NATIONAL TRAINING ON

MAINSTREAMING DISASTER AND CLIMATE RISK MANAGEMENT INTO DEVELOPMENT PLANNING IN MYANMAR

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NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

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Cover Photo:
Farming, Nay Pyi Taw, Myanmar, 2013
Livelihood, Bagan , Myanmar, 2013
Model School at Kungyangone, Myanmar (photo credit to UNICEF)
The cover photos represent all three sectors of economy;
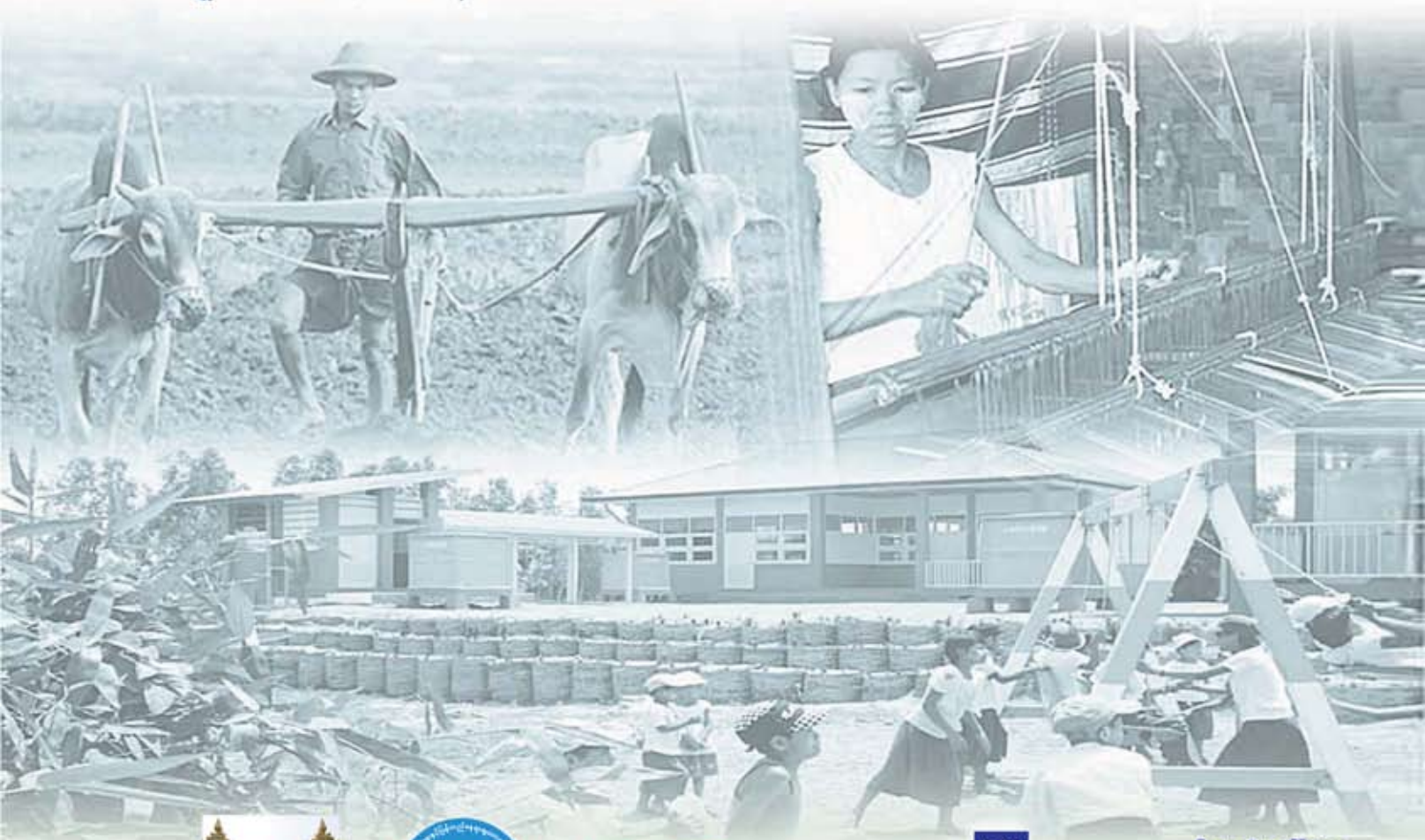 Agriculture, Industry and Services.

FACILITATOR'S GUIDE 2014

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List of Acronym

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
DM Law	Disaster Management Law
DRM/CRM	Disaster Risk Management/Climate Risk Management
HFA	Hyogo Framework for Actions
MAPDRR	Myanmar Action Plan on Disaster Risk Reduction
NAPA	National Adaptation Programme of Action to Climate Change
NCDP	National Comprehensive Development Plan

Introduction

Myanmar is undergoing transition and a number of developmental activities are underway. The developmental interventions are not risk neutral as they are either reducing risk or increasing risk. As Myanmar is prone to a number of hazards including earthquake, floods, cyclone and tsunami, it is important to capitalize on the current momentum in Myanmar and integrate disaster and climate risk considerations into on-going and future developmental interventions, which will contribute to sustainable development.

In this context, the Ministry of National Planning and Economic Development and the Ministry of Social Welfare, Relief and Resettlement have identified mainstreaming disaster and climate risk management into development planning as a focus area. Mainstreaming disaster and climate risk management has also been articulated as one of the seven components for prioritized actions in the national DRR action plan of Myanmar, titled 'Myanmar Action Plan on Disaster Risk Reduction 2012'.

Thus, it is essential that the process of development planning identifies and analyzes the underlying causes of risk and possible impacts, and factors in measures to reduce the risk. This is best achieved by mainstreaming disaster risk reduction within the development framework: planning (at all levels; national, sectoral and sub-national), programming and in the design and implementation of all development projects in hazard-prone countries.

In the light of adverse impact of recent disasters in Myanmar, it is important to build the capacities and enhance the understanding on mainstreaming Disaster and Climate Risk Management (DRM/CRM) in the development planning process among the different government officials who get involved in their departmental planning. Therefore, Relief and Resettlement Department of Ministry of Social Welfare, Relief and Resettlement and Planning Department of National Planning and Economic Development and ADPC have jointly developed a national training course on Mainstreaming Disaster and Climate Risk Management into Development Planning in Myanmar.

The training course has 3 modules namely Introduction to Development and Risk, Mainstreaming Disaster and Climate Risk Management into Development Planning, and Preparing for Mainstreaming Disaster and Climate Risk Management.

This Facilitator's Guide is part of the National Training Course Package on Mainstreaming Disaster and Climate Risk Management into Development Planning in Myanmar. Its key objective is to guide the facilitators in conducting the National Training Course. This document could be used along with the Participant's Handbook on Mainstreaming Disaster and Climate Risk Management into Development Planning in Myanmar, power point presentations of the sessions and case studies.

This National Course Package has been developed in through consultations conducted over 2012-2013 and been pilot tested in March 2013. However, as the development planning process in Myanmar is evolving, the course package will also evolve over times.

National Training on
Mainstreaming Disaster and Climate Risk Management into
Development Planning in Myanmar

Course Schedule

Session	Topic	Time	Facilitator
Day 1			
	Inaugural Session	09:00-10:30	RRD/PD
	Coffee Break	10:30-10:45	
	Module 1: Introduction to Development and Risk		
Session 1.1	Revisiting Development Case study	10:45-12:15	RRD
	Lunch	12:15-13:30	
Session 1.2	Linkages between Development and Disaster Lecture and Group Work	13:30-15:00	RRD
	Coffee Break	15:00-15:15	
Session 1.3	Understanding Hazards in Myanmar Lecture	15:15-16:45	RRD
	Wrap up of Day 1 Session	16:45-17:00	Participants/RRD
Day 2			
Session 1.4	Understanding Exposure and Vulnerability Lecture, Group Work and Case Study	09:00-10:30	RRD
	Coffee Break	10:30-10:45	
Session 1.5	Application of Risk Information Lecture, Group Work and Case Study	10:45-12:15	RRD
	Lunch	12:15-13:30	
	Application of Risk Information (Contd.) Lecture, Group Work and Case Study	13:30-15:00	RRD
	Coffee Break	15:00-15:15	
Session 1.6	Measures to Address Disaster Risk	15:15-16:45	RRD
	Wrap up of Day 2 Session	16:45-17:00	Participants/RRD
Day 3			
	Module 2: Mainstreaming DRM/CRM into Development Planning		
Session 2.1	Overview of Development Planning Process in Myanmar Lecture and discussion	09:00-10:30	PD
	Coffee Break	10:30-10:45	
Session 2.2	Overview of Disaster and Climate Risk Management in Myanmar Lecture and discussion	10:45-12:15	RRD and DMH
	Lunch	12:15-13:30	
Session 2.3	Framework for Mainstreaming DRM/CRM into	13:30-15:00	PD

	Development Lecture and Group Work		
	Coffee Break	15:00-15;15	
Session 2.4	Mainstreaming DRM/CRM into National Development Policies and Plans Lecture and Group Work	15:15-16:45	PD
	Wrap up of Day 3 Session	16:45-17:00	Participants/PD

Day 4

	Mainstreaming DRM/CRM into National Development Policies and Plans (Contd.) Lecture and Group Work	09:00-10:30	PD
	Coffee Break	10:30-10:45	
Session 2.5	Mainstreaming DRM/CRM into Sectoral Development Planning Lecture and Group Work	10:45-12:15	PD
	Lunch	12:15-13:30	
	Mainstreaming DRM/CRM into Sectoral Development Planning (contd.) Lecture and Group Work	13:30-15:00	PD
	Coffee Break	15:00-15:15	
Session 2.6	Mainstreaming DRM/CRM into Regional Development Planning Lecture and Group Work	15:15:16:45	PD
	Wrap up of Day 4 Session	16:45-17:00	Participants/PD

Day 5

	Mainstreaming DRM/CRM into City Development Planning Lecture and Group Work	09:00-10:30	City Development Committee
Session 2.7			
	Coffee Break	10:30-10:45	
Session 2.8	Mainstreaming DRM/CRM into Programs and Projects Lecture and Group Work	10:45-12:15	PAPRD
	Lunch	12:15-13:30	
	Module 3: Preparing for Mainstreaming Disaster and Climate Risk Management (DRM/CRM) into Development		
Session 3.1	Creating Enabling Environment for Mainstreaming DRM/CRM into Development Lecture	13:30-15:00	PD
	Coffee Break	15:00-15:15	
Session 3.2	Development of Action Plan by Participants	15:15-16:45	Participants
	Course Evaluation and Closing Remarks	16:45-17:00	PD/RRD

DMH: Department of Meteorology and Hydrology
PD: Planning Department
PAPRD: Project Appraisal and Progress Reporting Department
RRD: Relief and Resettlement Department

Module 1 : Introduction to Development and Risk

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Session 1.1: Revisiting Development

Session Objective:
To appreciate concept of Development, Sustainable Development, its three pillars, and disaster and climate risk as development challenge

Duration: 1 hr and 30 minutes
- 50 minutes for group work (including presentation)
- 35 minutes to cover the content
- 05 minutes to close the session

Training Methods: Case Study and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Case Study, Chart paper, and Markers

Key Message:
I. To highlight that development solely on the economic side is not sustainable
II. Sustainable development requires fine balancing of its three pillars: economic, social and environmental
III. Disaster and climate risk management are among key factors towards achieving sustainable development

Guidance on Session Conduction:
Message I:
- The session starts with case study which aims to highlight the pitfall of the solely economic-oriented development without enough attention on its negative consequences that cause deteriorating social and environmental condition.
- When the participants present the outcomes of group work, the facilitator could try to get settled divergent views.
- Facilitator should consolidate the key learning from the case study:
  o Development was viewed purely from economic side and reaping of short-term gain.
  o The possible negative consequences have not been considered at the first place, and finally it turned out to be lose-lose situation for all concerned (local government, villagers, and the company).
  o Poor monitoring of the project
  o Long term implication: unfavorable conditions for investment in the area

Message II:
- The three pillars of Sustainable Development are interdependent and should progress in unison.
- Discuss briefly the global, regional and national development frameworks to give a flavor of multi-layer development vision and endeavor, with emphasis on the national one including vision, objectives and development target to achieve.

Message III:

- Facilitator should again highlight that for development to be sustainable, there are a number of considerations such as governance, people participation, public and private cooperation, social cohesion as well as risk issues.
- Considerations on disaster and climate risk are very important as risk-sensitive development will contribute to safer and more resilient development.

Session 1.2: Linkages between Development and Disaster

Session Objective:
To highlight intricate linkages between development and disaster

Duration: 1 hr and 30 minutes
- 15 minutes to introduce linkages of development and disaster with some examples
- 40 minutes for group work (including presentation)
- 30 minutes to cover the rest of the content with more examples
- 05 minutes to close the session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Chart Paper, and Markers

Key Message:

I. To highlight the multi-facet relationship between development and disaster, which could be positive or negative, representing by the four quadrants that is 1) Disaster can set back development 2) Disaster can provide development opportunities, 3) Development can increase disaster risk and 4) Development can reduce disaster risk. (Refer to Participant's Handbook)

II. Note that not only disasters could create negative impact on development; development with absence of risk considerations could also increase risk.

III. Hence, it's important that the negative realms should be avoided as much as possible so as to stay in the positive realms. (i.e. Disaster can provide development opportunities and Development can reduce disaster risk)(Refer to Participant's Handbook)

Guidance on Session Conduction:

Message I:
- The session starts with various examples to highlight the linkages between development and disaster represented by the four quadrants.
- Group work is assigned to the participants to provide more examples on the four aspects of development and disaster relationship. During group presentation, facilitator will clarify some points and bring everyone to common understanding.
- Facilitator elaborates the four aspects of disaster and development linkage using examples provided by group work and other examples from Myanmar or other countries (see examples from the PowerPoint Presentation)

Message II:
- Facilitator highlights development interventions that could induce risk such as construction project on the active fault line, city expansion in flood prone location, no maintenance work or safety measure for aging infrastructures in cyclone prone areas.
- Discuss how development without sufficient consideration on disaster risk could harm people, cause damage to property, loss of investment, economic recession, and also incur huge expenditure for recovery and reconstruction, etc.

Message III:
- Facilitator could explain the importance to stay in the positive realms by making development safer and resilient against disaster.
- Emphasize that since development is human-actions, hence potential risk (due to skewed development) could be controlled or reduced by ensuring that enough concerns have been given to address the riskin the development practices.
- Before applying risk consideration into development, it's essential to understand the combination of 'risk' and 'how to address the risk', which will be discussed in session 1.3-1.6.

Session 1.3: Understanding Hazards in Myanmar

Session Objective:
To discuss the concept of 'hazard', as a component of 'risk', and key natural hazards including climate change impact on hydro-meteorological hazardsin Myanmar

Duration: 1 hr and 30 minutes
- 80 minutes to cover the content
- 10 minutes to close the session

Training Methods: Lecture

Training Support Aid: Projector, Screen, PowerPoint slide, Participant's Handbook, Chart Paper, Markers

Key Message:

I. The concept of 'hazard', highlighting the difference between hazard and disaster

II. Types of hazards and key hazards in Myanmar

III. Climate change and itsimpact on hydro-meteorological hazards

Guidance on Session Conduction:

Message I:
- Facilitator discusses examples of 'hazard' and 'disaster', highlighting that hazard is the potential phenomenon to cause harmful disruption of damage or, in other word, 'disaster'. For hazard to turn into disastrous event, it has to co-exist with the other two components, namely exposure and vulnerability.

Message II:
- Hazards could be classified as per the origins: geophysical, hydrological, and meteorological, climatological and biological. However, hazard classification could be varied as per specific purpose.
- There are 9 key hazards in Myanmar, which could be discussed in terms of their intensity, predictability, seasonality, rate of onset, frequency and impacts. Hazard map, historical data and statistics will be helpful in explanation.
- Facilitator could discuss each hazard of Myanmar in brief highlighting the seasonality, geographical distribution, frequencyand impacts, with major disaster events as examples,such as occurrences of cyclone, flood, and earthquake in the recent past years.

Message III:
- Facilitator discusses the concept of 'Climate Change' in terms of the cause (green house gas emission and global warming) and the influences of climate change related to disaster risk that is *increased uncertainty in climate conditions* (such as prolonged drought, change of storm pattern or landing site) and *extreme climate events* (such as severe storm or extremely heavy rain). Climate change trend from global or regional perspective could also be discussed.
- Facilitator then goes over observed changes in climate and extreme weather events in Myanmar.

Session 1.4: Understanding Exposure and Vulnerability

Session Objective:
To discuss concept and various dimension of 'exposure' and 'vulnerability' as the components of 'disaster risk'.

Duration: 1 hr and 30 minutes
- 40 minutes to cover the content
- 45 minutes for group work (including presentation)
- 05 minutes to close the session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Chart Paper, and Markers

Key Message:

I. To highlight that besides 'hazards', the other two components of 'disaster risk' are 'exposure' and 'vulnerability'.

II. Exposure is any elements (people, property, asset, buildings, structures, etc.)present in the hazard zone that are subject to potential losses.

III. Vulnerability is the characteristics or circumstances (of the exposed elements) that make it susceptible to the damaging effects of hazards. Vulnerability or unsafe condition could be in various aspects including physical, economic, and social one.

Guidance on Session Conduction:
Message I:
- The session starts with the concept of 'disaster risk', which comprise three components: hazard, exposure, and vulnerability. If there is only 'hazard', but no exposure and vulnerability, there will be no disaster event.
- This changes the perception of 'disaster' as natural phenomena beyond human control, to the idea that 'disaster' (or negative impacts of disaster) could be avoided or minimized by reducing exposure and vulnerability.

Message II:
- Facilitator discusses exposure by providing examples and using photos for clarity. (refer to PowerPoint slide).
- Facilitator could further discuss how exposure could be reduced, i.e. by relocation, prohibiting construction in high flood prone area, density control or limiting density of population or number of buildings and physical structures in earthquake hazard prone area(hence reducing exposure).

Message III:
- Facilitator could start with concept of vulnerability and then discuss examples on various dimension of it. Vulnerability should be described in details using extensive examples from Myanmar context, so that the participants could easily relate concept with real life vulnerable conditions.
- Vulnerability is specific to location, group of population, specific characteristics of sector, etc. For examples, agricultural sector might be highly vulnerable to drought and flood, but not earthquake. To reduce vulnerability, interlinked factors that cause vulnerable conditions have to be addressed.
- In group work, facilitator should try to encourage participants to discuss

disaster impacts (risk) of the selected sector, identify the factors related to exposure (what are exposed to hazard?) and vulnerability (why it's impacted? What are the characteristicsof the exposed elements that make it vulnerable?)and summarize exposure and vulnerability in a sentence. For examples, ground floor of the school building is likely to be flooded (impact) because it is located in flood prone areas (exposure) and it is constructed on the ground below flood level. (or ground floor not elevated above flood level) (vulnerability)

Session 1.5: Application of Risk Information

Session Objective:
To have understanding on overview of risk assessment and application of its outputs for different sectors

Duration: 3 hrs
- 40 minutes to cover concept of risk assessment
- 50 minutes for group work 1 (including presentation)
- 30 minutes for case study on risk assessment
- 50 minutes for group work 2 (including presentation)
- 10 minutes to close the session

Training Methods: Lecture, Case Study and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Case Study, Chart Paper, and Markers

Key Message:

I. Risk assessment is an important step to understand nature and extent of risk.

II. Risk assessment comprises broad steps including hazard identification, exposure analysis, vulnerability assessment, consequences analysis, risk estimate and risk evaluation

III. Risk assessment outputs including risk maps could be applied for various purposes such as decision making on development projectsto be implemented in hazard zones.

Guidance on Session Conduction:

Message I:
- Risk assessment is crucial to understand what type of risk present in the location and the extent of the risk. Based on the recognition that risk is the result of the link between hazard, exposure and vulnerability, risk assessment aims to estimate and evaluate the possible consequences and impacts of hazard events.

Message II
- To undertake risk assessment, hazards, their characteristics and frequency should be identified elements at risk and vulnerable conditions to be assessed, then the consequence analysis (i.e. with combination of hazards, at different intensity and frequency, exposure and vulnerable conditions, what are the likely consequences).
- Risk can be estimated based on the above analysis representing by risk maps or risk zone maps. The risk then shall be evaluated: whether the risk is acceptable, manageable or need to be addressed.
- Group work 1 aims to enhance better understanding on risk assessment. Participants will be given community map to consider risk level of the households shown in the map and then rank the household by level of risk from highest to lowest. The ranking has to be based on risks assessment-i.e. the hazard, hazard characteristics and frequency, exposure and vulnerable aspects of the households. Facilitator could briefly mention various dimensions of vulnerability as discussed in session 1.4 as it helps in this exercise. The results can vary up to the hazard, exposure and vulnerable aspects each group considers.

Message III:

- Case study of risk assessment and risk map of Myanmar should be discussed for more clarity such as Multi-Hazard Risk Assessment of Rakhine State, Earthquake Risk Assessment of Mandalay City, etc. The emphasis should be to familiarize the participants with risk assessment products (risk maps, risk zone maps) and their application.

- Risk assessment provides useful information that can be applied for development planning such as city expansion plan and public investment. Development projects should be informed of risk-sensitive location, vulnerable conditions and risk level so as to determine the appropriate actions to mitigate such risk.

- Regulations and legal enforcement such as city law, building by laws, zoning regulations, etc. could be updated taking into account risk information.

- Group work 2 aims to familiarize the participants with the existing risk assessment products of Myanmar, and explore application of risk information for development purpose. Each group is assigned to undertake a development project. Based on risk map given, each group will discuss what information in the risk map could be used to make better informed decision on project design and implementation.

Session 1.6: Measures to Address Disaster Risk

Session Objective:
To explore various measures for addressing risk and key considerations in selecting and applying the measures

Duration: 1 hr and 30 minutes
- 35 minutes to cover the content
- 50 minutes for group work (including presentation)
- 05 minutes to close session

Training Methods: Lecture, and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Chart Paper, and Markers

Key Message:

I. After risk is identified and assessed, the risk could be addressed: *to reduce risk* and/or *to manage residual risk*

II. Risk reduction measures could be structural or non-structural including eco-system based.

III. Managing residual risk is primarily to cope with the negative consequences of the risk (Despite applying risk reduction measures, some risk still remain and hence its impacts needs to be managed.)

IV. Often that one measure or the other is not sufficient; hence combination of measures should be applied for more effective risk treatment.

Guidance on Session Conduction:

Message I:
- Based on risk assessment, decision will be made on either to retain the risk (if the risk is low) or treat it.
- While hazard is somewhat beyond human control, *risk could be reduced by reducing exposure or vulnerable conditions*. For leftover risks, measures *to manage the residual risk* are required.

Message II
- Facilitator explains risk reduction measures: structural and non-structural including eco-system based using photographs (in the PowerPoint slides) and various examples for clarity.
- The point that these various measures could complement one another should be highlighted.

Message III:
- The measures to manage residual risk primarily aim to enhance actions to cope with adverse impacts.
- Measures to mange residual risk include:
  o *Preparedness measures* such as preparedness plan, system for early warning, evacuation drill, setting up emergency operation center, stock piling of relief items, awareness raising and precautionary measures for personal safety.
  o *Risk transfer:* to shift the consequences of risks from one party to another. Insurance are well-known form of risk transfer.

Message IV:

- All measures can be implemented at various levels (household, village, village tract,township, region/state and national level).
- Measures to be adopted should consider factors such as multi-hazard approach, low cost, suitability to local context, possibility for scaling up, building on local technology or local practices, capacity of community and concerned agencies to implement, manage and maintain the measures.
- The group work aims to familiarize the participants with various measures for risk mitigation and managing residual risk adopted in Myanmar. Each group will be given the list of projects indicated in the MAPDRR and requested to try to identify whether the projects are to reduce hydro-meteorological hazard, to reduce exposure, to reduce vulnerability, to transfer risk,or to better prepare for emergency situation, etc.

Module 2 : Mainstreaming Disaster and Climate Risk Management into Development Planning

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Session 2.1: Overview of Development Planning Process in Myanmar

Session Objective:
To have better understanding on overview of development planning process of Myanmar

Duration: 1 hr and 30 minutes
- 50 minutes to cover the content
- 35 minutes for group work (including presentation)
- 05 minutes to close the session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint slide, Participant's Handbook, Chart paper, and Markers

Key Message:
I. Government is the prime authority that shape development of the country. Through legislative power, government has enacted legal provisionand assign mandates on development planning to concerned authorities.
II. In Myanmar, the Ministry of National Planning and Economic Development is the nodal agency for planning. Multi-agency committees at different levels are set up to be responsible for development planning for respective levels.
III. Development planning is a cyclical and multi-layerprocess. Myanmar National Comprehensive Development Plan (NCDP) is the master plan that outlines long term development of Myanmar.

Guidance on Session Conduction:
Message I:
- Facilitator starts the session by discussing the importance of development planning, which set country aspiration, goal and targets to be achieved in the specified time line.
- Government and authorized entities (ministries, departments, state/region authority, township authority, etc.) are mandated with development planning related functions including formulation of development policy, plans, annual budget, regional plans, public investment,and implementationand monitoring of development projects, etc.

Message II:
- Facilitator describes overview of development planning process with the Ministry of National Planning and Economic Development as the nodal agency for coordinating development plans at all levels, linking the policy level (PlanningCommission), to sector, state/region, and district and township level.
- Facilitatorexplains using the planning process diagram, which illustrates different layers of planning and responsible authorities involved.
- The discussion should also highlight how the socio-economic conditions at sub-national level feed into the planning process and form the basis for development consideration.

Message III:

- Development planning tools at all level are interlinked with NCDP (2011-2030), which is the key planning document outlining long term development vision and goal for Myanmar.
- Other plans (regional plans, sector plans, township plan, etc.) are aligned with the NCDP and articulated specific objectives and development activities that contribute to attainment the long term goals indicated in the NCDP.
- Facilitator should briefly discuss the development vision and goals of the NCDP and give examples of sections or items in region/state or sector plan that corresponds to the overarching goals of the NCDP.
- The group work will highlight a number of existing planning tools in Myanmar, where DRM/CRM could be integrated (This will be discussed in details in session 2.3). In group, the participants will be asked to list down development policies, strategies, plans (annual, mid-term, long term) and projects, etc. of their respective ministry, department, and agency, and other development planning tools they are aware of.

Note: As Myanmar is under transition, the development tools are also under evolution.

Session 2.2: Overview of Disaster and Climate Risk Management in Myanmar

Session Objective:
To have better understanding on DRM and CRM frameworks adopted by Myanmar. Key is to discuss existing DRM/CRM elements that could be integrated into the development planning process.

Duration: 1 hr and 30 minutes
- 60 minutes to cover the content
- 20 minutes for discussion
- 10 minutes to close the session

Training Methods: Lecture

Training Support Aid: Projector, Screen, PowerPoint slide, Participant's Handbook, Chart Paper and Maker

Key Message:

I. Myanmar has adopted and committed to global and regional DRM framework, namely Hyogo Framework for Action and AADMER, respectively. These frameworks indicate set of actions to be undertaken towards disaster risk reduction.

II. At national level, MAPDRR sets national strategic actions for safer and more resilient Myanmar against natural hazards.

III. To address the climate change issue, there are global, regional and nationalframeworks that guide actions for climate change mitigation and adaptation.

Guidance on Session Conduction:

Message I:
- The Hyogo Framework for Action (HFA) is the global framework (until 2015) that indicates the five priorities of actions to guide countries and stakeholders at different levels towards substantial reduction of disaster impacts.
- The AADMER sets regional framework to undertake effective actions and coordination for disaster management and emergency response among ASEAN member states.
- Myanmar has adopted HFA and AADMER and has undertaken initiatives aligned to the frameworks.

Message II:
- MAPDRR (launched in 2012) specifies 65 key activities under 7 components as prioritized actions.
- Other key documents on DRM including the Standing Order, which determines specific roles and functions of concerned agencies for pre, during and post disaster, and Risk Assessment reports, which provide multi-hazard risk information.
- Institutional arrangement for DRM in Myanmar has the National Disaster Preparedness Central Committee (established in 2013) as the supreme authority for decision making, policy formulation, issuing of legal provision and overall supervision on natural disaster related

issues. The Relief and Resettlement Department (RRD) is the nodal agency for coordination on disaster related matters.

Message III:

- To address climate change impact, two approaches are introduced: mitigation (reduce green house gases emission) and adaptation (to enhance adaptive capacity to cope with adverse impacts).
- At national level, Department of Meteorology and Hydrology is a focal agency for climate change adaptation. The National Environmental Policy (adopted in 1994) establishes sound environmental policy with one of basic principle focusing on addressing climate change.
- Another key document is the Myanmar's National Adaptation Programme of Action (NAPA) to Climate Change with the overarching goal to identify and communicate immediate and urgent adaption needs (or Priority Adaption Projects).

Session 2.3: Framework for Mainstreaming DRM/CRM into Development

Session Objectives:

To develop common understanding on concept and approach of mainstreaming DRM/CRM into development and to discuss entry points for mainstreaming DRM/CRM into development planning process of Myanmar

Duration: 1 hr and 30 minutes
- 45 minutes to cover the content
- 40 minutes for group work (including presentation)
- 05 minutes to close the session

Training Methods: Lecture, Case Study and Group Work

Training Support Aid: Projector, Screen, PowerPoint slide, Participant's Handbook, Chart Paper, and Markers

Key Message:
I. What is mainstreaming? And why mainstreaming DRM/CRM is necessary?
II. Mainstreaming DRM/CRM involves understanding the development planning process, the DRM/CRM frameworks/element, and integrating the latter into each step of the former.
III. To highlight entry points for mainstreaming DRM/CRM into different planning tools of Myanmar.

Guidance on Session Conduction:

Message I:
- The session should start with introducing the key concept of mainstreaming. The facilitator should explain mainstreaming as 'to make it a normal process', 'not an ad-hoc or one-time exercise, but continuous' and 'not an end in itself, but it contributes to safer and more resilient development'.
- Development and disasters are inter-linked (as discussed in session 1.2). Development can induce disaster risk and ad-hoc response is not the solution. Thus, it's crucial that disaster and climate risk considerations are made part and parcel of different stages in the development planning processes to ensure that development interventionscould *withstand adverse impacts of disaster risk*, and *will not create new risk or intensify the existing ones.*

Message II:
- The facilitator should again mention in brief the elements of development planning process such as development policy, socio-economic plans, physical plans, land use plans, sector plans, region/state plans, township plans, annual plans, budgeting, programs and projects, monitoring and evaluation (as discussed in session 2.1); and the elements of DRM/CRM such as MAPDRR, NAPA, Risk Assessment, and dedicated DRM/CRM projects (as discussed in session 2.2).
- The facilitator then could explain the process of superimposing DRM/CRM elements on the development planning process by identifying steps in development planning where relevant DRM/CRM elements could be integrated. The facilitator can use the examples from other countries for clarity.

Message III:

- The group exercise aims to highlight various entry points for integrating DRM/CRM into the existing development planning tools of Myanmar.
- The facilitator asks each group to draw the line linking DRM/CRM elements (such as MAPDRR, DM Law, risk assessment outputs, Hazard Profile, Standing Order, NAPA, etc.) to the development planning tools to represent the relevancy and entry point for integration.
- To consolidate group work, facilitator could discuss the rationale for including DRM/CRM elements and the comparative benefits. Facilitator should also add other examples to enrich the discussion.

Session 2.4: Mainstreaming DRM/CRM into National Development Policies and Plans

Session Objectives:
To discuss national development policy formulation and national planning process and to explore how DRM/CRM could be integrated

Duration: 3 hrs
- 80 minutes to cover the content
- 90 minutes for group work (including presentation)
- 10 minutes to close session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Chart Paper, and Markers

Key Message:

I.   The steps involved in policy formulation and national planning processes (socio-economic long term planning)

II.   The benefit of integrating DRM/CRM into policy formulation and national planning process

III. There are several entry points for integration DRM/CRM with examples from various countries demonstrating DRM/CRM included in different sections of the socio-economic development policies and plans

Guidance on Session Conduction:

Message I:
- Public policies and national socio-economic plans guide identification of development goals, objectives, targets, strategies and activities to be achieved within the specified time frame.
- Policies formulation and national socio-economic planning comprises several steps from defining issues, set objectives, forecasting, developing and analyzing policy options, policy decision, monitoring andevalution. Inter-agency committees are set up to be responsible for these steps.
- For Myanmar, the Planning Commission is the supreme body that formulates national development policy and socio-economic plan, with other sub-committees to take supporting roles in the process.

Message II:
- By mainstreaming DRM/CRM considerations into the policy formulation and national planning processes, DRM/CRM will become public agenda, will receive equal attention and not overshadowed by other immediate development issues, and will be basis for concerned authorities to address risk issues in more harmonized manners across all development spheres.
- Facilitator could point out that by integrating DRM/CRM, DRM/CRM will not be viewed as a standalone subject,but to be addressed by all development concerned agencies.

Message III:

- Facilitator should emphasize that steps involved in policy formulation and national planning processes provide opportunity for mainstreaming DRM/CRM related components.
- The facilitator describes various entry points for DRM/CRM integration with examples from Myanmar and other countries. (details described in the Participant's Handbook)
- Group work aims to have the participants explore DRM/CRM integration into the NCDP. Discussion should be around the rationale behind the integration (i.e. why mainstreaming DRM/CRM is relevant to the selected sections, what is the benefit of it?) and what are the elements of DRM/CRM to be included in relevant entry points.

Session 2.5: Mainstreaming DRM/CRM into Sectoral Development Planning

Session Objectives:
To appreciate the need for mainstreaming DRM/CRM into sectoral development and explore 'how to' mainstream DRM/CRM in key development sectors

Duration: 3 hrs
- 80 minutes to cover the content
- 90 minutes for group work (including presentation)
- 10 minutes to close the session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint slide, Participant's Handbook, Chart Paper, and Markers

Key Message:
I. To highlight some of the key sectors vulnerable to disasters and why mainstreaming DRM/CRM is needed
II. Mainstreaming DRM/CRM into key sectors has to consider risk assessment and certain vulnerable characteristics within the sector so as to identify proper risk reduction measures to address the risk
III. Various examples demonstrating DRM/CRM measures integrating into key development sectors will be discussedfor clarity.

Guidance on Session Conduction:
Message I:
- There are 14 development sectors in Myanmar, each of which has line ministry as key responsible agency. The sectors are directly or indirectly affected by disasters. For example, direct impacts of disasters on education include school building damaged, and indirect impact would be reduced of household assets making schooling less affordable and drop out.
- On the other hand, sectoral activities may unintentionally increase disaster risk such as poorly constructed infrastructures in earthquake prone zone can substantially increase the level of exposure and vulnerability. However, by incorporating risk reduction measures, the sector activities will have increased capacity to bounce back from disastrous events and become more resilient. In the case of school buildings, by integrating DRM/CRM, the school will be able to withstand the impacts of potential hazards, enhance safety of students and teachers, ensure continuity of classes, and attendance of students.

Message II:
- Entry points for mainstreaming DRM/CRM in the key development sectors will be discussed in details with examples from education sector, infrastructure sector and health sector, etc.
- To address disaster risk, simple questions to think about are:*what arethe risks* that could directly (physical damage) or indirectly (other negative effects)affect the sector activities (by undertaking risk assessment including consequence analysis),*how such risk could be treated* (various measures, or combinations of measures), and *what are the entry points in*

the sector development that such considerations could be factored in.

- For example, in education sector, risk assessment could be included in the process of site selection for school construction, applying design restriction and hazard resistant building code could be made part of school construction process, training for teachers and students on emergency preparedness could be integrated into curriculum or school activities, regular inspection and maintenance of ageing school should be compulsory to ensure structural safety.

Message III:

- Facilitator could discuss various development sector interventions in Myanmar such as energy sector, electric power sector, construction sector, transportation sector, etc, exposure and vulnerable factors, and measures to adopt to reduce risk.
- Based on the discussion, participants do the group work to critically discuss their own department functions and activities and identify entry points for mainstreaming DRM/CRM elements into the respective sector.
- Facilitator should move around to help in group work and brainstorming, as well as clarify some points.

Session 2.6: Mainstreaming DRM/CRM into Regional Development Planning

Session Objectives:
To explore regional development planning process and to discuss potential entry points to include DRM/CRM considerations

Duration: 1 hr 30 minutes
- 50 minutes to cover the content (including case study)
- 35 minutes for group work (including presentation)
- 05 minutes to close the session

Training Methods: Lecture, Case Study and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Case Study, Chart Paper, and Markers

Key Message:
I. Region/state development planning process of Myanmar
II. Discuss case study: Mainstreaming DRM/CRM into the District Development Planning Process of Nepal, as example for Mainstreaming DRM/CRM into sub-national planning process
III. Explore various entry points to include DRM/CRM into region/state development planning of Myanmar

Guidance on Session Conduction:
Message I:
- The Region/State Planning and Implementation Committee under the Region/state government is mandated on region/state development planning. The committee performs various functions pertaining to region/state planning including data collection, maintain socio-economic statistics in respective areas, review the plans submitted from districts and townships in their jurisdiction, and evaluate the plans which will be further reported to the union government.
- To sum up, the region/state development planning process has the key role to collect and consolidate socio-economic information at ground level and report to macro level planning authorities, hence, linking district and township development planning, implementation and monitoring to the national and sectoral development planning process.
- The Region/State Planning and Implementation Committee is also responsible for rural development projects and managing own budget as well as allocated budge from the union government.

Message II:
- The region/state development planning comprises various stages that provide potential entry points for mainstreaming DRM/CRM.
- Case Study from Nepal demonstrates cyclical process of development at district level including preparation of resource map and district data, identifying development priorities of the district, stakeholder consultations, compilation of development projects from ward/village level, etc. By critical review of the steps involved, relevant DRM/CRM elements are identified for integration.
- The facilitator should point out that mainstreaming DRM/CRM doesn't introduce major change to the planning process. Rather, it attempts to

make DRM/CRM as integral elements of existing steps in the planning process by minor adjustment.

Message III:

- The facilitator should discuss briefly the region/state development planning process with concrete example of one region/state. Facilitator could emphasize on risk aspects in particular region/state and highlight the importance of factoring in DRM/CRM considerations inthe planning process.
- Facilitator should help the participant groups in identifying the DRM/CRM elements that are highly relevant to various planning steps and planning sections for integration.

Session 2.7: Mainstreaming DRM/CRM into City Development Planning

Session Objectives:

To discuss complex development issues in city setting, and to explore the approach for mainstreaming DRM/CRM

Duration: 1 hr 30 minutes
- 45 minutes to cover the content
- 40 minutes for group work (including presentation)
- 05 minutes to close the session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint slide, Participant's Handbook, Chart Paper, and Markers

Key Message:

I. To highlight issues of urbanization and why mainstreaming DRM/CRM into city development committees is necessary

II. Mainstreaming DRM/CRM into city development committees is done by exploring specific functions pertaining to urban development and relevant DRM/CRM elements to be included

Various measures to integrate DRM/CRM into city development committees

Guidance on Session Conduction:

Message I:
- Urbanization is increasingly becoming common in the developing countries. Examples of city expansion in Myanmar could be discussed for clarity. Urbanization should be discussed in term of social, economic, environmental conditions, as well as disaster and climate risk factors, which pose the challenge to sustainable urban development.
- The facilitator should highlight why mainstreaming DRM/CRM into urban local bodies is needed by thinking of potential impacts of disaster on urban population, activities, and functions. For example, urban centers are considered as centers of economic growth inmany countries, and impact of major disasters would lead to severe loss to the economy. For capital city which is hub of government offices, disruption of country administration system is possible due to disaster impacts.

Message II:
- Some of the entry point for mainstreaming DRM/CRM into city development committees could be done within the city functions and services such as waste management, healthcare, sanitation, drainage, water supply, power & electricity; and city and facilities development activities such as land use planning, density control, city transportation system and infrastructure development.
- The facilitator should also mention other supporting factors to promote city resilience to disaster and climate risk such as issuing and reinforcing city regulations (zoning, buffer zone, flood retention zone regulations, etc.), utilization of city tax, fees, budget to improve structures and maintenance work of city construction, involving stakeholders (private

sector and civil society) to support in risk reduction and preparedness activities.

Message III:

- The facilitator explains the city development of Myanmar, which is the mandate of Nay Pyi Taw, Yangon and Mandalay City Development Committee.

- Functions of the city development committees are discussed along with example of city planning tools such as Yangon City Development Conceptual Plan.

- The facilitator could discuss various aspects of city development, risk and key considerations on DRM/CRM elements provided in the Participant's Handbook. Facilitator could encourage the participants to think about this within Myanmar context.

- The facilitator describes four cases of development in city setting in brief and instructs the group work: identify key DRM/CRM considerations for each scenario presented in the case, type of support required and key challenges.

- To consolidate the group work, facilitator should highlight key problems, what are the factors that cause the problems with regards to disaster and climate risk, specific DRM/CRM measures to get avoid, or minimize the risk and how integrating DRM/CRM could contribute to safer and more resilient city.

Session 2.8: Mainstreaming DRM/CRM into Programs and Projects

Session Objectives:
To have common understanding on integrating DRM/CRM in development programs and projects, and to identify actions for integrating DRM/CRM in programs and projects

Duration: 1 hr 30 minutes
- 40 minutes to cover the content
- 45 minutes for group work (including presentation)
- 05 minutes to close the session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Chart Paper, and Markers

Key Message:

I. The project management cycle presents the main elements the projects have in common including programming, identification, appraisal, financing, implementation, evaluation.

II. It's crucial that development projects (across all sectors and at all levels) *adopt measures to reduce adverse impacts* from natural hazards, and *will not induce new risk or intensify the existing risk.*

III. Each phase in the project management cycle offer opportunity to include DRM/CRM elements such as issue identification, appraisal (log frame, check list, environmental impact assessment, etc.)

Guidance on Session Conduction:

Message I:
- Public investment are made through programmes and projects ranging from construction of infrastructures, expanding transportation network, to promoting local livelihoods and improving accessibility to public health for rural communities.
- All the projects follow the common phases of project management cycle.

Message II:
- It's essential that pubic investment will be optimized (i.e. to ensure that investment on projects will yield the expected outcomes and benefit for long term and not to be destroyed or damaged by disasters, which means zero return of investment) and development interventions will be protected (development projects adopt DRM/CRM measures that enable them to withstand the adverse affects of hazard),
- Equally important is to make certain that developmentprojectswill not unintentionally create new risk or exacerbate the new ones.
- Hence, individual project should include risk assessment and risk reduction in various phases of project management cycle.

Message III:
- Facilitator discusses various entry points for mainstreaming DRM/CRM into project management cycle including issues identification, logical framework (as a tool used for project design) or projects submission template, as used in Myanmar.

- The key consideration on DRM/CRM that appropriate to each phase are such as:
  - Issue identification- to consider what risks could have direct and indirect impacts on the project, what could be the potential impact of the project in preventing disasters, and to ensurerisk statistics andinformation is comprehensive and accurate for decision makers.
  - Appraisal- *Logical Framework*to include risk analysis and alternatives to accommodate risk reduction practices into project design, *Environmental Impact Assessment, Social Impact Assessment* inclusive of DRM/CRM elements, *Project check list* including questions on DRM/CRM
  - Monitoring- what are the impacts of disaster on the project, at what extent this impede project to achieve the set target, what needs to be done (risk reduction measures to be adopted) that will ensure project will achieve the set target.
- The facilitator provides examples for clarity and tries to relate this with the existing steps/practices for project management cycle used in Myanmar.
- In group work, the participants will look into steps involved or key documents used in project management cycle such as project proposal template, EIA requirements, criteria for project appraisal, check list, annual meeting for issues identification and budgeting, project monitoring report, etc. and identify entry points for mainstreaming DRM/CRM elements.

Module 3 : Preparing for Mainstreaming Disaster and Climate Risk Management

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Session 3.1: Creating Enabling Environment for Mainstreaming DRM/CRM into Development

Session Objective:
To discuss the factors that will create enabling environment for mainstreaming DRM/CRM into development

Duration: 1 hr 30 minutes
- 35 minutes to cover the content
- 50 minutes for groups work and discussion (including presentation)
- 05 minutes to close the session

Training Methods: Lecture and Group Work

Training Support Aid: Projector, Screen, PowerPoint Slide, Participant's Handbook, Chart Paper, and Markers

Key Message:
I. To highlight various factors that will create environment in favor of mainstreaming DRM/CRM
II. The facilitator facilitates the discussion to come up with collective view on the enabling factors to enhance mainstreaming DRM/CRM applications in Myanmar

Guidance on Session Conduction:
Message I:
- Facilitator discusses factors that could enable mainstreaming DRM/CRM such as advocacy among policy makers and media, legislative backing, enhancing multi-agency coordination, availability of risk information, knowledge sharing and promoting further applications in development planning process.
- Examples of any initiatives in Myanmar in line with the above mentioned factorscould be discussed to appreciate the current environment for mainstreaming DRM/CRM in the country.

Message II:
- The facilitator introduces the group work, describing the aim to identify supporting factors so as to progress DRM/CRM applications in the development planning processes.
- The facilitator should encourage participants to reflect upon the challenges on mainstreaming DRM/CRM and discuss various kinds of supporting actions or mechanisms within the government system as well as wider public/stakeholders to translate the mainstreaming approach into concrete actions. For this exercise, participants could be grouped by development theme: national development planning, sectoral ministries, city development committees and regional development planning.

Session 3.2:Development of Action Plan by Participants

Session Objective:
To discuss individual action plan on mainstreaming DRM/CRM into respective mandates

Duration: 1 hr 30 minutes
- 30 minutes to summarize key learning and reflections
- 50 minutes for individual planning (including presentation)
- 10 minutes to wrap up

Training Methods: Discussion and Individual exercise

Training Support Aid: Projector, Screen, PowerPoint slide, Participant's Handbook, Chart Paper, and Markers

Key Message:
I.   To have the participants reflect upon and consolidate the key learning from the training
II. To have the participantscome up with individual action plan to apply mainstreaming DRM/CRM into their respective mandates and functions

Guidance on Session Conduction:
Message I:
- Facilitator takes the participants through the outline of the training and summarizes key points of each session, as well as overall message of the course.
- Facilitator facilitates discussion on participants' reflections with emphasis on relevancy, applicability and added value of the key learning to the respective mandates and functions of each individual.

Message II:
- Each individual participant spends 10-15 minutes to note key actions points on applying mainstreaming DRM/CRM into their respective mandates and functions and type of support needed.
- The participants present individual plan to the class.
- The facilitator wrap up the action plans by consolidating commonality or overlap of actions/activities, shared interest, possible linkages, and way forward to enhance complementarities and inter-departmental coordination to realize concrete actions.

List of Facilitators

Sr.	Name	Position	Department
1	U Than Soe	Deputy Director	Relief and Resettlement Department
2	U Sa Willy Frank	Deputy Director	Relief and Resettlement Department
3	Daw Lai Lai Aye	Deputy Director	Relief and Resettlement Department
4	Daw Lay Shwe Zin Oo	Assistant Director	Relief and Resettlement Department
5	U Aung Kyaw	Assistant Director	Relief and Resettlement Department
6	U Nay Myo Tun	Assistant Director	Relief and Resettlement Department
7	U Myint Aung	Staff Officer	Relief and Resettlement Department
8	Daw Aye Nandar Win	Superintendent	Relief and Resettlement Department
9	Daw Aye Aye Maw	Section Clerk	Relief and Resettlement Department
10	Daw Toe Toe Aung	Senior Clerk	Relief and Resettlement Department
11	Daw Hla Kyawt Khin	Assistant Director	Planning Department
12	Daw Kyi Kyi Khaing	Assistant Director	Planning Department
13	Daw Kyi Nyunt	Assistant Director	Planning Department
14	Daw Myat Thida	Staff Officer	Planning Department
15	Daw Thida Aung	Staff Officer	Planning Department
16	Daw Khin Khin Soe	Staff Officer	Planning Department
17	Daw Ohnmar Khaing	Staff Officer	Planning Department
18	U Aung Ko Khaing	Assistant Director	Nay Pyi Taw City Development Committee
19	U Zaw Win Hlaing	Staff Officer	Nay Pyi Taw City Development Committee
20	U Myint Htwe	Branch Officer	Mandalay City Development Committee
21	U Thet Naing	Branch Officer	Mandalay City Development Committee
22	U Oo Than	Deputy Director	Yangon City Development Committee
23	U Aung Htaik	Staff Officer	Yangon City Development Committee
24	Daw Khin Thida Aung	Staff Officer	Department of Social Welfare
25	Daw Nyo Nyo	Staff Officer	Department of Social Welfare
26	U Kyaw Soe	Assistant Director	Department of Meteorology & Hydrology
27	U Aung Myint Kyi	Staff Officer	Department of Meteorology & Hydrology
28	Daw Nwe Nwe Lwin	Staff Officer	Project Appraisal and Project Report Department
29	Daw Khaing Thazin Oo	Staff Officer	Project Appraisal and Project Report Department
30	Daw Cho Nwe Theint	Staff Officer	Project Appraisal and Project Report Department