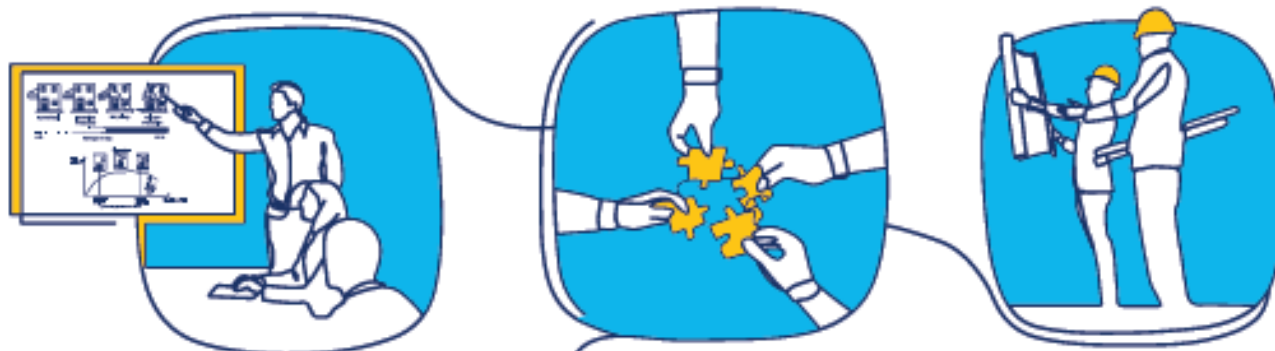


EMERGENCY SUPPORT TO SAFER HOSPITALS AND SETTLEMENTS



EVALUATION REPORT

31 MAY 2024



H2 BEHTAB PHASE II



Emergency Support to Safer Hospitals and Settlements (BEHTAB Phase II)

Grant No. S1-32QXB-000603

An endline evaluation report issued in May 2024



From the People of Japan

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FINAL EVALUATION OF THE BEHTAB PHASE II PROJECT | EVALUATION REPORT

31 May 2024

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Evaluator: Stephen Van Houten, capebluegroup@gmail.com

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ACRONYMS

BEHTAB	Project for Improving the Multi-Hazard Resilience of Hospitals
BEHTAB Phase II	Project for Emergency Support to Safer Hospitals and Settlements
BHRC	Road, Housing and Urban Development Research Centre
DEA	Detailed Engineering Analysis
DRR	Disaster Risk Reduction
ECO	Economic Cooperation Organization
EoJ	Embassy of Japan
EOGPBI	Executive Organisation for Public and Government Buildings and Infrastructure
FGDs	Focus Group Discussions
HNC	Hospital Non-structural Components
HQ	Headquarters
IIEES	International Institute of Earthquake Engineering and Seismology
JICA	Japan International Cooperation Agency
KIIs	Key Informant Interviews
MoFA	Ministry of Foreign Affairs
MoHME	Ministry of Health and Medical Education
MoRUD	Ministry of Roads and Urban Development
MoU	Memorandum of Understanding
NDRI	Natural Disasters Research Institute
NHC	National Habitat Committee
M&E	Monitoring and Evaluation
PBEO	Public Buildings Executive Organization
PBO	Planning and Budget Organization
PEA	Preliminary Engineering Analysis
PHC	Primary Healthcare Centres
ROAP	Regional Office for Asia and the Pacific
RVA	Rapid Visual Assessment
SDGs	Sustainable Development Goals
TDMMO	Tehran Disaster Mitigation and Management Organization
ToR	Terms of Reference
UN	United Nations
UN-Habitat	United Nations Human Settlements Programme
UNDP	United Nations Development Programme
USD	US Dollars

EXECUTIVE SUMMARY

BACKGROUND

In Kermanshah province in 2017, several hospitals and healthcare centres were severely damaged, and, in response, UN-Habitat submitted a proposal for the assessment and retrofitting of existing health facilities to the Ministry of Health and Medical Education. This resulted in the “Inventory, Earthquake and Multi-Hazard Performance Evaluation of existing Health Facilities in the Islamic Republic of Iran” (BEHTAB). UN-Habitat implemented this project from 2018 to 2020, in cooperation with the Ministry of Health and Medical Education (MOHME) and the financial support from the Government of Japan. Upon satisfactory completion of BEHTAB I, the Government of Iran requested the continuation of the project. Thus, the second phase of the project (BEHTAB phase II) was agreed upon. The Government of Japan funded this second project phase with a total budget of USD 1,851,463.00. The original project length was January 2021 to December 2021 but due to COVID-19 related delays, the project was extended to 31 March 2024.

The project objective was to establish the foundations toward disaster preparedness and enhancement of response capacity, post-crisis recovery, and crisis risk reduction (including health) associated with natural hazards and pandemics in healthcare facilities, communities and vulnerable people depending on the usage. The main intended outcome was to improve structural and non-structural resilience of Hospitals in the Islamic Republic of Iran.

The project focused on improving capacity in the country on Disaster Risk Reduction Management (DRRM) of health facilities through the development of a pilot project on risk management of hospitals against natural disasters, focusing on earthquakes. The project was composed of three main components:

- **Component 1:** Multi-hazard Assessment, Vulnerability Analysis, and preparing the retrofit design for existing healthcare facilities
- **Component 2:** Demonstrating non-structural retrofitting construction for selected vulnerable hospitals and healthcare centers as role models
- **Component 3:** Capacity development of the Government of I.R. Iran and related stakeholders through training courses, holding conferences, development of guidelines and software.

EVALUATION OVERVIEW

This final evaluation was mandated by UN-Habitat and in line with UN-Habitat Evaluation Policy (2013) and the Revised UN-Habitat Evaluation Framework (2016). The purpose of this evaluation was to assess the project’s performance, extent to which the project’s objectives and expected accomplishments were achieved, and overall impact of UN-Habitat in Iran for the duration of the collaboration with Government of Islamic Republic of Iran (Phase 2 of the MoU).

This evaluation covered the project implementation period of the second Phase of MoU of Tehran Office and the start of the Project in January 2021 up to 31 March 2024. The evaluation was evidenced-based, covering the project relevance, effectiveness, efficiency, impact outlook, and sustainability in the eight targeted cities. An independent and external consultant conducted the evaluation in May 2024.

SUMMARY OF FINDINGS

MAIN FINDINGS

This evaluation found fully achieved delivery against outcomes with the following levels of achievement for each project component (outcome):

Figure 1: Achievement of outcomes

	Multi-hazard Assessment, Vulnerability Analysis and Retrofitting Design of Constructed Healthcare Facilities (11 hospitals)	Fully Achieved
	Demonstrating Non-structural Retrofitting Construction of Selected Vulnerable Hospitals and Healthcare Facilities as Role Models	Fully Achieved
	Institutional and Personnel Capacity Development	Fully Achieved

This evaluation shows strong overall and project-specific results and achievements. An example of these achievements is provided below.

Figure 2: Examples of specific project achievements

Component/ Activity	Target/ Achievement	Beneficiaries
Component 1: Multi-hazard Assessment, Vulnerability Analysis and Retrofitting Design of Constructed Healthcare Facilities	11 large hospitals 379,574 square meters 3994 hospital beds	2,496,250
Component 2: Demonstrating Non-structural Retrofitting Construction of Selected Vulnerable Hospitals and Healthcare Facilities as Role Models	2 large hospitals 45,250 square meters 561 hospital beds	350,625
Component 3: institutional and personnel capacity development Training courses	10 training courses	639
Component 3: institutional and personnel capacity development 2 nd international conference	2 days/16 sessions/60 lectures	478
Component 3: institutional and personnel capacity development Enforcement of the guidelines for safe hospital planning and design	A guideline published by Planning and Budget Organization of I.R.Iran (publication No.880)	Nationwide
Component 3: institutional and personnel capacity development Handbook and guidelines	- Seismic assessment of Non-structural components in hospitals - Lesson learned of the project	Nationwide
Component 3: institutional and personnel capacity development Promotion/adaptation and integration of Innovative technologies in Hospital	- Design examples of hospitals equipped with innovative technologies. - Instruction for design, construction, and maintenance of innovative technologies in hospitals - A study tour to Japan	Nationwide
Component 3: institutional and personnel capacity development Design and development of an advanced version of the BEHTAB software	Hospital Risk Management Platform (HRMAP)	Nationwide

- This evaluation found that the project objective was achieved in that it has **significantly contributed to the establishment of the foundations toward disaster preparedness and enhancement** of response capacity, post-crisis recovery, and crisis risk reduction (including health) associated with natural hazards and pandemics in healthcare facilities.
- The evaluation found that the project had **significantly contributed to the improvement of structural and non-structural resilience** of targeted hospitals.
- The evaluation **found significant institutional and personal capacity improvement** of the project stakeholders.

A summary of the findings according to the five evaluation criteria is provided below.

SUMMARY OF FINDINGS

1 RELEVANCE

This evaluation found that BEHTAB Phase II was relevant and useful in response to the beneficiary, country, organisational, donor, and international development and DRR priorities. Of particular relevance is the project’s response to the urgent DRR needs and priorities, especially healthcare facilities, in the country. The project objectives were valid, and the project responded to the particular institutional and personal capacity development needs of the associated stakeholders. The evaluation found clear project alignment with, for example, UN-Habitat’s Global Strategy, UN-Habitat’s Country Strategy, donor priorities, country frameworks, the Sustainable Development Goals (particularly SDG 11), the Sendai Framework, the New Urban Agenda, and the United Nations Development Assistance Framework (UNDAF 2017-2021). Details of this alignment are provided in the main report below. Based on the significant and urgent DRR needs in Iran and UN-Habitat’s history and engagement in the country, the project is well placed to remain relevant and useful.

2 EFFECTIVENESS

The project was effective as evidenced in the complete achievement of the objectives. The evaluation found strong achievements across all three project components. In Component 1, there were notable achievements in terms of (1) hospital vulnerability assessments, (2) partner knowledge sharing and capacity development, and (3) institutional and expert capacity development. In Component 2, this evaluation noted the important achievements in (1) resilience improvement through retrofitting, (2) institutional and personnel knowledge sharing and capacity development, and (3) localisation of international techniques and methodologies for improving the resilience of critical urban facilities. In Component 3, this evaluation noted the achievements in the (1) capacity development of various stakeholders in the design, construction, operation, maintenance, and management of health centres, (2) promotion, adaptation, and integration of innovative hospital technologies, (3) implementation of enforcement mechanisms of design guidelines, (4) design and development of the BEHTAB software, and (5) hosting of the 2nd International Conference on Improving the Resilience of Hospitals and Critical Facilities. The main drivers of achievement were (1) strong project design, (2) careful and strategic stakeholder selection and engagement, and (3) notable adaptive management used to address various implementation challenges. The main challenge was the delay in project implementation due to, for example, communication problems between the key stakeholders and partners, COVID-19 restrictions, retrofitting issues, and the gaps in partner technical expertise. Finally, this evaluation found strong alignment and response to UN-Habitat’s cross-cutting issues of climate change, gender equality, human rights, and youth.

3 EFFICIENCY

BEHTAB Phase II was implemented efficiently. The team acquired appropriate resources with due regard for cost, implemented activities as simply as possible, attempted to keep overheads as low as possible, achieved deliverables on time and budget, and addressed duplication and conflicts. The Government of Japan funded this project phase with a total budget of USD 1,851,463.00. The budget shows a burn rate of 94%, and the balance of USD 118,414.86 will be spent against actual costs. This evaluation found that the project reporting went smoothly with no reported challenges. The project scored well for Value for Money (VfM). There is evidence that the project managers were aware of and

responded to VfM in terms of economy, efficiency, and effectiveness. When assessing VfM, it is also important to ensure that there are clear objectives and parameters. BEHTAB Phase II had clear objectives and parameters, including acceptable timeframes and levels of risk. This evaluation found a robust management and implementation team structure. Implementing partners spoke highly of the project team, especially in terms of its technical and communication expertise. Partners appreciated the project team’s participatory approach and open communication. The project team stated that the project team’s capacity met the project goals.

4

IMPACT OUTLOOK

This project achieved notable impacts, especially in the areas of (1) physical upgrading and (2) attitudes, knowledge, and skills. In terms of the physical upgrading, stakeholders underlined the fact that healthcare facilities had been physically transformed from being vulnerable to now being resilient. Linked to this, a particular project strength is its potential impact on a large range of primary beneficiaries who are now using the retrofitted healthcare facilities including women, men, youth, children, and people living with disabilities. Not only are these people using upgraded facilities, but these facilities will better protect them during a natural disaster and should be able to continue operations after the natural disaster. This evaluation found significant changes in stakeholder’s attitudes, knowledge, and skills of various stakeholders including, for example, hospital administrators and staff, contractors, engineers, and government. The project has also resulted in increased trust and confidence in the work of UN-Habitat. In considering the project’s unintended and indirect impacts, stakeholders underscored the studies of the 11 hospitals that can be used for other hospitals in the country. Also, the upskilled government staff and professional contractors can use the lessons learned from the project for upscaling activities in other similar projects.

5

SUSTAINABILITY

The project built institutional and personal DRRM capacity as evidenced by the impacts of both the structural and non-structural activities. Importantly, the project’s sustainability planning and approach were clearly outlined during the concept phase. The project design and implementation were built on the understanding that stakeholder engagement raises awareness, develops understanding, ensures buy-in, and builds local project support. This was particularly relevant in developing non-structural measures for resilient healthcare facilities and related occupational safety for healthcare personnel. This evaluation found noteworthy ownership of the project approach and activities as well as the emerging transfer of project gains and lessons. Respondents spoke strongly about how the project’s three components (studies, retrofitting, and capacity development) have contributed towards sustainability. Government respondents were clear about their strong commitment to and gratitude for the project and showed a keen interest in acquiring the project deliverables and upscaling the outcomes. The BEHTAB Phase II project – by establishing a multi-stakeholder implementation framework that encompasses various management and executive bodies, academic institutions, consultancies, manufacturers, and contractors – has significantly enhanced their collective expertise and proficiency. This collaborative approach has laid a solid foundation for the sustained progression of activities nationally. This evaluation noted that extensive retrofitting of such facilities requires a long-term financial plan, and stakeholders noted that EOGPBI has developed a toolbox for the development of a database of the existing hospitals as well as rapid assessment and screening for risk reduction efforts. The Planning and Management Organization, as a key stakeholder and steering committee member, acknowledges the importance of this issue. Furthermore, the Ministry of Health and Medical Education plays a crucial role here, underpinning the strategic planning required to support these long-term objectives. Stakeholders were unanimous in their view that the project should continue into another phase. Respondents highlighted the project’s relevance and impact in discussing the reasons for the project’s continuation.

RECOMMENDATIONS

The evaluation findings, strengths, challenges and lessons learned form the basis of the Recommendations. These Recommendations reflect the main areas that require attention, and issues that are currently being addressed are not included in this list. They apply across the planning, implementation, monitoring, and evaluation levels.

1 Ensure the project results are widely shared

Despite the notable sharing of project lessons and achievements during the project, there are opportunities to share the project results with, for example, academic, technical, and decision-making stakeholders to ensure the ongoing revision of relevant codes and regulations and contribute to increased retrofitting of healthcare facilities. *(ROAP and the UN-Habitat Iran)*

2 Review stakeholder capacity needs

While this project was successful in building the capacity of various stakeholders, a review of what capacities need strengthening in the different groups of partners could prove useful for the planning and implementation of the next phase. *(UN-Habitat Iran and Partners)*

3 Further develop stakeholder engagement

To improve project effectiveness and efficiency, it is recommended to have further stakeholder engagement during the next steps for the next project development. *(ROAP and UN-Habitat Iran)*

4 Strengthen project communication

The insufficient communication between the key stakeholders and partners in Iran hindered the initiation of the activities and adversely affected the progress of the project particularly in the project initiation stage. Reviewing and responding to these communication challenges is vital to build on the successes of this project. *(ROAP and UN-Habitat Iran)*

5 Improve the resilience of critical urban facilities against climate change impacts

Moving forward, it is important to improve the resilience of the health facilities as well as other critical urban facilities against climate change consequences, This issue can be pursued as one of the main subjects of need in the country. Linked to this is the importance of (1) including aspects of “green hospitals” regarding, for example, water consumption and waste management and (2) considering the inclusion of other buildings for the next phase of the project, for example, a pilot on schools and even homes. *(ROAP and UN-Habitat Iran)*

6 Strengthen the evidence of project impact

This evaluation highlighted the need for more supporting evidence of impact through the use of, for example, before-and-after photographs, case studies, and stories of change. *(UN-Habitat Iran and Partners)*

7 Further identifying Iranian hospitals with high seismic vulnerability

This project and its predecessor (BEHTAB-I) have successfully highlighted the importance of identifying and retrofitting hospitals with high seismic vulnerability. While stakeholders acknowledged these achievements, they argued that much more needs to be done. *(ROAP and UN-Habitat Iran)*

8 Continue strengthening government cooperation

This project showed strong project collaboration with the government and this important collaboration needs to be strengthened especially under current international sanctions against Iran. *(ROAP and UN-Habitat Iran)*

9 Identify and employ the most effective implementation methods that operate with minimal dependence on government entities

Following the above recommendation, this recommendation highlights the fine balance between government support and minimal dependence on the government. To ensure the project's success, it is essential to identify and employ the most effective implementation methods that operate with minimal dependence on government entities. At the same time, these methods must be designed to secure the necessary support and endorsement from governmental authorities. *(ROAP, UN-Habitat Iran, and Partners)*

10 Review and bolster aspects of government cooperation

Given the project delays resulting from certain government requirements, for example, around recruitment, identifying these blockages and beginning to negotiate and refine needs and responses could strengthen future project implementation. *(ROAP and UN-Habitat Iran)*

11 Review project partners

While this project found appropriate and strong partners, a review of the partners might assist in identifying gaps and ensuring that the correct number and mix of partners are available for the next phase of the project. *(UN-Habitat Iran)*

12 Extend and expand the project

Given the noteworthy project achievements, it is recommended to consider both the extension of the structural and non-structural activities into existing project areas and the expansion of the project into other provinces and counties. This project can be replicated and scaled up at the local and national levels. *(ROAP, UN-Habitat, Partners, and Government)*

SUMMARY

This evaluation found a highly relevant, effective, efficient, impactful, and sustainable project. This is an excellent example of a decidedly successful partnership (Governments of Japan and Iran, UN-Habitat, and national partners) that established the foundations for disaster preparedness and enhancement of response capacity, post-crisis recovery, and crisis risk reduction for healthcare facilities. The project's notable achievements were grounded in the practical and effective interacting model of the three components of assessments, retrofitting, and capacity strengthening.

This evaluation found overwhelming support for the continuation of this project. UN-Habitat is well-placed to provide further knowledge and experience in the field of improving the resilience of urban critical facilities as well as focusing on new materials and technologies. There are interesting opportunities moving forward, not only for improving the resilience of the health facilities but also for improving the resilience of other critical urban buildings against climate change consequences.

INTRODUCTION

BACKGROUND AND CONTEXT

Disasters have a significant impact on development work, estimated at US\$314 billion per year in the built environment alone.¹ Between 2005 and 2015, more than 1.5 billion people were affected globally, with women, children, youth and other vulnerable populations disproportionately affected. Notably, these estimates would be higher if climate change related losses were considered. UNISDR stated, “Without a radical change of course to address the economic and human costs of disasters, development gains will be significantly set back in affected countries, hampering the prospect of achieving the Sustainable Development Goals (SDGs).”²

The United Nations Human Settlements Programme (UN-Habitat) is the United Nations agency for human settlements.³ The UN General Assembly mandated the promotion of socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all, based on, *inter alia*, the Vancouver Declaration on Human Settlements, the Habitat Agenda, the Istanbul Declaration on Human Settlements, the Declaration on Cities and Other Human Settlements in the New Millennium, and UN Resolution 56/206.

Leading efforts to advance UN system-wide coherence for sustainable urbanisation, UN-Habitat plays a key role in implementing Goal 11 of the Sustainable Development Goals (SDG) adopted in September 2015 as well as the New Urban Agenda (NUA) adopted in Quito, Ecuador in October 2016. The latter sets out the new global standard for sustainable urban development.⁴ The NUA is a “roadmap for building cities that can serve as engines of prosperity and centres of cultural and social well-being while protecting the environment.”⁵ The NUA addresses how cities are planned, designed, managed, governed and

financed to achieve sustainable development goals; focusing on transformation towards social inclusion and ending poverty, as well as enhancing urban prosperity and opportunities for all and environmentally sustainable and resilient urban development. UN-Habitat has also increased its collaboration with governments and other stakeholders to implement the NUA and sustainable urbanization.

UN-Habitat works with partners to build inclusive, safe, resilient and sustainable cities and communities. UN-Habitat promotes urbanization as a positive transformative force for people and communities, reducing inequality, discrimination and poverty. UN-Habitat’s work, for the project under evaluation, was guided by its strategic plan 2020-2023, which adopted a more strategic and integrated approach to solving the challenges and opportunities of twenty-first century cities and other human settlements.⁶ UN-Habitat’s mission embodies the four main roles of the organization, which can be summarized as: think, do, share, and partner.

As part of its commitment to sustainable development, UN-Habitat provides technical assistance to the Government of the Islamic Republic of Iran (I.R. Iran) towards achieving the Sustainable Development Goals (SDGs), particularly, Goal 11, Sustainable Cities and Communities. The I.R. Iran and UN-Habitat signed an agreement to establish the ‘UN-Habitat Disaster Mitigation Office’ in Tehran on 21 December 2006.⁷ In 2009, the UN-Habitat Tehran Office was officially opened. This agreement was extended in two stages until June 2019. The amended agreement expanded the activities from disaster mitigation to all activities addressing all focus and thematic areas including urban planning and design, social inclusion, risk reduction and rehabilitation, urban infrastructure,

¹ UNISDR, Sustainable Development and DRR, <https://www.preventionweb.net/sendai-framework/sdg>

² Ibid.

³ UN-Habitat, About Us, <http://unhabitat.org/about-us/goals-and-strategies-of-un-habitat/>

⁴ UN, The New Urban Agenda: Key Commitments, 20 October 2016, <https://www.un.org/sustainabledevelopment/blog/2016/10/newurbanagenda/>

⁵ Ibid.

⁶ UN-Habitat, Strategic Plan 2020-2023, https://unhabitat.org/sites/default/files/documents/2019-09/strategic_plan_2020-2023.pdf

⁷ UN-Habitat, (April 2024), Terms of Reference, Evaluation of the project “Emergency Support for Safer Hospitals and Settlements (BEHTAB Phase II Project).

legislation and governance, urban research, urban economy, housing, and slum upgrading.

In 2019, at the Secretariat of the National Habitat Committee, an interim period of a maximum of two years (31 July 2019 to 31 July 2021) was considered as the transition period for a new agreement. In June 2022, the Memorandum of Understanding (MoU) between the I.R. Iran and UN-Habitat was signed during the 11th session of the World Urban Forum (WUF11) in Katowice, Poland (26-30 June 2022). The Ministry of Roads and Urban Development (MoRUD) is UN-Habitat's national counterpart. UN-Habitat works closely with the National Habitat Committee (NHC), established under MoRUD. The UN-Habitat office in I.R. Iran is located within the Road, Housing and Urban Development Research Center (BHRC). National partners include the MoRUD, the National Habitat Committee, ministries, municipalities, local organizations, academia, universities, and ECO Secretariat, International partners include UNFPA, UNESCO, WHO, UNICEF, UNIDO, UNEP, IOM, and UNHCR.

Since the M7.2 earthquake in Kermanshah province, west of Iran, in 2017, several hospitals and healthcare centres suffered severe damage, and, in response, UN-Habitat submitted a proposal for the assessment and retrofitting of existing health facilities to the Ministry of Health and Medical Education.⁸ This resulted in the "Inventory, Earthquake and Multi-Hazard Performance Evaluation of existing Health Facilities in the Islamic Republic of Iran" (BEHTAB). UN-Habitat implemented this project from 2018 to 2020, in cooperation with the Ministry of Health and Medical Education (MOHME) and the financial support from the Government of Japan.

PROJECT DESCRIPTION

Upon satisfactory completion of BEHTAB-I, the Government of Iran requested the continuation of the project. Thus, the second phase of the project (BEHTAB Phase II) was agreed upon. The Government of Japan funded this second project phase with a total budget of USD 1,851,463.00. The original project length was January 2021 to December 2021 but due to COVID-19 related delays, the project was extended to 31 March 2024.

Project Objective. To establish the foundations toward disaster preparedness and enhancement of response capacity, post-crisis recovery, and crisis risk reduction (including health) associated with natural hazards and pandemics in healthcare facilities, communities and vulnerable people depending on the usage.

Main Intended Outcome. To improve structural and non-structural resilience of Hospitals in the Islamic Republic of Iran by following the:

- a. Implementation of the project outcomes
- b. Implementation of Enforcement mechanisms for developed guidelines in collaboration with BHRC
- c. Integration of training courses on Design, Construction and Supervision of the hospitals within the Professional compulsory training of engineers in collaboration with BHRC
- d. Promotion and adaptation and integration of Innovative technologies in Hospital Construction and Retrofitting in particular using Base Isolators, BRBFs and Energy Dissipation Devices
- e. Lessons learnt for COVID-19 response and training needs assessments for increasing the Capacity Development and Delivering in-house and on-site training courses as part of the regular compulsory on-job training of healthcare workers, communities, architects and engineers and issuance of official certificates in occupational safety and health awareness and risk informed design, and Construction and Supervision of the hospitals in collaboration with respective Government authorities.

Disaster Risk Reduction Management. The project focused on improving capacity in the country for Disaster Risk Reduction Management (DRRM) of health facilities through the development of a pilot project on risk management of hospitals against natural disasters, focusing on earthquakes.⁹ Considering the performance of the non-structural components as a critical problem interrupting facility functioning during earthquakes, the project utilised an integrated earthquake DRRM approach in hospitals. The project was composed of three main components as below:

⁸ UN-Habitat, Emergency support to Safer Hospitals and Settlements (BEHTAB phase-II), <https://iran.unhabitat.org/behtab-phase-ii-completion/>

⁹ Ibid.

- **Component 1:** Multi-hazard Assessment, Vulnerability Analysis, and preparing the retrofit design for existing healthcare facilities¹⁰
- **Component 2:** Demonstrating non-structural retrofitting construction for selected vulnerable hospitals and healthcare centers as role models¹¹
- **Component 3:** Capacity development of the Government of I.R. Iran and related stakeholders through training courses, holding conferences, and development of guidelines and software.¹²

Figure 3: Target hospitals

Hospital name/ city	province	area (square meter)	No. of beds
Rasht	Gilan	37,039	400
Iranshahr	Sistan & Bloocheestan	60,220	530
Tehran, Baharloo	Tehran	30,000	330
Shooshtar	Khoozestan	14,009	197
Ardabil	Ardabil	52,850	524
Tehran, Razi	Tehran	40,066	439
Karaj	Alborz	23,906	260
Zabol	Sistan & Bloocheestan	19,201	204
Kermanshah	Kermanshah	57,033	549
Boushehr	Boushehr	17,250	192
Sari	Mazandaran	28,000	369
TOTAL		379,574	3,994

EVALUATION MANDATE

This final evaluation was mandated by UN-Habitat and in line with UN-Habitat Evaluation Policy (2013) and the Revised UN-Habitat Evaluation Framework (2016).¹³ This evaluation is part of UN-Habitat’s effort to perform systematic and timely evaluations of its projects and to ensure that UN-Habitat evaluations provide a full representation of its mandate and activities. It is in line with the UN-Habitat Evaluation Policy and the Revised UN-

¹⁰ UN-Habitat, Component 1. <https://iran.unhabitat.org/projects/active-projects/behtab-ii/component-1/>

¹¹ UN-Habitat. Component 2. <https://iran.unhabitat.org/projects/active-projects/behtab-ii/component-2/>

¹² UN-Habitat, Component 3. <https://iran.unhabitat.org/projects/active-projects/behtab-ii/component-3/>

Habitat Evaluation Framework which require that a project of US\$1 million and above should have an end of project evaluation. Evaluation is central to UN-Habitat’s mandate and activities, including programme planning, budgeting and the implementation cycle.

EVALUATION PURPOSE AND OBJECTIVES

As stated in the ToR, the purpose of this evaluation was to assess the project’s performance, the extent to which the project’s objectives and the expected accomplishments were achieved, and overall impact of UN-Habitat in I. R. of Iran for the duration of the collaboration with Government of Islamic Republic of Iran (Phase 2 of the MoU).¹⁴

The evaluation aimed to serve dual purposes of accountability and learning. It is intended to enhance accountability by providing UN-Habitat management and its governing bodies, the project team, project donor, target cities and other key stakeholders with an independent appraisal of whether the project has achieved the planned results. Moreover, the evaluation serves the purpose of contributing to enhanced learning to understand what worked well and what did not, operational experience, opportunities and challenges. Evaluation findings, lessons learned, and recommendations are expected to be used and feed into decision-making processes.

SCOPE AND FOCUS

This evaluation covered the project implementation period of the second Phase of the MoU of the Tehran Office and the start of the Project in January 2021 up to 31 March 2024. The evaluation was evidenced-based, covering the project relevance, effectiveness, efficiency, impact outlook, and sustainability in the eight targeted cities.

¹³ UN-Habitat, (April 2024), Terms of Reference, Evaluation of the project “Emergency Support for Safer Hospitals and Settlements (BEHTAB Phase II Project).

¹⁴ UN-Habitat, (April 2024), Terms of Reference, Evaluation of the project “Emergency Support for Safer Hospitals and Settlements (BEHTAB Phase II Project).

EVALUATION APPROACH AND METHODOLOGY

APPROACH

Dr Stephen Van Houten, an external and independent consultant, conducted the evaluation in close consultation with the UN-Habitat Evaluation Unit, the Regional Office for Asia and Pacific (ROAP), and the UN-Habitat

Country Office Iran. The evaluation was carried out in May 2024. Following the ToR, this evaluation used the following five evaluation criteria:

Table 1: Evaluation Criteria

1	RELEVANCE	The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies.
2	EFFECTIVENESS	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, considering their relative importance.
3	EFFICIENCY	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.
4	IMPACT OUTLOOK	The positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.
5	SUSTAINABILITY	The continuation of benefits from a development intervention after major development assistance has been completed. The probability of long-term benefits. The resilience to the risk of the net benefit flows over time.

METHODS

The evaluation used multi-faceted and mixed design methods to collect information during the evaluation, all of which are participatory,

inclusive, target group sensitive, and gender responsive. Ethical standards were considered throughout the evaluation to ensure stakeholder groups were treated with integrity and confidentiality was respected. These methods include the following

Table 2: Methods

DESK REVIEW	Various project documents were reviewed including the proposal, annual reports, and other relevant project documentation.
RESULTS FRAMEWORK ANALYSIS	The results framework analysis assessed the development of the objectives; formulation of the baseline data; development of the core indicators (especially in terms of impact and performance measurement); data monitoring; reporting; and available results to date in the project. Data from the results framework analysis were used to inform consultations with staff and other stakeholders.
KEY INFORMANT INTERVIEWS & CONSULTATIONS	These will be conducted with key project stakeholders. Details of these stakeholders are outlined below.
VALUE FOR MONEY QUESTIONNAIRE	These questionnaires will be emailed to key project staff and relevant stakeholders.
VALIDATION WORKSHOP	At the end of the data collection, a remote Validation Meeting was held with key staff and key stakeholders to present and validate the findings.

Evaluation Questions. Following the ToR, evaluation questions informed the key informant

interviews (KIIs) and the focus group discussions (FGDs). These questions can be found in Annex 4.

Value for Money Questionnaires. The Value for Money (VfM) questionnaire provided specific efficiency data and was given to the Project Manager for completion.

Sampling and Stakeholders. This evaluation used purposive sampling to best answer the evaluation questions by focusing on the relevant population involved in the project. More specifically, the type of purposive sampling used was maximum variation sampling, which allowed the evaluators to gain greater insights into a project by looking at it from all angles. The evaluator was thus able to identify common themes that were evident across the sample. In qualitative designs, the focus generally is not on sample size but rather on sample adequacy. The adequacy of sampling was used as an indication of quality which is justified by reaching saturation. This evaluation used thematic data saturation, that is, stopping when no new patterns or themes emerged from the data.

The stakeholder list was drawn up with the assistance of the core project staff. The evaluator reviewed this list and selected the stakeholders. This list was used for planning and adjusted, as required, after discussions with key project staff. The stakeholders included representatives from ROAP, project staff, project engineers, academics, and donors.

Data Quality Control and Analysis Plan. Various tools were utilised to collect, triangulate and validate the data, including Collaborative Advantage; Program Logic; Maximising Accountability and Learning Opportunities; and Quality of Evidence. This evaluation ensured the data quality through the application of the BOND Principles (Voice and Inclusion, Appropriate, Triangulation, Contribution, and Transparency)¹⁵ and the ALNAP criteria (Accuracy, Representativeness, Relevance, Generalisability, Attribution, and Clarity around contexts and methods).¹⁶ In the interviews, descriptive, normative, and impact questions were used to ensure that past, present and future conditions

were described and cause-and-effect relationships were explored.

Ethical Considerations. This independent evaluation was conducted in accordance with the norms and standards for evaluation in the UN system.¹⁷ All interviews, FGDs and other discussions were conducted in accordance with best ethical practices and safeguarding in research and evaluations, particularly with respect to ensuring participants' safety, anonymity, the protection of data, and risk mitigation. A Do No Harm approach was strictly followed, with relevant considerations for the safety of all staff, beneficiaries, stakeholders and evaluation team members. Data security and protection, the use of safe and private digital communication channels for sensitive exchange), and data management were carefully considered and managed. This evaluation was informed by General Data Protection Regulations (GDPR) Key Principles.¹⁸

Informed verbal consent was obtained ahead of all key informant interviews and FGDs. The evaluator explained that participation is voluntary and that participants can withdraw at any time from the discussion. The purpose of the evaluation and any potential risks of participating were explained ahead of stakeholder interviews.

Management Arrangements. The consultant communicated throughout the evaluation with the country team and reference persons.

LIMITATIONS

The tight deadlines for the evaluation resulted in a smaller sample size as well as the inability to get a visa to travel to Iran for in-person consultations. These limitations were mitigated through the careful selection of stakeholders in close consultation with UN-Habitat to ensure adequate representation and coverage.

Language posed a limitation to this evaluation. This was dealt with by working with the national staff who assisted with translation. All

¹⁵ BOND, Evidence Principles, <https://www.bond.org.uk/resources/evidence-principles>

¹⁶ ALNAP, Strengthening the quality of evidence in humanitarian evaluations, May 2017, www.alnap.org/system/files/content/resource/files/main/alnap-eha-method-note-5-2017.pdf

¹⁷ United Nations Evaluation Group (UNEG), Norms and Standards for Evaluation, 2005 (updated 2016), <http://www.unevaluation.org/document/detail/1914>

¹⁸ <https://gdpr-info.eu/>

questionnaires were sent to staff who are fluent in English.

Regarding the limitations of purposive sampling, these are usually cited as: errors in evaluator judgment; low level of reliability; and inability to generalize findings. The evaluation quality criteria listed in the previous section were used to minimize these limitations. While the evaluated sample was not representative of all the

stakeholders, this is not considered to be a weakness in evaluations where qualitative or mixed methods research designs are used.¹⁹ Given that there are only a limited number of primary data sources in this evaluation, purposive sampling was the most appropriate sampling method available.²⁰ This method choice was also strengthened by its high rating on cost- and time-effectiveness.



Shooshtar hospital, Khoozestan province

FINDINGS

The section begins with the main findings followed by five evaluation criteria of relevance, effectiveness, efficiency, impact and sustainability. The findings are fact-based.

¹⁹ <http://researchbasics.education.uconn.edu/>

²⁰ <http://research-methodology.net/sampling-in-primary-data-collection/purposive-sampling/>

MAIN FINDINGS

This evaluation showed strong overall and project-specific results for the project. As of 31 March 2024, there was fully achieved delivery against outcomes with the following levels of achievement for each outcome (component) and some examples of specific project achievements.

Figure 4: Achievement of the three outcomes (components)

	Multi-hazard Assessment, Vulnerability Analysis and Retrofitting Design of Constructed Healthcare Facilities (11 hospitals)	Fully Achieved
	Demonstrating Non-structural Retrofitting Construction of Selected Vulnerable Hospitals and Healthcare Facilities as Role Models	Fully Achieved
	Institutional and Personnel Capacity Development	Fully Achieved

Figure 5: Examples of specific project achievements

Component/ Activity	Target/ Achievement	Beneficiaries
Component 1: Multi-hazard Assessment, Vulnerability Analysis and Retrofitting Design of Constructed Healthcare Facilities	11 large hospitals 379,574 square meters 3994 hospital beds	2,496,250
Component 2: Demonstrating Non-structural Retrofitting Construction of Selected Vulnerable Hospitals and Healthcare Facilities as Role Models	2 large hospitals 45,250 square meters 561 hospital beds	350,625
Component 3: institutional and personnel capacity development Training courses	10 training courses	639
Component 3: institutional and personnel capacity development 2 nd international conference	2 days/16 sessions/60 lectures	478
Component 3: institutional and personnel capacity development Enforcement of the guidelines for safe hospital planning and design	A guideline published by Planning and Budget Organization of I.R.Iran (publication No.880)	Nationwide
Component 3: institutional and personnel capacity development Handbook and guidelines	- Seismic assessment of Non-structural components in hospitals - Lesson learned of the project	Nationwide
Component 3: institutional and personnel capacity development Promotion/adaptation and integration of Innovative technologies in Hospital	- Design examples of hospitals equipped with innovative technologies. - Instruction for design, construction, and maintenance of innovative technologies in hospitals - A study tour to Japan	Nationwide
Component 3: institutional and personnel capacity development Design and development of an advanced version of the BEHTAB software	Hospital Risk Management Platform (HRMAP)	Nationwide

RELEVANCE

Relevance is a measure of the extent to which interventions meet recipient needs and country priorities and are consistent with organisational and donor policies. This evaluation showed that the project objectives were consistent with beneficiary needs, country priorities, UN-Habitat’s global and country strategies, donor priorities, international development and DRR strategies.

These findings are discussed under the headings of (1) beneficiary needs and country priorities, (2) UN-Habitat’s Global Strategy, (2) UN-Habitat’s Country Strategy, (3) Donor Priorities, (4) Country Frameworks, (5) Sustainable Development Goals, (6) Sendai Framework, and (7) New Urban Agenda.

Beneficiary Needs and Country Priorities. This project shows a strong response to beneficiary and country needs. The majority of health facilities in the Islamic Republic of Iran – particularly those buildings that were constructed before the release of Versions 3 and 4 of the Iranian seismic design building code (standard 2800) – do not comply with the proper seismic codes.²¹ As a result, these buildings are vulnerable to disasters, as evidenced in the earthquakes at Manjil (1990), Bam (2003), and Kermanshah (2017) and the recent floods which affected 21 provinces in Iran. Various Preliminary Engineering Assessments (PEAs) conducted under the BEHTAB-I project showed the significant structural vulnerabilities of both old and recently built health facilities, which, if damaged as a result of a disaster, would not be able to provide uninterrupted health services to the people who live in those areas.

Stakeholders spoke strongly about the project’s relevance. One respondent noted, *“It is a very clear and obvious fact that Iran is in a high seismic area and buildings are of quality is poor and vulnerable to natural hazards.”* Another respondent stated, *“This project highlighted the weaknesses and vulnerabilities in the event of an earthquake. The retrofit designs will help to improve the hospital’s resilience and provide*

healthcare to the people.” Another stakeholder highlighted the benefits to the Iranian people, *“Iran is a country prone to many natural hazards like earthquakes and floods. Therefore, the people who live in Iran are the main beneficiaries to a high extent and they will benefit from the project’s outputs.”* A specific example of the project’s relevance in the Sari province is provided below:

“The province of Sari needed a new, modern hospital with a large number of beds. Tabarsi Sari Hospital was designed to partially meet this demand and is now nearly complete. This new hospital will improve the quality of healthcare in the province. The hospital had a relatively old design. It was important to conduct a seismic performance assessment of this important hospital to ensure that the building would continue to function safely in the event of an earthquake.” **Engineering Respondent.**

UN-Habitat’s Global Strategy. The project was covered by UN-Habitat’s Strategic Plan 2020-2023. This assessment found close project alignment with the plan’s focus on “the commitment and contribution of UN-Habitat to the implementation of those global development agendas, in particular the pledge in the 2030 Agenda for Sustainable Development to leave no one behind.”²² The basis of the new vision is “a better quality of life for all in an urbanizing world.”²³ This vision is articulated through the Plan’s four domains of change, namely:

- Reduced spatial inequality and poverty in communities across the urban-rural continuum
- Enhanced shared prosperity of cities and regions
- Strengthened climate action and improved urban environment
- Effective urban crisis prevention and response.

The Strategic Plan’s organizational priorities are supported by the two tracks (1) the social inclusion dimension (human rights; gender; children, youth and older persons; and persons

²¹ UN-Habitat (16 March 2021), BEHTAB Phase 2, ProDoc.

²² UN-Habitat, Strategic Plan 2020-2023, https://unhabitat.org/sites/default/files/documents/2019-09/strategic_plan_2020-2023.pdf

²³ Ibid.

with disability), and (2) two cross-cutting thematic areas (resilience and safety). These tracks connect the domains of change and their respective outcomes, as well as the drivers of change. It is also aligned with the Strategic Plan’s cross-cutting thematic area, resilience and safety, with its focus on the resilience of cities and other human settlements and their people, communities, institutions, environments and infrastructure systems is one of the key goals of the strategic plan, as informed by the 2030 Agenda for Sustainable Development and the Sustainable Development Goals. This Strategic Plan recognises the importance of key partnerships working on resilience, for example, the local and national government, UN partners, private sector, research institutions, and civil society. BEHTAB Phase II also supported UN-Habitat’s position that women and grassroots groups play a vital role in ensuring resilient communities. Finally, this project was aligned with UN-Habitat’s normative and operational activities in a consultative and inclusive process involving all stakeholders and counterparts.

UN-Habitat’s Country Strategy. This project was also aligned with UN-Habitat Iran’s three-year Habitat Country Programme Document (HCPD) for 2021-2024, which aims to respond to identified national and local challenges from an urban lens, fully aligned to nationally identified priorities, and ongoing UN and internationally mandated frameworks.

Donor Priorities. This project is closely aligned with the Government of Japan’s engagement and priorities in Iran. The Government of Japan has outlined its Key Areas for Priority Policy for Development Cooperation.²⁴ The three Key Areas

are (1) developing an environment for international peace, stability and prosperity, and sharing universal values, (2) addressing global issues toward achieving SDGs and promoting human security, and (3) economic diplomacy that aims at "quality growth" together with developing countries and contributes to regional revitalization. This project is particularly aligned with the second aligned Key Area under which it is highlighted: (1) Assistance for the implementation of SDGs (a. Assistance for formulating national strategies and plans, and b. Assistance for nurturing human resources for drafting development policies and their implementation) and (2) Disaster prevention, tsunami countermeasures, climate change and global environment issues. The project is also aligned with the Humanitarian-Development-Peace Nexus promulgated by the Government of Japan.

Country Frameworks. The project is aligned with the Sixth National Development Plan of the Islamic Republic of Iran as well as the National Disaster Management Law (2019).

“EOGPBI has in its program to improve the design and implementation procedure with the aim of improving the performance of government and public buildings and facilities against natural disasters. This issue has been considered in the organization's statutes and executive policies. This project is in line with these needs and plans.”
Government Respondent.

Sustainable Development Goals. This project is clearly aligned with the Sustainable Development Goals (SDGs).

Figure 6: Sustainable Development Goals



²⁴ Government of Japan, MOFA, International Cooperation Bureau, Priority Policy for Development Cooperation, April 2017, <https://www.mofa.go.jp/files/000259285.pdf>

While 10 of the 17 SDGs have targets related to disaster risk (thereby emphasizing the important role of DRR in the realisation of the 2030 Agenda for Sustainable Development), UN-Habitat and this project focus on SGD 11. Out of the six specific targets under Goal 11, the project contributed to:

- 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to the global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations
- 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.

Moreover, BEHATB-II had an impact on:

- 11.1: By 2030, ensure access for all to adequate, safe, affordable, and basic services and upgrade slums.
- 11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
- 11.c: Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

Sendai Framework. This project is strongly aligned with the Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework).²⁵ The Sendai Framework builds on the achievements and elements established under its predecessor, the Hyogo Framework for Action: Building the

Resilience of Nations and Communities 2005-2015.²⁶ The Sendai Framework introduced several important innovations, including a stronger emphasis on disaster risk management, as opposed to disaster management. The Sendai Framework highlights that disaster risk reduction is essential to the achievement of sustainable development.

The project is aligned with the following Sendai Framework outcome: The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.²⁷ Of particular applicability is the Sendai Framework’s target to, "substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including, through developing their resilience by 2030."²⁸ This evaluation highlighted UN-Habitat’s detailed alignment to the Sendai Framework in the planning phase, especially in the areas of the transformative commitments (Sustainable Urban Development for Social Inclusion and Ending Poverty as well as Sustainable and Inclusive Urban Prosperity and Opportunities for All), effective implementation (Building the Urban Governance Structure: Establishing a supportive Framework as well as Planning and Managing Urban Spatial Development), and means of implementation, where the relevant paragraphs are outlined.

New Urban Agenda. The project is closely aligned with the New Urban Agenda (NUA). In 2016, world leaders adopted the NUA, which sets a new global standard for sustainable urban development.²⁹ The project is aligned with the NUA, which is a “roadmap for building cities that can serve as engines of prosperity and centres of cultural and social well-being while protecting the

²⁵ UNISDR, Sendai Framework for Disaster Risk Reduction 2015-2030, 2015, <https://www.unisdr.org/we/coordinate/sendai-framework>

²⁶ UNISDR, Sustainable Development and DRR, <https://www.preventionweb.net/sendai-framework/sdg>

²⁷ United Nations, Sendai Framework for Disaster Risk Reduction 2015-2030, 2015, <https://www.unisdr.org/we/coordinate/sendai-framework>

²⁸ United Nations, Sendai Framework for Disaster Risk Reduction 2015-2030, 2015, <https://www.unisdr.org/we/coordinate/sendai-framework>

²⁹ UN, The New Urban Agenda: Key Commitments, 20 October 2016, <https://www.un.org/sustainabledevelopment/blog/2016/10/newurbanagenda/>

environment.”³⁰ In particular, the project is aligned with the focus on the achievement of sustainable development goals and environmentally sustainable and resilient urban development. The NUA addresses the ways in which cities are planned, designed, managed, governed and financed to achieve sustainable development goals; focusing on transformation towards social inclusion and ending poverty, as

well as enhancing urban prosperity and opportunities for all and environmentally sustainable and resilient urban development. This evaluation noted UN-Habitat’s acknowledgement that the NUA is explicit on the critical role of prevention and reduction of risk in the realisation.³¹ Finally, the project is also aligned with the United Nations Development Assistance Framework (UNDAF 2017-2021).



Retrofitting of Piping System, A. Tabarsi Hospital, Sari

³⁰ UN, The New Urban Agenda: Key Commitments, 20 October 2016,

<https://www.un.org/sustainabledevelopment/blog/2016/10/newurbanagenda/>

³¹ UN-Habitat (16 March 2021), BEHTAB Phase 2, ProDoc.

EFFECTIVENESS

Effectiveness is a measure of the extent to which an intervention meets its objectives. Objectives are defined quantitatively as expected outputs or results.³² Effectiveness is evaluated by comparing what has been obtained with what was planned, and thus outputs and results indicators are all that is required. A project's effectiveness is assessed by asking: To what extent were the objectives achieved or are likely to be achieved? What were

the major factors influencing the achievement or non-achievement of the objectives?

These effectiveness findings are discussed under the headings of (1) progress, (2) achievements, (3) drivers, (4) challenges, & (5) cross-cutting issues

Progress. All project activities have been satisfactorily completed. The Activity progress is outlined below.

Figure 7: Project progress

PLANNING	Preparation, and final modification of the project documents, AoCs, and MoU	100%
	Budget revision	100%
	COMPONENT 1	
	Bidding and selection process of consultants	100%
	Studies of group I	100%
	Studies of group II	100%
	Studies of group III	100%
	Consultant selection for studies of selected hospitals	100%
	Studies of selected hospitals	100%
	COMPONENT 2	
	Implementing partner selection process (AoC) 2	100%
	Finalizing implementing drawings and tender documents	111%
	contractor selection process	100%
	Implementing non-structural retrofitting	111%
	COMPONENT 3	
	Finalizing the national standard code	100%
	Training courses, workshops, 2 nd conference	111%
	Promotion/adaptation and integration of Innovation Technology	100%
	Design and development of an advanced version of the BEHTAB software	100%
	Wrap-up and final reports	100%

In assessing the extent to which the results that were reported are a fair and accurate record of achievement, all project monitoring reports were reviewed. This information was triangulated with input from various stakeholders, where

applicable. This evaluation found that the reported results are a fair and accurate record of the project's achievements. The M&E system was robust and well-managed, which made it easy to track and measure outcomes and the results

³² European Commission, EVALSED: The resource for the evaluation of Socio-Economic Development, September 2013,

http://ec.europa.eu/regional_policy/sources/docgener/evaluation/guide/guide_evalsed.pdf

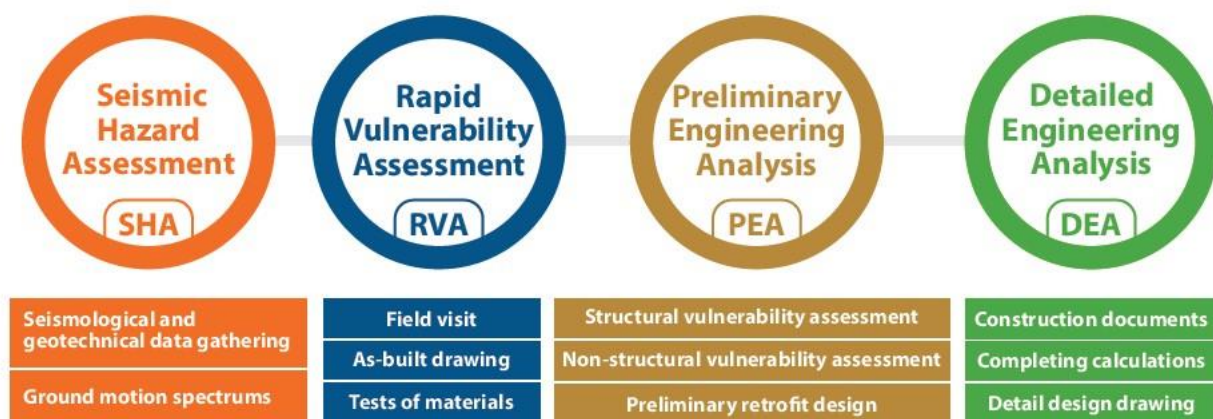
against planning. This M&E process also showed the project team’s ability to learn and adapt during the project. For example, there are clear examples of COVID-19 adaptations (discussed further below).

This evaluation highlighted the need for more supporting evidence of impact through the use of, for example, before-and-after photographs, case studies, and stories of change.

Achievements. This evaluation found strong achievements across all three project

components. In **Component 1**, there were notable achievements in terms of (1) hospital vulnerability assessments, (2) partner knowledge sharing and capacity development, and (3) institutional and expert capacity development. The evaluation respondents spoke highly of all three of these outputs, with many, for example, highlighting the usefulness and thoroughness of the assessments (Seismic Hazard and Rapid Vulnerability) and analyses (Preliminary Engineering and Detailed Engineering).

Figure 8: The main stages of the studies under Component 1



For example, a stakeholder noted, *“What I love most is the assessments, for example, the seismic assessment for critical facilities under the supervision of experts.”* Another respondent stated, *“A major achievement was the use of the latest international relevant standards for the seismic assessment of hospitals.”* Finally, another stakeholder argued, *“These assessments were very important as they improved the perception, knowledge, and response of the engineering society regarding safety elements in the hospitals.”* These responses highlight the importance of the project’s systematic approach to the evaluation and enhancement of critical design and construction procedures as

implemented in the institutional and expert capacity development for stakeholders, implementing partners, and private sector actors.

Respondents also underlined the importance of the various technical working groups (TWG) and technical meetings that were held during this first component. Stakeholders highlighted the usefulness of the consultant presentations of their methods and results, For example, a stakeholder said, *“These meetings were very important because they gave us the opportunity to ask questions and learn more.”*



Technical Working Group Meeting



Seismic Assessment Technical Meeting

Figure 9: Component 1 results

Results:

Reports on vulnerability assessment and retrofit design for 11 large hospitals in the country with overall capacity of near 4000 beds. The Component provides Results including:

- **Reports on Probabilistic Seismic Hazard Assessment:** Sesimological and geotechnical data gathering, Ground motion spectrums
- **Reports on Rapid Vulnerability Assessment:** Field visits and survey, Data collection, Reviewing as-built drawings and tests of materials
- **Reports on Preliminary Engineering Analysis:** Structural vulnerability assessment, Non-structural vulnerability assessment, Preliminary retrofit design
- **Reports on Detailed Engineering Analysis:** Complete analysis and calculations, detailed design drawings, Bill of quantity, Construction documents
- **Institutional capacity development** in private sector, Implementing partners and stakeholders

In **Component 2**, this evaluation noted the important achievements in (1) resilience improvement through retrofitting, (2) institutional and personnel knowledge sharing and capacity development, and (3) localisation of international techniques and methodologies for improving the resilience of critical urban facilities.

Respondents spoke strongly about the value of retrofitting, for example, *“We have gained a lot of knowledge and experience regarding the*

construction of hospital retrofitting.” Another stakeholder stated, *“A major achievement of this project was the innovative solutions for seismic retrofitting and the strengthening of non-structural elements of hospitals.”* Another stakeholder said, *“Retrofitting and the knowledge we gained from this was very important.”* This component’s achievements are typified by the actual hospital retrofitting as well as the knowledge gained from doing this work.

Figure 10: Component 2 results

Results:

- Detailed Retrofitting design drawings of NSCs along with bill of quantities and construction documents
- Retrofitted vulnerable NSCs of hospitals in Iran including masonry wall systems, support of mechanical piping systems, and piping connections (2 Large hospitals | 45,250 Square meters | 561 Hospital beds, 350,625 beneficiaries)



Boushehr hospital- retrofitting implementation



Sari hospital- retrofitting implementation

In **Component 3**, this evaluation noted the achievements in the (1) capacity development of various stakeholders in the design, construction, operation, maintenance, and management of health centres, (2) promotion, adaptation, and integration of innovative hospital technologies, (3) implementation of enforcement mechanisms of design guidelines, (4) design and development of the BEHTAB software, and (5) hosting of the 2nd International Conference on Improving the Resilience of Hospitals and Critical Facilities.

While all of these are important achievements, evaluation respondents highlighted design guidelines and BEHTAB software. For example, *“These guidelines are important because we now have guidelines to inform future work.”* Another stakeholder noted, *“Publishing multiple guidelines and reports was one of the most important achievements of the project.”* The achievements under this component are

summarised by the important production and sharing of associated knowledge and learning, which are important contributors to both Impact and Sustainability (discussed further below).



2nd International Conference on Improving the Resilience of Hospitals and Critical Facilities

Figure 11: Component 3 results

Results:

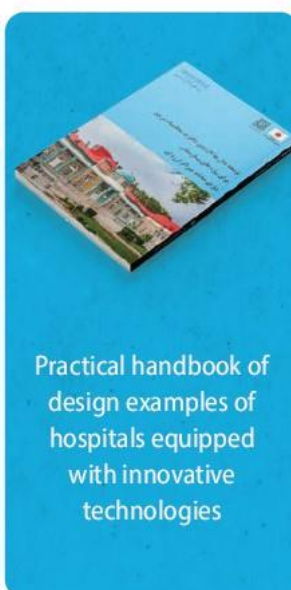
- Training courses for expert community within stakeholders in government and private sector
- Second conference on Improving Resilience of Hospitals and Critical Facilities
- Development and enforcement of design guidelines for safer hospitals against natural disasters
- Development of guidelines for promotion/adaptation and integration of innovative technologies in hospital
- BEHTAB software system for disaster risk management of hospital inventory



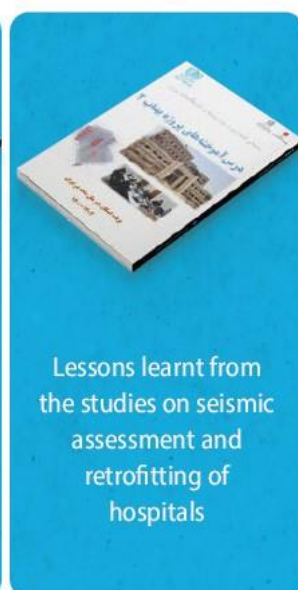
Development of the BEHTAB guideline: Instructions for Design of Safe and Resilient Hospitals against Multi-Hazards
Publication Number 880, Planning and Budgetting Organization (PBO-880)



Seismic assessment of Non-structural components (NSCs) in Hospitals



Practical handbook of design examples of hospitals equipped with innovative technologies



Lessons learnt from the studies on seismic assessment and retrofitting of hospitals

Example of project guidelines

Drivers. In assessing the drivers of these achievements, this evaluation underscored the importance of (1) project design, (2) stakeholder selection and engagement, and (3) adaptive management.

Project design. The project was carefully designed, having taken into account the specific country and stakeholder needs as well as UN-Habitat's experience. The initial conceptual recognition that this was an emergency support project, as defined from a DRRM perspective, was important to the project's noteworthy achievements. This project was closely aligned with the two essential parts of the DRRM approach, that is, (1) risk analysis and identification and (2) risk treatment. By conducting decision making and inventory establishment (risk analysis) and performing DRR activities and monitoring and follow up (risk treatment), the project was successful in providing a "practical toolbox along with the experience of the pilot project in hospital risk management to the beneficiaries/stakeholders of this project."³³ A respondent stated, *"We enjoyed being part of this project. Its design was very good. It was different from other projects because its foundation was much stronger."* Overall, this evaluation found a relevant and well-designed project.

Stakeholder selection and engagement. Following from the above point, this project's achievements were also driven by the careful selection and engagement of key stakeholders across the three pillars (1) stakeholders (MFA, NHC, TDMMO, and PBO), (2) implementing partners (EDGPI and BHRC), and Un-Habitat (ROAP) and UN-Habitat

Iran Office (Figure 11). This approach proved very successful in engaging key stakeholders across the whole project cycle. Respondents noted, "The project was designed in collaboration with different stakeholders, for example, government, engineers, consultants, and researchers." Another stakeholder stated, *"The partners are satisfied because we were all involved in the project. That made for a good project and will contribute to future work."*

This project followed UN-Habitat's adoption of the "People's Process," where the "underlining principle has been to place the affected people at the centre of the process. This means mobilizing the affected communities to take decisions on their recovery and supporting them."³⁴

"Several partners were invited to contribute to the project and their points of view were considered in the procedures. In addition, the academic and engineering experts were invited as TWG members, and they could provide reliable methodologies for the cases including the design, construction and evaluation of hospital buildings." **Partner Respondent.**

UN-Habitat thus aims to develop effective partnerships for planning, implementation, decision making, problem-solving, and resource sharing. The above quotations highlight respondents' recognition of the project's participatory process. This evaluation showed that the design, implementation, and monitoring processes appropriately involved relevant national stakeholders. Overall, this evaluation found a robust stakeholder approach with notable aspects of collaboration and engagement.



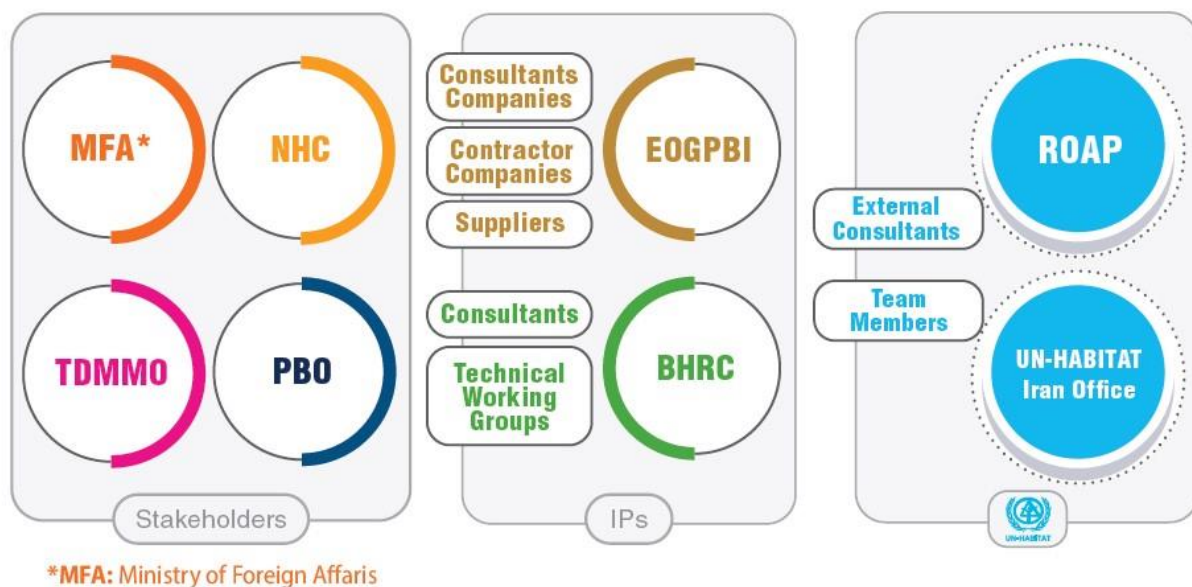
Tehran Disaster Mitigation and Management Organization

³³ UN-Habitat (16 March 2021), BEHTAB Phase 2, ProDoc.

³⁴ UN-Habitat, People's Process in Post-disaster and Post-conflict Recovery and Reconstruction, 2007,

<http://unhabitat.lk/wp-content/uploads/2015/01/PeoplesProcess.pdf>

Figure 12: Stakeholder approach



Adaptive management. Finally, this evaluation highlighted the effective adaptive management to the various project challenges. While these challenges are further discussed in the next section, it is important to note ROAP and UN-Habitat Iran’s ability to successfully identify and adapt to these various challenges, most notably the delays as a result of the COVID-19 restrictions. Adaptive management is increasingly being recognised as vital to project success, especially emergency support projects.

Challenges. The challenges were outlined under the headings of (1) communication issues, COVID-19, (2) retrofitting issues, (3) technical expertise, and (4) delays.

Communication. The main challenge in the project was the insufficient communication between the key stakeholders and partners in Iran which hindered the initiation of the activities and adversely affected the progress of the project particularly in the project initiation stage.

COVID-19. Project staff and respondents noted how busy MoH was during the COVID-19 pandemic, which made it difficult for them to engage with the project, especially in its initial phase. This resulted in delays. Respondents also observed that COVID-19 also adversely affected other government department’s ability to respond, for example, the Ministry of Roads, which are responsible for construction. These challenges were further complicated by the fact that this project relied on a multistakeholder approach (as discussed above), which made it

challenging to get everyone together to discuss the project planning and implementation.

Retrofitting issues. The project team highlighted that there were various technical issues in the retrofitting work. That is, because retrofitting is different to a new building, the project team were engaged with difficult problems involving the assessment, responsive design, and construction. Another related challenge under this heading was the fact that the project team had to initially convince various stakeholders that retrofitting is important (e.g. MoH and MoE).

Technical expertise. Related to the above challenge, there were the complexities associated with retrofitting. This was the first time that most stakeholders had done retrofitting within construction, and thus, they did not initially have the expertise to do the work. Staff respondents noted, *“It took a considerable amount of time talking to them and training them with the input of various experts like university professors.”* The lack of retrofitting experience and capacity of the contracting companies meant that *“activities could not be started until the right level had been achieved.”* These challenges contributed to project delays.

Delays. Overall, project delays were a significant project challenge. Initially, it was meant to be a one-year project, but the project was extended three times. As mentioned above, there were various contributors to the project delays. It is worth highlighting another important contributor.

Because of the lack of sufficient implementing partner capacity, the implementing partners requested that the implementation modality be changed to implementation by UN-Habitat through the UNDP procurement procedure in Iran. Following the conclusion of AoC with EOGPBI, attempted the procurement procedure through the UNDP in Iran. This procedure took more than 5 months with a new announcement from UNDP indicating a need for a review by a higher-level committee. This resulted in considerable project delays, particularly for Component 1.

This evaluation noted the project team’s adaptive response by negotiating with the different stakeholders, including ROAP, NHC, and EOGPBI, to find the most effective and efficient solutions.

Cross-cutting issues. This evaluation found strong alignment and response to UN-Habitat’s cross-cutting issues of climate change, gender equality, human rights, and youth.

Climate change. This project acknowledged that inadequate attention given to climate change impacts during project planning and design increases the long-term costs of basic urban infrastructure investments and the likelihood that such investments will not deliver the intended benefits. Moreover, the whole project design and implementation was a direct response to disasters and climate related impacts, especially

for critical healthcare facilities for both retrofitting and new construction.

Gender equality. The project is aligned with UN-Habitat’s Policy and Plan for Gender Equality and the Empowerment of Women in Urban Development and Human Settlements. This policy outlines UN-Habitat’s commitment to ensure that all its activities reflect and advance the global consensus on non-discrimination and equality between men and women. The policy builds on the former Gender Policy (2002) and the Gender Equality Action Plan (2008), as reported by the Evaluation of Gender Mainstreaming in UN-Habitat (2011), Gender Audit Report of UN-Habitat (2012), and the Implementation Review of the UN - Habitat Gender Equality Action Plan (2012).

Human rights. The project utilised a human rights-based approach with a focus on non-discrimination and attention to the needs and priorities of the most marginalised and disadvantaged groups. This project highlighted the importance of strengthening public access to healthcare facilities after a disaster.

Youth. The project was informed by various lessons learned from other UN-Habitat youth empowerment projects.

Finally, in terms of disability, this project ensured that universal design and access principles were adopted in retrofitting the healthcare facilities.



Field Visit of the Honourable Ambassador of Japan to the Project Implementation Site

EFFICIENCY

Efficiency is a measure of the relationship between outputs (intervention products or services) and inputs (the resources that it uses). A project is regarded as efficient if it utilizes the least costly resources that are appropriate and available to achieve the desired outputs. The project budget and variance, value for money (VfM), and capacity are now discussed.

Efficiency is discussed under the headings of (1) project budget, (2) reporting, (3) value for money, and (4) capacity.

Project budget. The Government of Japan funded this project phase with a total budget of USD 1,851,463.00. The table below outlines the budget, expenditure, and variance.

Table 3: Project budget

Sponsored Program Class	Total Budget	Total Expenditure as of 31 Mar 2024	Burn Rate	Balance
AS1-CONTRACT-SERVICE	9,800.91	8,806.85	90%	994.06
AS1-EQUIP-VEH-FURNIT	155.75	155.75	100%	0.00
AS1-IP-DIRECT	869,000.00	869,000.00	100%	0.00
AS1-OPER-OTHER-COSTS	32,650.89	27,120.37	83%	5,530.52
AS1-STAFF-PERSONNEL	661,260.52	586,568.93	89%	74,691.59
AS1-TRAVEL	49,372.64	25,830.92	52%	23,541.72
PSC-EXP-UN	210,891.29	197,234.32	94%	13,656.97
Total	1,833,132.00	1,714,717.14	94%	118,414.86
Levy 1%	18331.32			
Grand Total (USD)	1,851,463.32			

This budget shows a burn rate of 94%. The balance of USD 118,414.86 will be spent against actual costs.

Reporting. This evaluation found that the project reporting went smoothly with no reported challenges.

Value for Money. It is becoming increasingly important for stakeholders that development funds should be used as effectively as possible.³⁵ That is, aid should work as best as it can and needs to be well targeted and managed. In development cooperation, this concept is referred to as value for money (VfM). VfM is defined as the “best balance between the “three E’s” – economy,

efficiency, and effectiveness.”³⁶ Another definition states that the purpose of the VfM approach is to “develop a better understanding (and better articulation) of costs and results so that we can make more informed, evidence-based choices. This is a process of continuous improvement.”³⁷ VfM cannot be assessed by using one of these dimensions in isolation. VfM is not a tool or a method but rather a way of thinking about how best to use resources.

This evaluation follows the VfM format that covers the areas of Economy, Efficiency, and Effectiveness. This list is not exhaustive and illustrative examples are provided for each area.

³⁵ OECD, Development Co-operation Directorate, Value for money and international development: Deconstructing myths to promote a more constructive discussion, May 2012, http://www.oecd.org/development/effectiveness/4965254_1.pdf

³⁶ OECD, Development Co-operation Directorate, Value for money and international development: Deconstructing myths to promote a more constructive discussion, May

2012, http://www.oecd.org/development/effectiveness/4965254_1.pdf

³⁷ DFID, DFID’s Approach to Value for Money (VfM), July 2011, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/67479/DFID-approach-value-money.pdf

Table 4: Examples of Value for Money

1	Economy: Did you buy inputs of the appropriate quality at the right price?
	<ul style="list-style-type: none"> • Six external consultants (national and international) were recruited, in line with the project goals. The education and qualification levels of the applicants for the consultancy services were adjusted with the terms of reference. However, project staff noted that the selected consultants' competencies were beyond the required levels, and they delivered high level services to the project. • The recruitments and supplies provided by the IPs have been performed based on the national regulations for similar activities ensuring the most reasonable price and the best quality in each case. • The project faced several government challenges which could have adversely affected the procedure of implementation as well as the economy of the project. In response, the project team adjusted the procedures for staff recruitment and consultants corresponding to each activity after the resolution of the implementation challenges.
2	Efficiency: How efficiently did project inputs convert to outputs through project activities?
	<ul style="list-style-type: none"> • The project team, partners, and consultants benefited from the well-skilled and well-experienced experts who were engaged in many engineering projects, in the field of retrofitting and resilience, throughout the country. • Equipped with such experts, the project activities were carried out in a much more efficient way. Many activities which needed the prerequisite studies to begin, were performed using the experience of the project team. This increased the efficiency of the work.
3	Effectiveness: How well did the project outputs achieve the desired outcome of poverty reduction/changes to beneficiaries and target groups?
	<ul style="list-style-type: none"> • The project outputs may be divided into two categories, those related to (1) the physical assets such as the studied hospitals and retrofitted hospitals, and (2) increasing and broadening the knowledge and experience of people. Based on project data, in both categories, the target groups benefited significantly. • The retrofitted hospitals will service more beneficiaries than the target groups identified in the project document. • More experts gained knowledge and experience than was originally planned. • The guidelines developed in the project can be employed nationwide by the corresponding experts and authorities. • The software developed in the project could provide a capable tool for disaster risk reduction in the country for the authorities and was well acknowledged by the government and corresponding organizations.

This evaluation found that the project scored well for VfM. There is evidence that the project managers were aware of and responded to VfM in terms of economy, efficiency, and effectiveness. When assessing VfM, it is also important to ensure that there are clear objectives and parameters. BEHTAB Phase II had clear objectives and parameters, including acceptable timeframes and levels of risk.

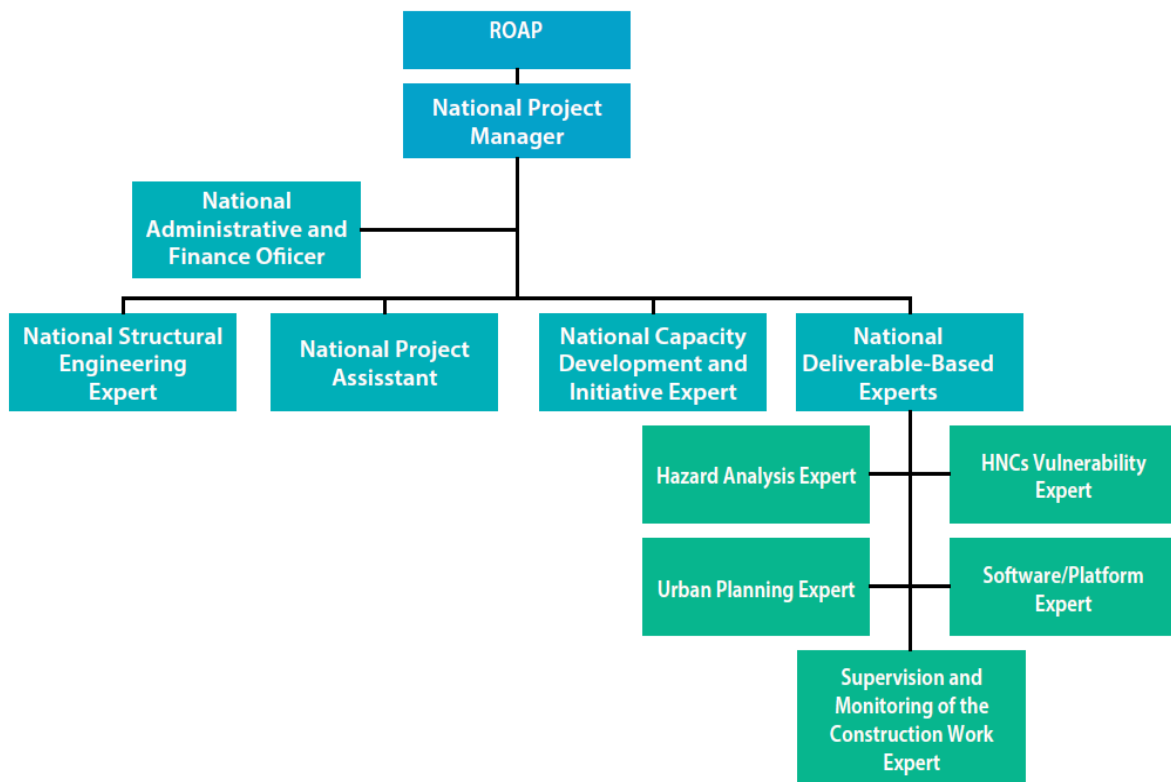
Capacity. This evaluation found a robust management and implementation team structure. Implementing partners spoke highly of the project team, especially in terms of its

technical and communication expertise. Partners appreciated the project team's participatory approach and open communication. The project team stated that the project team's capacity met the project goals.

"Regarding the knowledge and experience, the project team was selected to have enough knowledge and capacity and could access the required resource once needed." **UN-Habitat Respondent.**

The project organogram is presented below.

Figure 13: Organogram



IMPACT LOOK

Impact is a measure of the notable intervention effects on the beneficiaries, be they positive or negative, expected or unforeseen. It is a measure of the broader intervention consequences, for example, social, political, and economic effects at the local, regional and national level. This evaluation found impact as reported at the community, municipal and national levels.

Impact is discussed under the headings of (1) physical upgrading, (2) attitudes, knowledge, and skills, and (3) unintended impacts.

Physical upgrading. Many stakeholders highlighted the important impact of the physical upgrading. In other words, they underlined the fact that healthcare facilities had been physically transformed from being vulnerable to now being resilient. These impacts include the resolution of regulatory ambiguities, modification of related codes, response to the non-structural components, and the response to functional design. A respondent stated, *“It is important to actually see the changes in the conventional design of hospitals.”* Another stakeholder said,

“Changing the design of important buildings like hospitals has been indispensable. We now feel prepared.” Another stakeholder summarized this impact of improved infrastructure as follows: *“The direct impacts are clearly the improved infrastructures against natural hazards and the people who use it.”* From a technical perspective, another important related impact is the changing of the technical specifications for seismic restraint of non-structural components. This impact was raised by the majority of the respondents.

A particular project strength is its potential impact on a large range of primary beneficiaries who are now using the retrofitted healthcare facilities including women, men, youth, children, and people living with disabilities. Not only are they using upgraded facilities, but these facilities will better protect them during a natural disaster and should be able to continue operations after the natural disaster: *“The hospital is now able to provide non-stop service.”* A respondent argued, *“Simply stated, we have significantly increased the resilience of these hospitals.”*



Rasht Hospital



Fatemi, Ardebil

Attitudes, knowledge and skills. A common evaluation finding was the reported change in attitude towards retrofitting and making buildings more resilient to the effects of disaster. That is, the changed attitudes of various stakeholders including hospital administrators and staff, contractors, engineers, and government. A respondent noted, *“We see a changed emphasis for people in improving the resilience of hospitals. We saw this yesterday at a project event (15 May 2024) with the government, private sector and Government of Japan. People really understand the importance.”* Another respondent stated, *“The methodology used was completely suitable for the project. It seems that the necessary attitude change in the design of health buildings has been achieved in the management and design stakeholders.”* Stakeholders also highlighted the improved technical skills and knowledge of the various associated stakeholders.

“The managers of hospital construction projects, the organizations in charge of the projects, the consulting engineering firms, and the experts in charge of design codes have all benefited from the project. The capacity development of consultants and government who are engaged in the construction of hospitals has been very important.”
Partner Respondent.

The impact on the government was important and acknowledged by respondents linked to the government. A stakeholder noted, *“Maybe the most important impact of the BEHTAB phase-II project was alerting the government managers to*

the multiple aspects that are required in improving the resilience of hospitals and critical facilities.” Another respondent stated, *“The overall impact of the project was elevating the sensitivity of the experts and decision makers both in government and private sector about the factors required for the resilience of hospitals and following the steps required to have a risk reduction plan in place.”* A few respondents argued that the project had streamlined the resilience discussion in the country between the government and experts.

Following from the above impacts, this project has also resulted in increased trust in the work of UN-Habitat: *“Among the technical community and line ministry (Roads and Development), we have increased the trust and value of UN-Habitat’s brand, which was not very well known before in this country.”*

Unintended impacts. In discussing the project’s unintended and indirect impacts, stakeholders underscored the studies of the 11 hospitals that can be used for other hospitals in the country. Also, the upskilled government staff and professional contractors can use the lessons learned from the project for upscaling activities in other similar projects. Specifically, respondents noted that the project approach has been used by the government directly for other risk reduction and management projects. This finding is not only important in discussing the impact of the project but also in project sustainability (this issue is discussed further below under Sustainability).

SUSTAINABILITY

Sustainability is a measure of intervention benefits after external support has been completed. Many interventions fail once the implementation phase is over, mainly because the beneficiaries do not have the financial resources or motivation to continue the programme activities. Sustainability is now a core theme in evaluations as donors and international and national stakeholders emphasize autonomy, self-reliance and long-term improvements.

This section is discussed under the headings of (1) sustainability planning, (2) ownership and transfer, (3) capacity and maintenance, and (4) continuation.

Sustainability planning. The project's sustainability planning and approach were clearly outlined during the concept phase. UN-Habitat defined its role as a "Strategic Influencer" to ensure project sustainability as it provides "well developed systems, approaches, platforms and knowledge resources to Ministry of Health and other government entities, that have resources for following up on the key recommendations and national level scale up."³⁸ The project proposed using stakeholder engagement platforms and other professional societies in Teheran from the previous project to create a common platform where stakeholder representatives could discuss and provide input on project implementation through a transparent and inclusive process.

The project was also based on the assumption that "giving stakeholders ownership and decision making based on evidence generated from the project and building their capacity will yield better project outcomes."³⁹ The project design and implementation were built on the understanding that stakeholder engagement raised awareness, develops understanding, ensures buy-in, and builds local project support. This was particularly relevant in developing non-structural measures for resilient healthcare facilities and related occupational safety for healthcare personnel.

Ownership and Transfer. This evaluation found noteworthy ownership of the project approach and activities as well as the emerging transfer of project gains and lessons.

During project implementation, as evidenced in the project reporting and discussions with stakeholders, the project team was clearly focused on sustainability which they tried to support through various activities. For example, the project team:

- Published multiple guidelines and reports to guide and sustain the project results.
- Engaged several key experts in the field of hospital design and construction.
- Established multiple training and discussion sessions.
- Engaged local constructors in the implementation process of retrofitting solutions as well as industrial units in manufacturing new elements for the improvement of resilience of critical facilities.

Respondents spoke strongly about how the project's three components (studies, retrofitting, and capacity development) have contributed towards sustainability.

*"The process of the project in three components of the studies, retrofit works, and capacity building, also helped other beneficiaries to use the experiences of the project to design and construct other new resilient infrastructures." **Partner Respondent.***

In the assessment of the project's sustainability, and adding to the above examples, this evaluation noted important multiplier effects and actions. Examples of multiplier effects under the three project components include:

- Following the updating of the design methodology component 1, based on the achievements and recommendations from the project report, the results will be followed nationally based on this experience and the technical order note issued by the partner.
- The construction techniques and technologies were modified and updated nationwide, based on the new approaches, equipment and devices, and successful construction during Component 2.
- The guidelines developed during Component 3 were endorsed by the national technical board in BHRC and approved and published as

³⁸ UN-Habitat (16 March 2021), BEHTAB Phase 2, ProDoc.

³⁹ Ibid.

national guidelines No. 880 by the National Planning and Budget Organization.

Examples of relevant actions taken include:

- Providing a document regarding the current challenges in different managerial and directorial stages of health facility projects incorporated by innovative technologies in the country.
- Facilitating meetings with BHRC and PBO officials to discuss their vision and experiences regarding the application of innovative technologies in improving the resilience of hospitals.
- Organizing and holding a meeting with the Iran National Innovation Fund (INIF) officials for collaboration in supporting innovative ideas.
- Various communication with some providers and consulting companies.

Moreover, respondents noted how the project has contributed to government approaches to DRRM. For example, stakeholders noted that EOGPBI has used the project results to improve the quality of associated design, construction, and retrofitting work for safer and more resilient facilities: *“Through documentation, endorsement, and formal requests, the results have been used and upscaled in other and future projects in EOGPBI.”* Various other examples were provided.

“The main stakeholder of the project (EOGPBI under MoRUD) currently uses the results of the project for other under-design and under-construction hospitals. It shows the project sustainability very well.” **Partner Respondent.**

Various stakeholders highlighted how the project had resulted in these healthcare facilities becoming role models for other healthcare facilities. These are noteworthy achievements and speak highly of the project’s relevance, impact, and sustainability.

Finally, this evaluation also explored the government’s commitment and buy-in for possible project up-scaling. Government respondents were clear about their strong commitment to and gratitude for the project and showed a keen interest in acquiring the project deliverables and upscaling the outcomes. The government has mandated that consulting firms and contractors adopt the successful practices

and accomplishments of the BEHTAB Phase II into their projects. Respondents stated that there is evidence that the partners are adopting the project strategy, methodology, and techniques in their new projects. Partners have also expressed satisfaction with the project and a desire to apply the results as seen during meetings and various communications (presented during the data collection).

Capacity and Maintenance. In discussing whether the government has the necessary capacity to take over the project activities, this evaluation found that external and government respondents highlighted the robust technical capabilities within the government technical departments to take responsibility for the project’s activities. Furthermore, the BEHTAB Phase II project – by establishing a multi-stakeholder implementation framework that encompasses various management and executive bodies, academic institutions, consultancies, manufacturers, and contractors – has significantly enhanced their collective expertise and proficiency. This collaborative approach has laid a solid foundation for the sustained progression of activities nationally.

Despite this positive finding, some respondents did note that this work requires ongoing support, high-level oversight, and the consistent advancement of capacities across all stakeholders to ensure enduring success and impact. This includes ensuring that moving forward, the Ministry of Health and Medical Education becomes an integral part of this national initiative. The ministry is expected to leverage its substantial resources and expertise to ensure the strong and sustainable advancement of the project.

In terms of maintenance, this evaluation found that the project, for new buildings, utilised an array of activities to ensure the continuity of activities and the sustained progression of work. For existing hospitals, there was hospital allocation of a designated budget for facility maintenance during the operational phases.

Nonetheless, extensive retrofitting of such facilities requires a long-term financial plan. In response, EOGPBI has developed a toolbox for the development of a database of the existing hospitals as well as rapid assessment and screening for risk reduction efforts. The Planning and Management Organization, as a key

stakeholder and steering committee member, acknowledges the importance of this issue. Furthermore, the Ministry of Health and Medical Education plays a crucial role here, underpinning the strategic planning required to support these long-term objectives.

Continuation. Stakeholders were unanimous in their view that the project should continue into another phase. Respondents highlighted the project’s relevance and impact in discussing the reasons for the project’s continuation.

“This project must continue! Iran is located in a highly seismically active zone, where strong earthquakes occur frequently. Hospitals serve as lifelines during earthquakes. Earthquake vulnerability and rehabilitation of hospitals allow them to provide essential services to people affected by earthquakes.” **Partner Respondent.**

Another stakeholder stated, *“Absolutely yes, because by continuing this kind of project, the skills of the engineering society will be developed in designing safe buildings or retrofitting vulnerable ones.”*

Out of the four accepted types of programme and project transitions (termination, extension, expansion and redesign & adaptation), respondents argued for the second and third transitions, namely, extension and expansion.

To build on the project gains, part of the project could extend both the structural and non-structural activities into existing project areas. Moreover, there could be the expansion of the project into other provinces and counties. This project can be replicated and scaled up at the

local and national levels, and eventually institutionalized. A stakeholder noted, *“The project is certainly replicable and should be scaled up to address the country’s needs.”* It should be noted that some respondents, despite agreeing that the project could be extended and expanded, argued that project institutionalization could be difficult given government and ongoing international challenges. A stakeholder argued, *“While the positive effects of the project will remain sustainable in the country, of course, continuous support by the government and EOGPBI will be required.”*

Stakeholders highlighted two other related issues for future consideration. One, respondents raised the possibility of extending the retrofitting to other “key public buildings” like schools and even homes. This suggestion mirrors the successful retrofitting work done under UN-Habitat’s Project for City Resilience (PCR) in Afghanistan (2017-2019).⁴⁰ Two, several stakeholders raised the importance of including aspects of “green hospitals” regarding, for example, water consumption and waste management.

In summary, the project’s sustainability was enhanced through the provision of (1) a substantial number of trained experts, (2) the development of national guidelines and technical instruction reports, (3) technical order-notes that were issued by the implementing partner to the consulting companies and contractors, (4) an participatory approach that included a wide range of stakeholders during the decision making and implementation processes.



Sari A. Tabarsi Hospital

⁴⁰ UN-Habitat, Project for City Resilience in Afghanistan, <https://unhabitat.org/project/project-for-city-resilience-in-afghanistan>

CONCLUSIONS

SUMMARY

This evaluation found a highly relevant, effective, efficient, impactful, and sustainable project. This is an excellent example of a decidedly successful partnership (Governments of Japan and Iran, UN-Habitat, and national partners) that established the foundations for disaster preparedness and enhancement of response capacity, post-crisis recovery, and crisis risk reduction for healthcare facilities. The project’s notable achievements were grounded in the practical and effective interacting model of the three components of assessments, retrofitting, and capacity strengthening.

This evaluation found overwhelming support for the continuation of this project. UN-Habitat is well-placed to provide further knowledge and experience in the field of improving the resilience of urban critical facilities as well as focusing on new materials and technologies. There are interesting opportunities moving forward, not only for improving the resilience of the health facilities but also for improving the resilience of other critical urban buildings against climate change consequences.

RECOMMENDATIONS

1 Ensure the project results are widely shared

Despite the notable sharing of project lessons and achievements during the project, there are opportunities to share the project results with, for example, academic, technical, and decision-making stakeholders to ensure the ongoing revision of relevant codes and regulations and contribute to increased retrofitting of healthcare facilities. *(ROAP and the UN-Habitat Iran)*

2 Review stakeholder capacity needs

While this project was successful in building the capacity of various stakeholders, a review of what capacities need strengthening in the different groups of partners could prove useful for the planning and implementation of the next phase. *(UN-Habitat Iran and Partners)*

3 Further develop stakeholder engagement

To improve project effectiveness and efficiency, it is recommended to have further stakeholder engagement during the next steps for the next project development. *(ROAP and UN-Habitat Iran)*

4 Strengthen project communication

The insufficient communication between the key stakeholders and partners in Iran hindered the initiation of the activities and adversely affected the progress of the project particularly in the project initiation stage. Reviewing and responding to these communication challenges is vital to build on the successes of this project. *(ROAP and UN-Habitat Iran)*

5 Improve the resilience of critical urban facilities against climate change impacts

Moving forward, it is important to improve the resilience of the health facilities as well as other critical urban facilities against climate change consequences, This issue can be pursued as one of the main subjects of need in the country. Linked to this is the importance of (1) including aspects of “green hospitals” regarding, for example, water consumption and waste management and (2) considering the inclusion of other buildings for the next phase of the project, for example, a pilot on schools and even homes. *(ROAP and UN-Habitat Iran)*

Strengthen the evidence of project impact

6 This evaluation highlighted the need for more supporting evidence of impact through the use of, for example, before-and-after photographs, case studies, and stories of change. *(UN-Habitat Iran and Partners)*

7 **Further identifying Iranian hospitals with high seismic vulnerability**

This project and its predecessor (BEHTAB-I) have successfully highlighted the importance of identifying and retrofitting hospitals with high seismic vulnerability. While stakeholders acknowledged these achievements, they argued that much more needs to be done. *(ROAP and UN-Habitat Iran)*

8 **Continue strengthening government cooperation**

This project showed strong project collaboration with the government and this important collaboration needs to be strengthened especially under current international sanctions against Iran. *(ROAP and UN-Habitat Iran)*

9 **Identify and employ the most effective implementation methods that operate with minimal dependence on government entities**

Following the above recommendation, this recommendation highlights the fine balance between government support and minimal dependence on the government. To ensure the project's success, it is essential to identify and employ the most effective implementation methods that operate with minimal dependence on government entities. At the same time, these methods must be designed to secure the necessary support and endorsement from governmental authorities. *(ROAP, UN-Habitat Iran, and Partners)*

10 **Review and bolster aspects of government cooperation**

Given the project delays resulting from certain government requirements, for example, around recruitment, identifying these blockages and beginning to negotiate and refine needs and responses could strengthen future project implementation. *(ROAP and UN-Habitat Iran)*

11 **Review project partners**

While this project found appropriate and strong partners, a review of the partners might assist in identifying gaps and ensuring that the correct number and mix of partners are available for the next phase of the project. *(UN-Habitat Iran)*

12 **Extend and expand the project**

Given the noteworthy project achievements, it is recommended to consider both the extension of the structural and non-structural activities into existing project areas and the expansion of the project into other provinces and counties. This project can be replicated and scaled up at the local and national levels. *(ROAP, UN-Habitat, Partners, and Government)*

ANNEXES

ANNEX 1: DOCUMENTS CONSULTED

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ANNEX 2: STAKEHOLDER LIST

NO.	NAME	POSITION	DATE
1	Mr Afshin Kalantari	National Project Manager, UN-Habitat	16 May 2024
2	Mr Alireza Tajik	Iran Arc Consulting Company	26 May 2024
3	Ms. Marjan Masoodi	Payab Tarh Consulting Company	25 May 2024
4	Mr. Navab Merikhi	Structural Engineer, UN-Habitat	20 May 2024
5	Mr. Mostafa Zeinoddini	Khaje Nasir University	24 May 2024
6	Mr. Alireza Nikbakht	NOI Consulting Company	24 May 2024
7	Mr. Ramin Azizpour	Razigaran Consulting Company	23 May 2024
8	Mr. Ali Akbar Aghakouchak	Individual Consultant, UN-Habitat	20 May 2024
9	Mr. Ali Majidinejad	Project Assistant, UN-Habitat	20 May 2024
10	Ms. Atefeh Jahanmohammadi	Project focal point, BHRC	20 May 2024
11	Ms. Hediah Yousefizadeh	Project Senior finance & admin, UN-Habitat Iran	21 May 2024
12	Mr. Ali Sobti	EOGBI	28 May 2024
13	Mr. Omid Bahar	UN-Habitat Consultant	28 May 2024
14	Mr. Rahim Badamian	EOGPBI	28 May 2024
15	Mr. Mijtaba Hosseini	TDMMO	29 May 2024
16	Mr. Mohammad Mirhashemi	UN-Habitat Consultant	24 May 2024
17	Mr. Alireza Talebi	Fada Fan Consulting company	29 May 2024
18	Mr. Hoshyar Azar	Shora Consulting company	25 May 2024
19	Mr. Hamid Zafarani	UN-Habitat Individual Consultant	29 May 2024
20	Mr. Yu Utsunomiya	Embassy of Japan, Iran	5 June 2024
21	Mr. Srinivasa Popuri	Senior Human Settlements Officer, ROAP, UN-Habitat	7 June 2024

ANNEX 3: INTERVIEW QUESTIONS

RELEVANCE	
1. To what extent is the Project consistent with beneficiaries' requirement, country needs, national development goals, and partners' and donors' policies?	
2. Was the implementation strategy in line with and responsive to SDG 11 and NUA?	
EFFECTIVENESS	
3. To what extent has the project been effective in achieving its objective of increasing the understanding the importance of resilience against natural hazards and knowledge of implementation of a vulnerability reduction program for hospitals in the targeted communities? <ul style="list-style-type: none"> ○ What is the quality of outputs delivered? Are they useful? ○ How satisfied are the partners and beneficiary with the project/outputs? 	
4. What types of products and services did the project provide to beneficiaries through activities implemented?	
5. To what extent have monitoring and reporting on the implementation of the project been timely, meaningful and adequate?	
6. To assess the extent to which cross cutting issues of gender, human rights, climate change/ environment, and youth, including age and disabilities were relevant to the project and have been integrated in the design, implementation and delivery of the Project	
7. Did the identification, design and implementation process involve local and national stakeholders, as appropriate?	
EFFICIENCY	
8. How well were economically resources/inputs (funds, expertise, time, etc.) efficiently utilized and converted to results?	
9. Did UN-Habitat demonstrate to have adequate capacity to design and implement the Project?	
10. How well were economically resources/inputs (funds, expertise, time, etc.) efficiently utilized and converted to results?	
11. Were institutional arrangements adequate for implementing the Project and for delivery of expected outputs and outcomes?	
IMPACT OUTLOOK	
12. What is the overall impact of the project (directly or indirectly, intended and unintended)?	
13. What are the positive changes to beneficiaries resulted from the Project? Review the process and the methodology of the Project, including the level of participation of the communities and other stakeholders.	
SUSTAINABILITY	
14. To what extent did the project build capacity and ownership of stakeholders that contribute to sustainability?:	
15. To what extent will the project be replicated or scaled up or institutionalized? Is the Project replicable or able to scale up at national or local levels?	
16. Do the positive effects produced by the Project intended or unintended seem sustainable?	

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