

KICK-OFF MEETINGS IN NEPAL

FORCE PROJECT

The launch meetings of the FORCE project – Forecasting and Communication Earthquake Risk were held in the city of Kathmandu, Nepal, during 20th to 24th February 2023. Multiple one-to-one meetings were held with the main governmental departments involved in Disaster Risk Reduction activities, and a workshop with an important group of stakeholders was held on 24th February, 2023. Representatives of the GEM Foundation and NSET attended all meetings and will be the coordinators of the project activities in the country.

The FORCE project, supported by USAID Bureau for Humanitarian Assistance (BHA), aims to enhance earthquake hazard modeling capabilities, as well as to provide better risk models to account for changes in the number of occupants, structures and economic value exposed to earthquakes and the adverse effects of climate change. The project evaluates future earthquake risk losses, thus supporting decision makers with risk metrics that account for the expected evolution of the built environment, which are fundamental for the design and implementation of long-term risk reduction measures.



Figure 1. Group photo, kick-off workshop FORCE project. February 24, 2023, Kathmandu, Nepal.

Meetings and discussions with the different stakeholders focused on the project goals in the country:

1. to improve the reliability of earthquake hazard and risk assessment;
2. to introduce a temporal component in the global exposure model, thus enabling the quantification of future disaster losses, including those associated with climate change; and
3. to develop communication and dissemination tools to maximize the uptake of disaster risk information in policy making.

Discussions included the challenges and needs to clearly communicate the outputs and results of the project to the relevant authorities and the general audience.



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STAKEHOLDERS

Governmental offices

- NDRRMA: National Disaster Risk Reduction and Management Authority, Nepal
- NPC: National Planning Commission, Ministry of Urban Development, Nepal
- DUDBC: Department of Urban Development and Building Construction, Ministry of Urban Development, Nepal
- DMG: Department of Mines and Geology, Ministry of Industry, Commerce and Supply, Nepal

National institutions

- NSET: National Society for Earthquake Technology, Nepal
- KHCE: Khwopa College of Engineering, Tribhuvan University, Nepal
- NCE: National College of Engineering, Tribhuvan University, Nepal
- NHSRP: National Housing and Settlements Resilience Platform, Nepal
- SEANep: Structural Engineers Association Nepal
- NEA: Nepal Engineers' Association
- CRS: Catholic Relief Services, Nepal
- ESS: Earthquake Safety Solutions, Nepal

International institutions

- UN RCO: United Nations Resident Coordinator's Office, Humanitarian Country Team
- USAID-BHA: U.S. Agency for International Development, Bureau for Humanitarian Assistance
- GEM: Global Earthquake Model Foundation

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AGENDA

Monday, 20th February, 2023

- Morning Group meetings with USAID-BHA, NSET and GEM
Afternoon Meeting with NDRRMA
Afternoon Meeting with UN-RCO

Tuesday, 21st February, 2023 – NSET and GEM

- Morning Detailed working session between NSET and GEM
Afternoon Technical visit: earthquake impact, reconstruction and recovery process in Bungamati district

Wednesday, 22nd February, 2023

- Morning Meeting with DUDBC
Afternoon Meeting with NPC

Thursday, 23th February, 2023

- Morning Working session for kick-off workshop
Afternoon Meeting with USAID-BHA team in the USA embassy

Friday, 24th February, 2023 – FORCE Kick-off workshop

- 10:00 – 10:30 Welcoming tea
10:30 – 11:00 Opening by USAID-BHA, NSET and NDRRMA
11:00 – 12:00 Need of Earthquake Risk Assessment and The FORCE Project, GEM Foundation
12:00 – 12:30 Overview of Earthquake Risk Assessment in Nepal, NSET
12:30 – 13:00 Discussions and closing, all
13:00 – 14:00 Lunch

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DISCUSSIONS

The following sections shortly describe the outcomes and suggestions during the one-to-one meetings held during the visit to Nepal. Overall, we assess that these meetings were a space for updating and discussion on the strengths, challenges and recommendations for the development of project activities in the country.

Meeting with NDRRMA

The National Disaster Risk Reduction and Management Authority (NDRRMA) in Nepal is the governmental institution with the mandate to provide information regarding earthquake risk assessment in the country.



Figure 2. Meeting with NDRRMA in the context of the FORCE Project.

NDRRMA has the mandate to establish an ecosystem to: 1) study risk; 2) understand risk; and 3) monitor risk. They work with municipal governments to do the mapping of each municipality. In the last three years they have brought massive datasets into a common asset platform. In addition, a high number of surveys is available for public schools, public buildings and hospitals (more than 10,000 facilities), as well as the post-disaster damage collection after the Gorkha event in 2015 and the information on the reconstruction process. NDRRMA is working toward a national risk platform to host and share relevant information for disaster and risk management.

Regarding the FORCE initiative, NDRRMA see three main areas of collaboration: 1) technical training for the NDRRMA teams; 2) update the existing information and summarize the work that can be done to each of the different models; 3) use FORCE outcomes in terms of current and future risk to work at the municipal level.

The next steps will be to generate a concept note among NDRRMA, NSET and GEM that clearly states the joint activities to be carried out during the FORCE project. An MoU will be signed among the parties and NDRRMA will be in charge of communicating and informing the other government offices that are required to achieve the proposed outcomes, or that are beneficiaries or those.

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Meeting with DUDBC

The Department of Urban Development and Building Construction (DUDBC) is the governmental institution in charge of maintaining and updating the national building code.

The main recommendation from DUDBC regarding the FORCE Project is the coordination at the national level on the activities and results, as well as the identification of key roles by the different stakeholders and the potential impact that results could have. They already expressed their interest in being members of the steering committee, led by NDRRMA, to coordinate with the other governmental representatives.

DUDBC also highlights the numerous studies for earthquake hazard and risk assessment available for Nepal, or specific cities, such as the detailed assessment for Kathmandu valley recently developed by JICA. They indicate *"We have many studies, but the results are not used because there is no connection with governmental agendas. The outputs from the project should be contextualized in the budget/programs already envisioned in the different ministry agendas"*.

Meeting with DMG

The Department of Mines and Geology (DMG) is the governmental institution in charge of mapping the seismic faults, seismic network and the seismic hazard assessment. DMG is currently working in the release of a seismic hazard map for this year. The seismic hazard model was developed with the software CRISIS and it uses information after the Gorkha 2015 earthquake to update the characterization of seismic sources in the country. Unfortunately, the model is not open and it is not in agreement with the seismic hazard map used by the national building code.

The discussions included the need for developing a unified national seismic hazard model for Nepal, given that models by different authors are available. DMG has indicated their willingness to participate in the FORCE project discussions and usage of seismic hazard models as an input for seismic risk assessment in the country.



Figure 3. Meetings with NPC and NDRRMA (left), and DMG (right) in the context of the FORCE Project.

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Meeting with NPC and NDRRMA

The National Planning Commission (NPC) expressed their interest in using and applying the results of the FORCE project in the local agenda. They would like to quantify, in terms of number of lives saved and economic impact, the activities that the Government had implemented since the occurrence of the 2015 Gorkha earthquake. NPC indicates that simple metrics are the best tool to communicate, evaluate and monitor the different policies regarding earthquake risk reduction in the country.

Regarding the legal framework, NPC agrees with NDRRMA leading and coordinating the activities with NSET and GEM. Since one of the challenges for updating and improving the risk model for the country is the data availability, NPC ask NDRRMA to coordinate with the National Statistics Office (CBS) the acquisition of the 2021 census data that will serve as the main input for the risk model updates.

Meeting with UN RCO

UN RCO (United Nations Resident Coordinator's Office) leads UN Country Teams and coordinate UN support to countries in implementing the 2030 Agenda. In Nepal, UN RCO is already using the 90 scenarios developed by Durham University and NSET for response planning activities.

They see FORCE activities and outcomes as an opportunity to strengthen the technical understanding of risk assessment studies through the capacity training component. They indicated the need to avoid duplicating efforts in the country, since already several studies are available.

Group meetings USAID-BHA, NSET and GEM

The visit to Nepal provided the opportunity for close interaction between the USAID-BHA team, NSET and GEM. An introductory meeting was held with on Monday 20th February, 2023, with Santosh Gyawali, the AID Development Program Specialist, the main point of contact of the FORCE project with the BHA team in Nepal. On Thursday, 23rd February, a general presentation of the FORCE project was given to the USAID team in the U.S embassy, and the team more closely related to disaster risk participated in the half-day workshop on Friday 24th February.

The USAID BHA team indicated the importance in communicating with the different stakeholders to avoid duplicating efforts, and indicated that FORCE activities should leverage on existing programs. USAID-BHA Nepal can help to bring together human resources and contacts that may be beneficial to FORCE.

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FORCE kick-off workshop

Half a day session was dedicated to share project activities and expected outcomes. It was an opportunity to invite the different stakeholders to take an active role in the project.



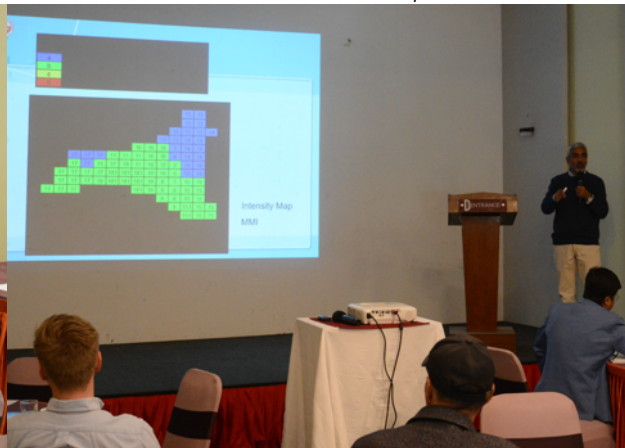
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Rameshwor Marhatta, NDRRMA



Surya Narayan Shrestha, NSET



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Figure 4. Kick-off FORCE Project, presentations.

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OUTCOMES AND MOVING FORWARD

The meetings and workshop held in Nepal ratifies the importance of human interaction and engagement of the different stakeholders from the early stages in the project activities. Overall, the different institutions express their interest in participating in the project and receiving the outcomes as a set forward in understanding and monitoring earthquake risk.

NDRRMA will be the governmental office key in the project activities. They will be in charge of facilitating the access of data and surveys existing in the country, as well as the maintenance, distribution and communication of the project outcomes to the other governmental offices and the general public. NSET and GEM will be the main technical support for development and update of models, and academic institutions will be involved as much as possible.

From the different meetings, we highlight the challenges indicated by the different actors:

- Need of unifying numerous studies available in the country
- Need for an inter-governmental strategy to share, use and maintain information
- Need for a centralized system of open and transparent models. NDRRMA indicated the mandate to create a platform for this purpose.
- Social vulnerability is very important for the decision makers and the stakeholders. This is something that we must explore with the Statistical Office of Nepal.



Figure 5. Internal meetings with USAID-BHA, NSET and GEM team in the context of the FORCE Project.

DISCLAIMER

This report has been made possible thanks to the support and generosity of the American people through the United States Agency for International Development (USAID) and the Bureau of Humanitarian Assistance (BHA). The opinions, findings, and conclusions stated herein are those of the authors and do not necessarily reflect the views of USAID or the United States Government.

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Kick-off workshop

Venue: Entrance Cafe, Chakupat, Lalitpur, Nepal

Date: 24th February 2023 (12 Falgun 2079)

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