Training design on Earthquake Risk Reduction Training

1. **Title of the training**
   Training on Earthquake Risk Reduction

2. **Target participants**
   TOTAL: approximately (160) pax

   - Relevant Government officials who are engaging Disaster Risk Reduction functions
   - Completed Basic Disaster Management Course
   - Participants will be from the most earthquake prone area Kachin, Chin, Yangon, Bago, Mandalay, Sagaing and Nay Pyi Taw

3. **Duration**
   - (5) days
   - 2 times (tentatively on the last week of May and 1st week of June)

4. **Objective**
   At the end of the training, participants

a) will enhance the understanding of the concept of Disaster Risk Reduction especially for Earthquake hazard
b) will gain knowledge on the concept of Earthquake hazard and its impact (structural and non - structural)
c) will strengthen their capacity on earthquake risk reduction such as preparedness and response

5. **Course Design**

   Earthquake Risk Reduction Course comprises four modules and practical/ group work session. The first two modules will provide brief on Disaster Risk Reduction (DRR) and development planning system and practical on linkage between DRR and development system in Myanmar. Subsequently, Module 3 and 4 will provide the concept of earthquake hazard and structural, social and economic impacts, historical events of earthquakes in Myanmar, safety tips for earthquake (before, during, after), Disaster Management Committee, Earthquake Preparedness and Response Plan and steps of conducting community participatory earthquake drill. In addition, the module 4 will cover the methods of delivering messages on safety tips for earthquake to the community from Basic Disaster Management Course which is being conducted by DMTC. By the end of the training, the participants will be able to have knowledge on earthquake hazard and apply their knowledge and experience on earthquake risk reduction activities.

   The time allocation are as follows;

No.	Module	Lecture (hrs)	Group work/ discussion (hrs)	Total (hrs)
1.	Understanding Disaster Risk Reduction	1	1	2
2.	Disaster Risk Reduction and Development System in Myanmar	1	1	2
3.	Earthquake hazard and risk in Myanmar	4	2	6
4.	Understanding Earthquake Risk Reduction	10	8	18
	TOTAL teaching hours	**16**	**12**	**28**

Module 1: Understanding Disaster Risk Reduction

Duration: TOTAL – 2 hrs: Lecture – 1 hrs, Group work – 1 hr

Facilitators

- trainers from DMTC

Rational

- Myanmar is prone to various hazards including hydrological and geological hazards
- As the government officials are the members of the Disaster Management Committee, past disaster events highlight that their knowledge and capacities are limited
- This module aims to provides basic knowledge of various hazards/ disasters in Myanmar. It also introduces the basic concept of Disaster Management and related terminologies to have a common understanding and promote related knowledge for the government officials who are taking lead for DRR initiatives in Myanmar

Topics to be covered

Session 1.1: Disasters/ hazards in Myanmar
Session 1.2: Concept and terminology of Disaster Management
Session 1.3: Concept of Disaster Risk Management

Learning Outcomes

The participants will be able to

1) understand the phases of Disaster Management Cycle
2) understand the commonly used DRR terminology

Learning methods: Presentations, discussion, group work

Assessment methods: group work, Pre Test & Post Test

Module 2: Disaster Risk Reduction and Development System in Myanmar

Duration: TOTAL – 2 hrs: Lecture – 1 hrs, Group work – 1 hr

Facilitators

- trainers from DMTC

Rational

- Due to the rapid urbanization, many development projects are implementing in major cities such as Yangon, Mandalay, Bago etc.
- However, there are limited consideration on the concept of disaster risk reduction in the development projects in Myanmar
- Thus, the module will highlight the current disaster management system in Myanmar and what are the impacts of disasters for the development projects. It will also include how to integrate the disaster risk in the ongoing development projects

Topics to be covered

Session 1.1: Introduction to Disaster Management System in Myanmar
Session 1.2: Development and Disaster linkage
Session 1.3: Integration of Disaster Risk in Development Project

Learning Outcomes

The participants will be able to

1) understand the disaster management initiatives activities at National Level
2) learn how to integrate the disaster risk in the development projects

Learning methods: Presentation, discussion, group work

Assessment methods: group work, Pre Test & Post Test

Module 3: Earthquake hazard and risk in Myanmar

Duration: TOTAL – 6 hrs: Lecture – 4 hrs, Group work – 2 hr

Facilitators

- facilitators from Myanmar Earthquake Committee and UNDP

Rational

- Among all the natural disasters that impact the country, earthquakes are the greatest threat to development gains.
- Records from the Department of Meteorological and Hydrology show that major quakes have occurred along these fault zones causing loss of lives, damages to infrastructure with consequential impact on the country's economy.
- This module will provide mechanism of earthquake and the basic terminology in relation to earthquake.
- The module will also highlight the past earthquakes in Myanmar which caused severe damages on infrastructures, historical buildings etc.

➢ The Rapid Visualize Screening Method (RVS) method will be introduced to the participants and participants will be familiar with the method from the practical group work.
Topics to be covered Session 3.1 Earthquake hazard profile of Myanmar Session 3.2 Structural vulnerabilities of earthquake hazard Session 3.3 Social and Economical vulnerabilities of earthquake hazard
Learning Outcomes: • Learn about fundamental and basic terminology in relation to earthquakes • Understand seismic hazard and risk in Myanmar • Able to identify vulnerabilities (structural, social, economical and functional) around them • Able to apply the RVS method to know the condition of the buildings • Able to realize that those vulnerabilities could be mitigated
Learning methods: Presentation/video, sharing experience of past earthquake, discussion, practical group work on RVS method
Further reading: • Earthquake Tips, NICEE, http://www.iitk.ac.in/nicee/EQTips/ • Aung, H. H., 2015, Myanmar Earthquakes History, Pages 92, available at https://www.researchgate.net/publication/275466080 • MEC, 2017, REPORT on Rapid Visual Screening of Existing Buildings in Hlaing Thar Yar Township, Yangon, Myanmar Earthquake Committee
Assessment methods: Pre Test & Post Test

Module 4: Understanding Earthquake Risk Reduction
Duration: TOTAL – 18 hrs: Lecture – 10 hrs, Group work – 8 hr
Facilitators ➢ facilitators from Myanmar Earthquake Committee, UNDP and DMTC
Rational ➢ A major earthquake of Magnitude 7.0 or more could have grim consequences on the economy of the country and the social welfare wellbeing of citizens. ➢ The preparedness measures should be in place for effective response to reduce life losses and damage to property when a destructive earthquake happens. ➢ The module will emphasize on the safety tips for earthquake such as what to do - before, during and after - an earthquake, consideration of the Earthquake hazard in the development of the Disaster Management Plan and formation of the Disaster Management Committees to minimize casualties and property damages. ➢ The module will also highlight the roles and responsibilities of relevant sectors of the government in collaboration with agencies for earthquake response

- The module will also introduce the steps to conduct the earthquake drill in the community

Topics to be covered

Session 4.1 Earthquake safety measures (Do's and Don'ts)
Session 4.2 Communication for awareness raising
Session 4.3 Earthquake Preparedness and Response Plan and Disaster Management Plan
Session 4.4 Simulation exercise of Earthquake drill

Learning Outcomes

- Know the Do's and Don'ts on before, during and after an earthquake
- Gain knowledge of how to deliver earthquake awareness messages appropriately
- Understand the Sub National Earthquake Preparedness and Response Plan
- Learn about the importance of Disaster Management Plan and roles and responsibilities of Disaster Management Committees
- Learn how to prepare the evacuation map for earthquake hazard
- Familiar with HVCA
- Learn about how to conduct the community participatory earthquake drill

Learning methods - Presentation/video, discussion, group work on developing the evacuation map, Hazard, Vulnerability and Capacity Assessment for Earthquake Hazard, Disaster Management Plan and roles and responsibilities of Disaster Management Committee, practical on conducting the drill

Note: Session 4.2 Communication for awareness raising will be from Basic Disaster Management Course from DMTC

Further Reading:

- A.W. Coburn, R.J.S. Spence, A. Pomonis, DMTP Vulnerability and Risk Assessment, Cambridge Architectural Research Limited for NUDP, UNDRO.
- Davis, I., and Gupta, S. 1991. Disaster mitigation in Asia and the Pacific: Technical background paper. In B. Ward, ed., Disaster mitigation in Asia and the Pacific, Pages 23–69, Manila: Asian Development Bank Australian Emergency Manual: Community Emergency Planning Guide, National Disaster Office.
- W. Nick Carter, Disaster Management: A Disaster Manager's Handbook Chapter 2, pp, 9-23, Appendix A, pp.345-55.

Assessment methods: Group work, Pre Test & Post Test