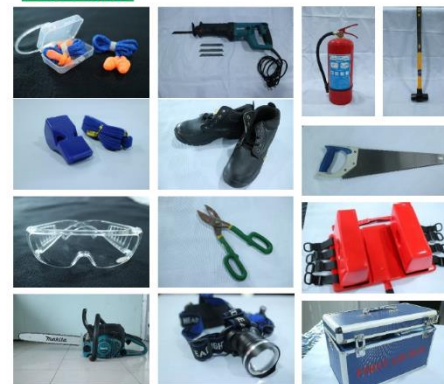
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Emergency Management Light Equipment



DNCC/ DSCC



FSCD



18



Emergency Management Warehouses & Control Rooms



Emergency Management Heavy Equipment



DNCC/ DSCC/ SCC



FSCD



15



Turn Table Ladder for FSCD



16



Hazmat Tenders for FSCD



17



Trainings at the Emergency Warehouses

Skill sessions by FSCD



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Hon'ble Mayor of DNCC Mr. Md. Atiqul Islam inaugurated the Emergency Operation Center on 31 October, 2022.



24



Hon'ble Mayor of DSCC Barrister Sheikh Fazle Noor Taposh inaugurated the Emergency Operation Center on June 26, 2023.



26



Hon'ble Mayor of SCC Mr. Ariful Haque Chowdhury inaugurated the Emergency Operation Center on September 25, 2023.



27



Green Field Tower for FSCD (Gabtoli kacha Bazar)



31



Command and Control Room for FSCD



30

Training, Exercise and Drills (TED) by DDM

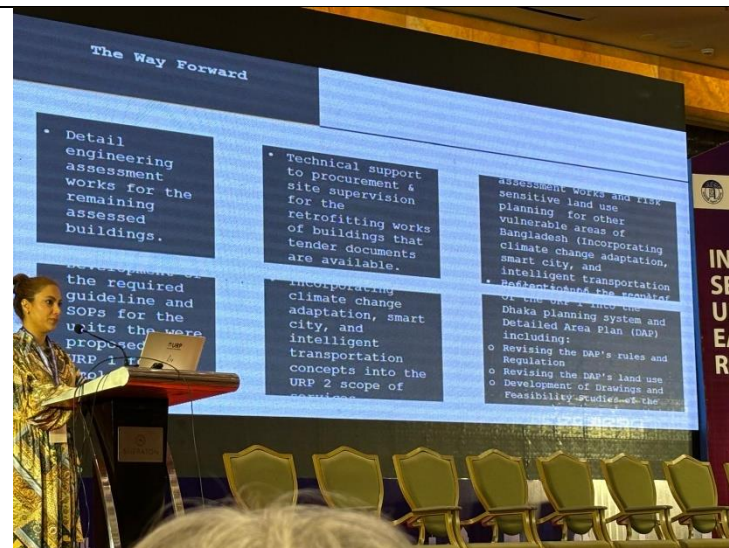
Training on

- ☐ Basic Disaster Risk Management
- ☐ Training on Search and Rescue
- ☐ Emergency Information and Communications Technology
- ☐ Urban Search and Rescue (USAR)
- ☐ Tabletop Exercise (TTX)' and 'Field Training Exercise (FTX)
- ☐ Emergency Operations Plan (EOP) development and Emergency Operation Center (EOC) management
- ☐ International Association of Emergency Managers
- ☐ Agency Specific drill and Multi-agency drill





International Seminar on Urban Earthquake Resilience (organized by RAJUK)



National Dissemination Workshop (organized by PCMU)



